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USUAL PLACE OF RESIDENCE

In accordance with census practice dating back to 1790, each person enumerated in the 1970 census was

counted as an inhabitant of his usual place of residence, which is generally construed to mean the place where he lives and sleeps most of the time. This place is not necessarily the same as his legal residence, voting residence, or domicile. In the vast majority of cases, however, the use of these different bases of classification would produce substantially the same statistics, although there may be appreciable differences for a few areas.

The implementation of this practice has resulted in the establishing of residence rules for certain categories of persons whose usual place of residence is not immediately clear. Furthermore, this practice means that persons were not always counted as residents of the place where they happened to be found by the census enumerators. Persons without a usual place of residence were, however, counted where they were enumerated.

Members of the Armed Forces living on military installations were counted, as in every previous census, as residents of the area in which the installation was located. Similarly, members of the Armed Forces not living on a military installation were counted as residents of the area in which they were living. Crews of U.S. Navy vessels were counted as residents of the home port to which the particular vessel was assigned; crews of vessels deployed to the overseas fleet were therefore not included in the population of any State, the District of Columbia, Puerto Rico, or the outlying areas. Persons in Armed Forces families were counted where they were living on Census Day (e.g., the military installation, "off-base," or elsewhere, as the case might be).

Crews of U.S. merchant marine vessels were counted as part of the

population of the U.S. port in which their vessel was berthed on Census Day; or if sailing in inland or coastal waters, as part of the population of the vessel's home port. Crews of all other U.S. merchant marine vessels are not included in the population of any State, the District of Columbia, Puerto Rico, or the outlying areas.

College students, as in 1950 and 1960, were counted as residents of the area in which they were living while attending college, whereas children in boarding schools below the college level were to be counted at their parental home. Inmates of institutions, who ordinarily live there for considerable periods of time, were counted as residents of the area where this institution was located; on the other hand, patients in short-term wards of general hospitals were not counted at the hospital if they had a usual place of residence elsewhere. On the night of April 6, 1970, a special enumeration was conducted in missions, flophouses, jails, detention centers, etc., and persons enumerated therein were counted as residents of the particular place.

Americans who were overseas for an extended period (in the Armed Forces, working at civilian jobs, studying in foreign universities, etc.) are not included in the population of any State, the District of Columbia, Puerto Rico, or the outlying areas. On the other hand, persons temporarily abroad on vacations, business trips, and the like, were counted at their usual residence.

Persons in larger hotels, motels, etc., on the night of March 31, 1970, were requested to fill out a census form for allocation back to their homes if they indicated no one was there to report them in the census. A similar approach

was used for persons visiting in private residences, as well as for Americans who left the United States during March 1970 via major intercontinental air or ship carriers for temporary travel abroad.

In addition, information on persons away from their usual place of residence was obtained from other members of their families, landlords, etc. If an entire family was expected to be away during the whole period of the enumeration, information on it was obtained from neighbors. A matching process was used to eliminate duplicate reports for a person who reported for himself while away from his usual residence and who was also reported at this usual residence by someone else.

Citizens of foreign countries temporarily visiting or traveling in the United States or living on the premises of an embassy, ministry, legation, chancellery, or consulate were not enumerated. Citizens of foreign countries having their usual residence in the United States as defined above, including those working here (but not living at an embassy, etc.) and those attending school (but not living at an embassy, etc.) were included in the enumeration, as were members of their families living with them.

AREA OF ENUMERATION

In the 1970 census, the areas enumerated were as follows: The United States, the Commonwealth of Puerto Rico, American Samoa, the Canal Zone, Guam, the Trust Territory of the Pacific Islands, the Virgin Islands of the United States, and some additional small areas of sovereignty or jurisdiction (see table 1). In this report the term "United States" when used without qualification refers to the 50 States and the District of Columbia

but excludes Puerto Rico and the outlying areas.

The 1970 census also made special provision for the enumeration of members of the Armed Forces of the United States living abroad and their dependents with them, civilian American citizens employed abroad by the United States Government and their dependents living with them, and the crews of vessels (U.S. Navy, Coast Guard, or American Merchant Marine) on the high seas or in foreign ports. Data for the Army, Air Force, and Marine Corps personnel stationed abroad were provided by the Department of Defense, rather than by enumeration on census forms. The enumeration of all other persons abroad or at sea was conducted by means of specially designed census report forms, with the cooperative efforts of the Department of Defense, the Department of State, the U.S. Coast Guard, and the U.S. Maritime Administration. These agencies took the responsibility for the publicity of the census as well as for the distribution and collection of the report forms. In addition, an effort was made to obtain reports for private citizens who were living abroad for long periods of time; however, the reporting was made on a voluntary basis, and it is probable that this group was not so well reported as other groups covered by the census. A Volume II report, PC(2)-10A, **Americans Living Abroad**, contains statistics on these private American citizens.

Persons who were only temporarily abroad were to have been reported by their families or neighbors in the United States. To further guarantee coverage of such persons, a special form was distributed by major airlines and steamship companies to Americans departing the United States

during the month of March. Travelers were instructed to complete this form if they knew there would be no one at their residence to report them.

APPORTIONMENT

The primary reason for the establishment of the decennial census of population, as set forth in the Constitution, was to provide a basis for the apportionment of members of the House of Representatives among the several States. Such an apportionment has been made on the basis of every census from 1790 to 1970, except that of 1920. Prior to 1870, the population basis for apportionment was the total free population of the States, omitting Indians not taxed, plus three-fifths of the number of slaves. After the apportionment of 1860 the fractional count of the number of slaves, of course, disappeared from the procedure; and in 1940 it was determined that there were no longer any Indians who should be classed as "not taxed" under the terms of the apportionment laws. The 1940 and the 1950 apportionments, therefore, were made on the basis of the entire population of the 48 States, those of 1960 and 1970, on the basis of the entire population of the 50 States. In 1970, for the first time, certain segments of the overseas population were allocated to their home State and included in the population of those States for the purpose of apportionment. All apportionments are made under the constitutional provision that each State should have at least one Representative, no matter how small its population.

Figures for the apportionment population and its component parts are presented in table A. The resident population for 1970 shown in this table is the count for each State as

TABLE A. Apportionment and Apportionment Population Based on the 1970 Census

States	Size of State delegation ¹	Apportionment population	Resident population ²	United States population abroad ³			
				Total	Federal employees		Dependents of Federal employees
					Armed Forces	Civilians	
United States	435	204,053,325	203,235,298	1,580,998	1,076,431	67,993	436,574
Alabama	7	3,475,885	3,444,165	31,720	22,121	786	8,813
Alaska	1	304,067	302,173	1,894	1,304	114	476
Arizona	4	1,787,620	1,772,482	15,138	9,866	652	4,620
Arkansas	4	1,942,303	1,923,295	19,008	13,027	443	5,538
California	43	20,098,863	19,953,134	145,729	93,511	9,547	42,671
Colorado	5	2,226,771	2,207,259	19,512	12,585	961	5,966
Connecticut	6	3,050,693	3,032,217	18,476	12,681	1,049	4,746
Delaware	1	551,928	548,104	3,824	2,678	145	1,001
Dist. of Columbia . . . . .	...	(4)	756,510	6,461	3,139	841	2,481
Florida	15	6,855,702	6,789,443	66,259	38,948	3,391	23,920
Georgia	10	4,627,306	4,589,575	37,731	26,151	975	10,605
Hawaii	2	784,901	769,913	14,988	6,151	2,042	6,795
Idaho	2	719,921	713,008	6,913	4,362	281	2,270
Illinois	24	11,184,320	11,113,976	70,344	50,769	2,725	16,850
Indiana	11	5,228,156	5,193,669	34,487	25,454	943	8,090
Iowa	6	2,846,920	2,825,041	21,879	16,069	796	5,014
Kansas	5	2,265,846	2,249,071	16,775	10,812	650	5,313
Kentucky	7	3,246,481	3,219,311	27,170	20,138	525	6,507
Louisiana	8	3,672,008	3,643,180	28,828	20,969	658	7,201
Maine	2	1,006,320	993,663	12,657	7,754	540	4,363
Maryland	8	3,953,698	3,922,399	31,299	19,542	2,215	9,542
Massachusetts	12	5,726,676	5,689,170	37,506	25,123	2,092	10,291
Michigan	19	8,937,196	8,875,083	62,113	46,329	1,925	13,859
Minnesota	8	3,833,173	3,805,069	28,104	20,806	1,167	6,131
Mississippi	5	2,233,848	2,216,912	16,936	11,741	443	4,752
Missouri	10	4,718,034	4,677,399	40,635	30,438	1,151	9,046
Montana	2	701,573	694,409	7,164	5,113	312	1,739
Nebraska	3	1,496,820	1,483,791	13,029	8,939	464	3,626
Nevada	1	492,396	488,738	3,658	2,028	310	1,320
New Hampshire	2	746,284	737,681	8,603	5,446	550	2,607
New Jersey	15	7,208,035	7,168,164	39,871	26,905	2,412	10,554
New Mexico	2	1,026,664	1,016,000	10,664	6,680	529	3,455
New York	39	18,338,055	18,241,266	96,789	70,316	4,741	21,732
North Carolina	11	5,125,230	5,082,059	43,171	31,268	1,009	10,894
North Dakota	1	624,181	617,761	6,420	4,432	243	1,745
Ohio	23	10,730,200	10,652,017	78,183	57,807	2,460	17,916
Oklahoma	6	2,585,486	2,559,253	26,233	17,273	870	8,090
Oregon	4	2,110,810	2,091,385	19,425	13,614	926	4,885
Pennsylvania	25	11,884,314	11,793,909	90,405	62,043	3,368	24,994
Rhode Island	2	957,798	949,723	8,075	5,374	371	2,330
South Carolina	6	2,617,320	2,590,516	26,804	19,043	490	7,271
South Dakota	2	673,247	666,257	6,990	4,792	244	1,954
Tennessee	8	3,961,060	3,924,164	36,896	26,375	827	9,694
Texas	24	11,298,787	11,196,730	102,057	63,915	3,658	34,484
Utah	2	1,067,810	1,059,273	8,537	5,582	381	2,574
Vermont	1	448,327	444,732	3,595	2,229	177	1,189
Virginia	10	4,690,742	4,648,494	42,248	26,721	2,547	12,980
Washington	7	3,443,487	3,409,169	34,318	20,784	2,427	11,107
West Virginia	4	1,763,331	1,744,237	19,094	13,055	471	5,568
Wisconsin	9	4,447,013	4,417,933	29,080	22,264	978	5,838
Wyoming	1	335,719	332,416	3,303	1,965	171	1,167

¹Apportionment computed in accordance with provisions of Title 2, United States Code, section 2a.
²As transmitted to the President for apportionment purposes, except for the New York figure, which represents a later revision. Figures for some States differ from those in the detailed tables because of corrections made after the tabulations were completed.
³Includes military and civilian Federal employees and their dependents who (a) were living in outlying areas of the United States and reported a State as their "home of record," or (b) were living in a foreign country and were American citizens or reported a State as their home of record.
⁴The population of the District of Columbia is not included in the apportionment population.

transmitted to the President for apportionment purposes, except for the New York figure, which represents a later revision. For some States, these counts differ from those in the detailed tables, because of corrections made after the tabulations were completed (see "Correction Note" in chapter A, pages 37-40). The apportionment population for 1970 includes, in addition to the resident population, the following segments of the population abroad: Federal employees, military and civilian, and their dependents who at the time of the census (a) were living in an outlying area of the United States and reported a State as their "home of record" or (b) were living in foreign countries and were citizens of the United States or reported a State as their home of record. Although such persons were added to the resident population of each State, they were not distributed among the political subdivisions of the State.

The population base for apportionment and other relevant information are shown in table B for each census since 1790. The results of each apportionment starting with the initial apportionment of 1789 and including those from each census from 1790 to 1970 are shown by regions, divisions, and States in table 12.

The first attempt to make provision for automatic reapportionment was included in the act for the taking of the Seventh and subsequent censuses (approved May 23, 1850). By specifying the number of Representatives to be assigned and the method to be used, it was hoped to eliminate the need for a new act of Congress every decade and assure an equitable distribution of Representatives. When this Census Act was superseded in 1879, the automatic feature was discontinued, and the method of computing

the apportionment was determined by Congress on each occasion up to 1910.

No apportionment was made after the census of 1920, the apportionment of 1910 remaining in effect. In 1929, when the act for the taking of the Fifteenth and subsequent censuses was under consideration, it seemed desirable to incorporate some provision which might prevent the repetition of the 1920 experience. A section was therefore included in the act which provided, for the 1930 and subsequent censuses, that unless Congress within a specified time enacted legislation providing for apportionment on a different basis, the apportionment should be made automatically by the method last used. In accordance with this act, a report was submitted by the President to Congress on December 4, 1930, showing the apportionment computations both by the method of major fractions (which was the one used in 1910) and by the method of equal proportions. In 1931, in the absence of additional legislation, the effective apportionment automatically followed the method of major fractions.

The census of 1940 and all subsequent censuses were taken under the same law as the census of 1930, but in 1941 the apportionment law was amended to the effect that apportionments based on the 1940 and subsequent censuses should be made by the method of equal proportions.

CENTER OF POPULATION

The center of population of the United States, based on the 1970 census, is located in St. Clair County, Ill., at a point about five miles east southeast of the city of Mascoutah. The Bureau of the Census defines the "center of population" as the point at

which an imaginary flat, weightless, and rigid map of the United States would balance if weights of identical value were placed on it so that each weight represented the location of one person on April 1, 1970. Table C and figure 9 show the approximate location of the center of population at each census from 1790 to 1970. Located at latitude 38 degrees, 27 minutes, 47 seconds north, and longitude 89 degrees, 42 minutes, and 22 seconds west, the 1970 center is 26.9 miles west and 9.4 miles south of the 1960 site near Centralia, Ill. (see figure 10). This change during the 10-year period reflects the continued westward movement of the population. Since 1790, when the first census was taken, the center has moved about 700 miles west and 60 miles south of its first location 23 miles east of Baltimore, near Chestertown, Maryland.

The center of population differs from the geographic center, which is the point at which the surface of the United States would balance if it were a plane of uniform weight per unit of area. That point is located in Butte County, South Dakota (see figure 8).

URBAN AND RURAL RESIDENCE

Definition.—According to the definition adopted for use in the 1970 census, the urban population comprises all persons living in urbanized areas and in places of 2,500 inhabitants or more outside urbanized areas. More specifically, the urban population consists of all persons living in (a) places of 2,500 inhabitants or more incorporated as cities, villages, boroughs (except in Alaska), and towns (except in the New England States, New York, and Wisconsin), but excluding those persons living in the rural portions of extended cities; (b)

TABLE B. Population Base for Apportionment and the Number of Representatives Apportioned: 1790 to 1970

Census Year	Population base ¹	Number of Representatives ²	Ratio of apportionment population to Representatives	Date of apportionment act
1970	204,053,325	435	³ 469,088	Nov. 15, 1941
1960	178,559,217	435	410,481	Nov. 15, 1941
1950	149,895,183	435	344,587	Nov. 15, 1941
1940	131,006,184	435	301,164	Nov. 15, 1941
1930	122,093,455	435	280,675	June 18, 1929
1920	(4)	435	(4)	(4)
1910	91,603,772	435	210,583	Aug. 8, 1911
1900	74,562,608	386	193,167	Jan. 16, 1901
1890	61,908,906	356	173,901	Feb. 7, 1891
1880	49,371,340	325	151,912	Feb. 25, 1882
1870	38,115,641	292	130,533	Feb. 2, 1872 ⁵
1860	29,550,038	241	122,614	May 23, 1850 ⁶
1850	21,766,691	234	93,020	May 23, 1850 ⁷
1840	15,908,376	223	71,338	June 25, 1842
1830	11,930,987	240	49,712	May 22, 1832
1820	8,972,396	213	42,124	Mar. 7, 1822
1810	6,584,231	181	36,377	Dec. 21, 1811
1800	4,879,820	141	34,609	Jan. 14, 1802
1790	3,615,823	105	34,436	Apr. 14, 1792
		65	⁸ 30,000	Constitution, 1789

¹Excludes the population of the District of Columbia, the population of the Territories, (prior to 1940) the number of Indians not taxed, and (prior to 1870) two-fifths of the slave population. In 1970, includes selected groups of Americans abroad.

²This number is the actual number apportioned at the beginning of the decade.

³Ratio of resident population to Representatives in 1970 is 465,468.

⁴No apportionment was made after the census of 1920.

⁵Amended by act of May 30, 1872.

⁶Amended by act of Mar. 4, 1862.

⁷Amended by act of July 30, 1852.

⁸The minimum ratio of population to Representatives stated in the Constitution (art. 1, sec. 2).

TABLE C. Center of Population of the United States: 1790 to 1970

Census Year	North latitude	West longitude	Approximate location
United States:			
1970	38°27'47"	89°42'22"	In St. Clair County, Ill., 5 miles east-southeast of Mascoutah.
1960	38°35'58"	89°12'35"	In Clinton County, Ill., 6-1/2 miles northwest of Centralia.
1950	38°48'15"	88°22'8"	3 miles northeast of Louisville, Clay County, Ill.
Conterminous United States: ¹			
1950	38°50'21"	88°9'33"	8 miles north-northwest of Olney, Richland County, Ill.
1940	38°56'54"	87°22'35"	2 miles southeast by east of Carlisle, Haddon township, Sullivan County, Ind.
1930	39°3'45"	87°8'6"	3 miles northeast of Linton, Greene County, Ind.
1920	39°10'21"	86°43'15"	8 miles south-southeast of Spencer, Owen County, Ind.
1910	39°10'12"	86°32'20"	In the city of Bloomington, Ind.
1900	39°9'36"	85°48'54"	6 miles southeast of Columbus, Ind.
1890	39°11'56"	85°32'53"	20 miles east of Columbus, Ind.
1880	39°4'8"	84°39'40"	8 miles west by south of Cincinnati, Ohio (in Kentucky).
1870	39°12'0"	83°35'42"	48 miles east by north of Cincinnati, Ohio.
1860	39°0'24"	82°48'48"	20 miles south by east of Chillicothe, Ohio.
1850	38°59'0"	81°19'0"	23 miles southeast of Parkersburg, W.Va. ²
1840	39°2'0"	80°18'0"	16 miles south of Clarksburg, W.Va. ²
1830	38°57'54"	79°16'54"	19 miles west-southwest of Moorfield, W.Va. ²
1820	39°5'42"	78°33'0"	16 miles east of Moorefield, W.Va. ²
1810	39°11'30"	77°37'12"	40 miles northwest by west of Washington, D.C. (in Virginia).
1800	39°16'6"	76°56'30"	18 miles west of Baltimore, Md.
1790	39°16'30"	76°11'12"	23 miles east of Baltimore, Md.

¹Conterminous United States excludes Alaska and Hawaii.

²West Virginia was set off from Virginia, Dec. 31, 1862, and admitted as a State June 19, 1863.

unincorporated places of 2,500 inhabitants or more; and (c) other territory, incorporated or unincorporated, included in urbanized areas. The population not classified as urban constitutes the rural population.

In censuses prior to 1950, the urban population comprised all persons living in incorporated places of 2,500 or more and areas (usually minor civil divisions) classified as urban under special rules relating to population size and density. The most important component of the urban territory in any definition is the group of incorporated places having 2,500 inhabitants or more. A definition of urban territory restricted to such places, however, would exclude a number of large and densely settled places merely because they are not incorporated. Prior to 1950, an effort was made to avoid some of the more obvious omissions by inclusion of selected places which were classified as urban under special rules. Even with these rules, however, many large and closely built-up places were excluded from the urban territory.

To improve its measure of the urban population, the Bureau of the Census adopted, in 1950, the concept of the urbanized area and delineated boundaries for unincorporated places. With the adoption of the urbanized area and unincorporated place concepts for the 1950 census, the urban population was defined as all persons residing in urbanized areas and, outside these areas, in all places incorporated or unincorporated, which had 2,500 inhabitants or more. With the following two exceptions, the 1950 definition of urban was continued substantially unchanged to 1960 and 1970. In 1960 (but not in 1970), certain towns in the New England States, townships in New Jersey and

Pennsylvania, and counties elsewhere were designated as urban. However, most of the population of these "special rule" areas would have been classified as urban in any event because they were residents of an urbanized area or an unincorporated place of 2,500 or more. Second, the introduction of the concept of "extended cities" in 1970 has very little impact on the urban and rural figures generally.

Extended cities.—Over the 1960-1970 decade there has been an increasing trend toward the extension of city boundaries to include territory essentially rural in character. Examples are city-county consolidations such as the creation of the city of Chesapeake, Va., from South Norfolk city and Norfolk County and the extension of Oklahoma City, Okla., into five counties. The classification of all the inhabitants of such cities as urban would include in the urban population persons whose environment is primarily rural in character. In order to separate these people from those residing in the closely settled portions of such cities, the Bureau of the Census examined patterns of population density and classified a portion or portions of each such city as rural. An extended city contains one or more areas, each at least 5 square miles in extent and with a population density of less than 100 persons per square mile according to the 1970 census. The area or areas constitute at least 25 percent of the land area of the legal city or total 25 square miles or more. The delineation of extended cities was limited to cities in urbanized areas.

These cities—designated as extended cities—thus consist of an urban part and a rural part. In table 31, the population figures for the two

parts are shown separately, under the total population for the entire city. In chapters A, B, and C, when an extended city is a central city of an urbanized area or a standard metropolitan statistical area, only the urban part is considered as the central city. (However, in tables 38 to 40 of chapter A, the population of the entire, or legal, city is included for the purpose of presenting data on annexations.) When the extended city is shown separately under the area, the city name is followed by the term "urban part." In tables in which the city name is not followed by this term, the population figure shown is for the entire city. In chapter D, figures for central cities refer to the entire population within the legal city boundaries.

"Current" and "previous" definitions.—In the tables showing historical data by urban and rural residence, the "current" figures refer to the definitions used in 1950, 1960, and 1970. The "previous" figures refer to the definitions used in 1940 and previous years. Although the definition was not always identical during these earlier years, the "previous" figures presented in this report have been adjusted to constitute a substantially consistent series based on the 1940 definition.

Farm and nonfarm residence.—The rural population is subdivided into the rural-farm population, which comprises all rural residents living on farms, and the rural-nonfarm population, which comprises the remaining rural population. As in the 1960 census, the farm population consists of persons living on places of 10 or more acres from which sales of farm products amounted to \$50 or more in the preceding calendar year or on places of fewer than 10 acres from which sales

of farm products amounted to \$250 or more in the preceding year.

Farm residence in accordance with this definition was determined from answers to questions H17 and H18, asked of households in the 20-percent sample (see facsimiles of questionnaire items and instructions, pages App-59 and 60).

Persons in rural territory who, according to the definition, were not living on farms were classified as non-farm residents. All persons living in group quarters except those in agricultural workers camps on farms are classified as nonfarm.

Farm and nonfarm residence has been obtained in each census since that of 1930. For 1970, as in the 1960 census, the figures are for the farm population residing in rural territory. In all other censuses, farm or nonfarm residence was determined for persons in cities and other territory classified as urban as well as in rural territory.

Users of the data on farm and nonfarm residence should refer to the "Correction Note" in chapter C.

COUNTIES

The primary divisions of the States are, in general, termed counties, but in Louisiana these divisions are known as parishes. There are no counties in Alaska. In this State, statistical areas called census divisions were developed for general statistical purposes through the cooperation of the State and the Census Bureau and are treated as county equivalents. In four States (Maryland, Missouri, Nevada, and Virginia), there are one or more cities which are independent of any county organization and thus constitute primary divisions of their States. In Puerto Rico, areas comparable to counties are called municipios. Table

D shows the distribution of counties by size in the United States.

COUNTY SUBDIVISIONS

Statistics for subdivisions of counties are presented as follows:

- (a) Minor civil divisions in 28 States.
- (b) Census county divisions in 21 States.
- (c) In Alaska, boroughs and reservations for those census divisions (the county equivalent) which are so subdivided.

Minor civil divisions.—Minor civil divisions (MCD's) represent the primary political or administrative subdivisions established by State law. Where more than one type of primary division exists in a county, the Census Bureau uses the more stable type so as to provide comparable statistics from decade to decade, insofar as possible. The most common type of MCD is the civil township, but there are also towns, magisterial districts, precincts, etc. In some States, incorporated places are MCD's in their own right; in other States, they are subordinate to the MCD in which they are located, or the pattern is mixed—some incor-

porated places are independent minor civil divisions and others are subordinated to the minor civil division. In the New England States, there is considerably more interest in these subdivisions than is generally true elsewhere. Therefore, in the New England States, statistics for these areas (which are designated as "towns") are presented in the tables which present data for places; the towns are interspersed alphabetically with the places and are identified by the word "town" after the name.

Census county divisions.—Census county divisions (CCD's) were established first in the State of Washington for use in the 1950 census. Between 1950 and 1960, they were established in 17 other States; and during the last decade, in three additional States (Delaware, North Dakota, and Oklahoma). In reviewing the existing CCD's for the 1970 census, some revisions were made to improve their usefulness. For example, most of the counties which were a single division in 1960 were divided into two census county divisions to provide more area detail.

CCD's represent community areas which have been defined in recent decades by the Census Bureau with the

TABLE D. Counties Grouped According to Population Size: 1970 and 1960

Size of County	1970		1960	
	Number	Percent	Number	Percent
Total ¹	3,141	100.0	3,134	100.0
Under 1,000	26	0.8	20	0.6
1,000 to 5,000	299	9.5	274	8.7
5,000 to 10,000	554	17.6	561	17.9
10,000 to 50,000	1,583	50.4	1,683	53.7
50,000 to 100,000	332	10.6	293	9.3
100,000 and over	347	11.0	303	9.7

¹ Includes county equivalents.

cooperation of the Governors and State and local officials. In these States, the CCD's have replaced a variety of MCD's which were unsatisfactory for statistical purposes principally because their boundaries frequently changed, were imaginary lines, or were not well known by many of the inhabitants. CCD's have relatively permanent boundaries which follow physical features or the limits of incorporated places. Where an unincorporated enclave exists within a city, it is included in the same CCD as the city. In establishing CCD's, consideration was given mainly to the trade or service areas of principal settlements and in some cases to major land use or physiographic differences. Each CCD has a name which is generally the name of the principal place listed within it, except in the State of Washington where most of the divisions are numbered rather than named.

Unorganized territories.—In the States of Maine, Minnesota, and South Dakota there are a number of counties which contain two or more discontinuous unorganized territories, i.e., territory not included in a minor civil division. To improve the utility of census data for these States, each separate area of unorganized territory in these States is recognized as one or more subdivisions and given a name preceded by the designation "Unorg. Terr. of." Small isolated units of unorganized territory also are found in a few counties in other States but do not require special treatment.

PLACES

Two types of places are recognized in the census reports—incorporated places and unincorporated places, as defined below.

Incorporated places.—These are political units incorporated as cities, boroughs, towns, and villages with the following exceptions: (a) boroughs in Alaska and (b) towns in the New England States, New York, and Wisconsin. Boroughs in Alaska are treated as county subdivisions and may include one or more incorporated places. The towns in the New England States, New York, and Wisconsin are minor civil divisions similar to the townships found in other States and not necessarily thickly settled centers of population such as the cities, boroughs, towns, and villages in other States. Similarly, in New Jersey and Pennsylvania, where some townships possess powers and functions similar to those of incorporated places, the townships are not classified as "incorporated places." Thus, some minor civil divisions which are "incorporated" in one legal sense of the word are not regarded by the Census Bureau as "incorporated places." Without this restriction all of the towns in the New England States, New York, and Wisconsin, and the townships in New Jersey and Pennsylvania would have to be counted as incorporated places without any consideration of the nature of population settlement. The densely settled portions of some are recognized as unincorporated places or as part of an urbanized area.

In Hawaii and Puerto Rico, there are no incorporated places in the sense of a functioning local governmental unit. However, places have been recognized and boundaries established for them. Such places are treated as incorporated in the 1970 census.

Unincorporated places.—As in the 1950 and 1960 censuses, the Census Bureau has delineated boundaries for closely settled population centers

without corporate limits. Each place so delineated possesses a definite nucleus of residences and has its boundaries drawn to include, if feasible, all the surrounding closely settled area. Outside urbanized areas, those unincorporated places with a population of 1,000 or more are presented in the census reports in the same manner as incorporated places of equal size. Within urbanized areas, unincorporated places are shown only if they have 5,000 inhabitants or more and there was an expression of local interest in their recognition.

Unincorporated places with 2,500 inhabitants or more are shown in table 31 and are identified with the letter "U." Unincorporated place boundaries change with changes in the settlement pattern; a place which has the same name in 1970 as in previous decades does not necessarily have the same boundaries. Boundary outlines for unincorporated places appear on maps in chapter A for each State part. Detailed maps are available for purchase from the Census Bureau.

The following modifications in the delineation of unincorporated places were introduced in the 1970 census:

1. Selected towns in the New England States and townships in Pennsylvania and New Jersey are not regarded as urban as in 1960. Therefore, unincorporated places are defined for the built-up area of these towns and townships outside urbanized areas in the same manner as they are in the rest of the country.
2. In urbanized areas outside of the New England States, unincorporated places with 5,000 inhabitants or more are recognized; in 1960 only places of 10,000 inhabitants

or more were recognized. In the New England States, no unincorporated places are recognized within urbanized areas.

3. Built-up parts of military installations outside incorporated places are recognized as unincorporated places.
4. All places in Hawaii are treated as incorporated places, with boundaries defined by the State; in 1960, all places other than Honolulu and Hilo were considered as unincorporated places with boundaries defined by the Census Bureau.
5. Arlington County, Virginia, is treated as an unincorporated place; it is the only such place which consists of an entire county.

Annexations.—The population figure for an incorporated place at earlier censuses applies to the area of the place at the time of the given census. Hence, the indicated change in population reflects the effect of any annexations or detachments. In order to permit the analysis of the relative importance of population growth within old boundaries and of population added by annexation, separate counts of the population in annexed areas were made for the first time in the 1960 census for incorporated places having 2,500 inhabitants or more in 1950. In 1970, the data were compiled for incorporated places having 2,000 inhabitants or more in 1960. A summary showing the annexation data by States appears in table 30.

Detachments from cities are far less frequent than annexations, and, for the most part, involve smaller areas. As in 1960, information was not obtained on detachments.

URBANIZED AREAS

The major objective of the Census Bureau in delineating urbanized areas is to provide a better separation of urban and rural population in the vicinity of the larger cities. An urbanized area consists of a central city, or cities, and surrounding closely settled territory. The specific criteria for the delineation of an urbanized area are as follows:

- 1a. A central city of 50,000 inhabitants or more in 1960, in a special census conducted by the Census Bureau since 1960, or in the 1970 census; or
- b. Twin cities, i.e., cities with contiguous boundaries and constituting, for general social and economic purposes, a single community with a combined population of at least 50,000, and with the smaller of the twin cities having a population of at least 15,000.
2. Surrounding closely settled territory, including the following (but excluding the rural portions of extended cities, see "Urban and Rural Residence," above):
 - a. Incorporated places of 2,500 inhabitants or more.
 - b. Incorporated places with fewer than 2,500 inhabitants, provided that each has a closely settled area of 100 housing units or more.
 - c. Small parcels of land normally less than one square mile in area having a population density of 1,000 inhabitants or more per square mile. The areas of large nonresidential tracts devoted to such urban land uses as railroad yards, airports, factories, parks, golf courses, and cemeteries are excluded in computing the population density.

- d. Other small areas in unincorporated territory with lower population density provided that they serve

- to eliminate enclaves, or
- to close indentations in the urbanized areas of one mile or less across the open end, or
- to link outlying enumeration districts of qualifying density that are not more than 1½ miles from the main body of the urbanized area.

The 1970 criteria are essentially the same as those used in 1960 with two exceptions. The extended city concept is new for 1970. Secondly, in 1960, towns in the New England States, townships in New Jersey and Pennsylvania, and counties elsewhere, which were classified as urban in accordance with specific criteria, were included in the contiguous urbanized areas. In 1970, only those portions of towns and townships in these States that met the rules followed in defining urbanized areas elsewhere in the United States are included.

All persons residing in an urbanized area are classified as urban. The urbanized area population is sometimes divided into those in the "central city (or cities)" and those in the remainder of the area or the "urban fringe." The "central city" category consists of the population of the cities named in the title of the urbanized area.¹ The title

¹ The four exceptions are:
 New York, N.Y.—Northeastern New Jersey, which includes New York, Newark, Jersey City, Paterson, Clifton, and Passaic
 Chicago, Ill.—Northwestern Indiana, which includes Chicago, Gary, Hammond, and East Chicago
 Los Angeles-Long Beach, which includes Los Angeles, Long Beach, Anaheim, Santa Ana, and Garden Grove
 San Francisco-Oakland, which includes San Francisco, Oakland, and Vallejo.

is limited to three names and normally lists the largest city first and the other qualifying cities in size order; this order is, in many cases, based on 1960 population because most names were fixed before the 1970 counts were available. For the other cities to be listed in the title, they must have (a) 250,000 inhabitants or more or (b) at least one-third the population of the largest city and a population of 25,000 or more (except in the case of the small twin cities).

STANDARD METROPOLITAN STATISTICAL AREAS

Definition.—The Bureau of the Census recognizes 243 standard metropolitan statistical areas (SMSA's) in the United States and 4 in Puerto Rico, making a total of 247 in the 1970 census. These include the 231 SMSA's as defined and named in the Bureau of the Budget publication, *Standard Metropolitan Statistical Areas: 1967*, U.S. Government Printing Office, Washington, D.C. 20402. Since 1967, 16 SMSA's have been added, of which two were defined in January 1968, and an additional 14 were defined in February 1971 on the basis of the results of the 1970 census. Changes in SMSA boundaries or titles made after February 1971 are not recognized in this series of reports. SMSA's are defined by the Office of Management and Budget (formerly Bureau of the Budget).

Except in the New England States, a standard metropolitan statistical area is a county or group of contiguous counties which contains at least one city of 50,000 inhabitants or more, or twin cities with a combined population of at least 50,000. In addition to the county or counties containing such a city or cities, contiguous

counties are included in an SMSA if, according to certain criteria, they are socially and economically integrated with the central county. In a few SMSA's, where portions of counties outside the SMSA were annexed to the central city, the population living in those counties is not considered part of the central city or SMSA. In the New England States, SMSA's consist of towns and cities instead of counties. Each SMSA must include at least one central city, and the complete title of an SMSA identifies the central city or cities. For a detailed description of the criteria used in defining SMSA's, see the Bureau of the Budget publication cited above.

The population living in SMSA's is designated as the metropolitan population. The population is subdivided as "inside central city or cities" and "outside central city or cities." The population living outside SMSA's constitutes the nonmetropolitan population.

The figures for central cities shown in chapter D may differ from those shown in chapters A, B, and C. In those chapters, if a central city of an SMSA is an extended city, the figures shown for the central city were restricted to the urban portion of the city (except tables 38 to 40). In addition, parts of central cities outside the SMSA boundaries were excluded from the central city population. In chapter D, however, figures for central cities refer to the entire population within the legal city boundaries, including any rural and nonmetropolitan parts.

Relation to urbanized areas.—The urbanized area can be characterized as the physical city as distinguished from both the legal city and the metropolitan community. Generally, urbanized

areas are smaller than SMSA's and in most cases contained in SMSA's. However, in a few instances, the fact that the boundaries of SMSA's are determined by political lines, and those of urbanized areas by the pattern of urban land use, means that there are small segments of urbanized areas which lie outside SMSA's. In general, then, urbanized areas represent the thickly settled core of the SMSA's, with the exceptions noted above. The population in urbanized areas outside SMSA's is relatively small as compared with the population in SMSA's outside urbanized areas (see table E). This situation reflects, as might be expected, the existence of considerable rural areas in metropolitan counties, particularly outside the Northeast, and, to a lesser extent, places of 2,500 inhabitants or more which are not in urbanized areas.

There is generally one urbanized area in each standard metropolitan statistical area. Sometimes, however, there are two because there exists another qualifying city with 50,000 inhabitants or more whose surrounding urban fringe is separated from the urban fringe of the larger central city or cities. (The Chicago metropolitan area has three urbanized areas wholly or partly within it.) In other cases, a single urbanized area covers portions of two or more standard metropolitan statistical areas. One metropolitan area (New London-Groton-Norwich, Conn.) has no urbanized area.

STANDARD CONSOLIDATED AREAS

In view of the special importance of the metropolitan complexes around New York and Chicago, the Nation's two largest cities, several contiguous

TABLE E. Population Inside and Outside Urbanized Areas and Standard Metropolitan Statistical Areas: 1970

Location	Total	Inside SMSA's		Outside SMSA's	
		Total	Inside central cities		Outside central cities
United States	203,211,926	139,418,811	63,796,943	75,621,868	63,793,115
Inside urbanized areas	118,446,566	116,881,936	63,612,584	53,269,352	1,564,630
Inside central cities	63,921,684	63,921,684	63,499,699	421,985	—
Outside central cities	54,524,882	52,960,252	112,885	52,847,367	1,564,630
Outside urbanized areas	84,765,360	22,536,875	184,359	22,352,516	62,228,485

SMSA's and additional counties that do not appear to meet the formal integration criteria but do have strong interrelationships of other kinds have been combined into the New York-Northeastern New Jersey and the Chicago-Northwestern Indiana Standard Consolidated Areas, respectively. The former consists of Middlesex and Somerset Counties in New Jersey and the following SMSA's: New York, Newark, Jersey City, and Paterson-Clifton-Passaic. The latter consists of the following SMSA's: Chicago and Gary-Hammond-East Chicago.

CONGRESSIONAL DISTRICTS

Table 13 presents statistics on the number of persons in each Congressional District. The figures relate to the districts as defined for the 91st Congress. Information on the population of the Congressional Districts of the six States which redistricted for the 92d Congress appears at the end of the table.

STATE ECONOMIC AREAS AND ECONOMIC SUBREGIONS

Definition.—State economic areas are relatively homogeneous subdivisions of

States. They consist of single counties or groups of counties which have similar economic and social characteristics. The boundaries of these areas have been drawn in such a way that each State is subdivided into major parts, with each part having certain significant characteristics which distinguish it from adjoining areas.

The State economic areas were originally delineated for the 1950 censuses. The grouping of the 3,103 counties or county equivalents in 1950 into State economic areas was the product of a special study sponsored by the Bureau of the Census in cooperation with the Bureau of Agricultural Economics and several State and private agencies. The delineation procedure was devised by Dr. Donald J. Bogue, then of the Scripps Foundation for Research in Population Problems, on loan to the Bureau of the Census.²

Originally, 501 areas were delineated, but in the publications of the 1950 Census of Population, combination of areas reduced the number to 453. The 1960 set of State economic

²For further discussion and materials on State economic areas and their uses, see U.S. Bureau of the Census, *State Economic Areas*, U.S. Government Printing Office, Washington, D.C., 1951.

areas represented a limited revision of the 1950 areas. This revision took into account changes in the definitions of standard metropolitan statistical areas, but no attempt was made to re-examine the original principles or to apply them to more recent data relating to homogeneity. In addition, State economic areas were delineated for Alaska and Hawaii for the first time. As a result of the revision, the number of areas was increased from 501 to 509. In 1970, the only change was the designation of Brown County, Wisconsin, as a metropolitan State economic area, bringing the total to 510.

Relation to standard metropolitan statistical areas.—The combination of counties into State economic areas had been made for the entire country, and in this process the larger standard metropolitan statistical areas (those in 1960 with a central city of 50,000 or more and a total population of 100,000 or more) were recognized as metropolitan State economic areas.³ When a standard metropolitan statis-

³In 1950 those standard metropolitan areas with a total population of 100,000 or more in 1940 were recognized as metropolitan State economic areas.

tical area was located in two or more States or economic subregions, each State part and each part in an economic subregion became a separate metropolitan State economic area. In New England this correspondence of metropolitan State economic areas and standard metropolitan statistical areas did not exist because State economic areas are composed of whole counties, whereas standard metropolitan statistical areas are built up from towns. Here a county with more than half its population in one or more standard metropolitan statistical areas was classified as a metropolitan State economic area if the county or a combination of counties containing the standard metropolitan statistical area or areas had 100,000 inhabitants or more.

The State economic area in which a county is located is shown in table 24 in parentheses following the county name. A letter designates a metropolitan, and a figure a nonmetropolitan, State economic area.

Economic subregions.—These areas represent combinations of State economic areas. The 510 State economic areas are consolidated into a set of 121 areas which cut across State lines but which, as intended, preserve to a great extent the homogeneous character of

the State economic areas. No changes were made in the boundaries of the 119 economic subregions of 1950 in conterminous United States. Two new subregions were established for the 1960 census, one in Alaska and one in Hawaii.

Figures on the population of the economic subregions by urban and rural residence are presented in table 43, and a map showing the boundaries of the economic subregions and State economic areas appears on page 10.

SPECIAL CENSUSES

The Bureau of the Census has an established procedure for taking a special census at the request and expense of a local government or community. Generally, the areas for which special censuses are taken are those which have experienced an unusual increase in population either because of changes in political boundaries or because of relatively high immigration. Special censuses have also been taken to establish the population of newly incorporated places. The areas in which special censuses were conducted by the Bureau of the Census between April 1, 1960, and April 1, 1970, are shown in table 45; more than 1,600 special censuses were

conducted during the decade 1960 to 1970.

The Bureau of the Census has published separately the results of the special censuses in varying detail in **Current Population Reports, Series P-28.**

CENSUS TRACTS

Census tracts are small areas into which large cities and adjacent areas have been divided for statistical purposes. In standard metropolitan statistical areas, tracts were established by the Bureau of the Census in cooperation with a local committee. Tracts were generally designed to be relatively uniform with respect to population characteristics, economic status, and living conditions. The average tract has about 4,000 residents. Tract boundaries are established with the intention of being maintained over a long time so that comparisons may be made from census to census. Population and housing data from the 1970 census are published for tracts in 241 standard metropolitan statistical areas, 238 in the United States and 3 in the Commonwealth of Puerto Rico. Statistics on the characteristics of the population and housing units for each tracted area are published in Series PHC(1), **Census Tracts.**

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GENERAL

As stated in the introductory text, the 1970 census was conducted primarily through self-enumeration. The principal determinant for the responses was, therefore, the questionnaire and its accompanying instruction sheet. Furthermore, census takers were instructed, in their telephone and personal-visit interviews, to read the questions directly from the questionnaire. The definitions and explanations given below for each subject are largely drawn from various technical and procedural materials used in the collection of the data. This material helped the enumerative personnel to understand more fully the intent of each question and thus to resolve problem or unusual cases in a manner consistent with this intent. Also included is certain explanatory information to assist the user in the proper utilization of the statistics. Facsimiles of the census questions and respondent instructions are presented on pages App-53 to App-60.

Data on some of the subjects covered in this report as well as other social and economic characteristics of the population are also available from the Current Population Survey (CPS). This nationwide survey, covering a sample of approximately 50,000 occupied housing units, is conducted monthly by the Bureau of the Census and provides statistics for the United States by regions and by residence inside and outside standard metropolitan statistical areas.

The concepts and definitions used in the CPS in 1970 were generally the same as those used in the 1970 census. Differences between statistics based on the CPS and census samples may be attributed to differing sample sizes and estimation procedures, to sampling

variability, and to variation in survey procedures and enumerators.

SOCIAL CHARACTERISTICS

AGE

The data on age were derived from answers to questions 5, 6, and 7, which were asked of all persons (see facsimiles of questionnaire items and instructions on page App-53). Only the information in items 6 and 7 was read into the computer. Answers in item 5, which was not FOSDIC readable, were used during field review to fill any blanks in items 6 and 7. The age classification is based on the age of the person in completed years as of April 1, 1970. The data on age represent the difference, as calculated in the computer, between date of birth and April 1, 1970.

In the computation of median age, if the median falls in the terminal category of an age distribution, the method of presentation is to show the initial age of the terminal category followed by a plus sign; thus, if the median falls in the category "75 years and over," it is shown as "75+." Median age in all tables is computed from data for 5-year age groups.

For the category "62 years and over," the 1960 data shown in these tables include an estimate of the number of persons 62 to 64 years old.

The number of persons shown as 100 years old and over in the 1970 census is overstated, apparently because of a misunderstanding by some persons in filling the age portion of the census questionnaire. This kind of reporting error appears to have affected the count of persons 100 years and over in varying degree in all of the States. Available evidence

suggests that the true number of persons 100 years old and over in the United States does not exceed several thousand and is possibly less than 5,000, as compared with the tabulated figure of 106,441.

In each census, up through the 1950 census, in which data on single years of age have been collected, there have been notable overstatements of ages ending in certain digits and understatements for other digits. Although this tendency toward "digit preference" or "age heaping" had declined fairly steadily through 1950, certain characteristic patterns and differentials (by sex, color, etc.) persisted. By 1960

and 1970, however, "age heaping" had been reduced to such a low level that it cannot readily be distinguished from other errors in the data and from real fluctuations in population due to past fluctuations in births, deaths, and net migration. In any case, heaping was minimal and, if the measures essentially reflect heaping, new patterns of digit preference appear. That some such changes might occur in the 1960 and 1970 censuses had been anticipated not only because of the use of self-enumeration but also because of the use of a question on date of birth rather than on completed years of age as a source of data on age.

Table F shows the relative preference for terminal digits of age in the United States censuses from 1880 to 1970 in terms of Myers' "blended method" and his summary index of the deviations from expected values. The gradual lessening of digital preference over the years is very clearly demonstrated in the table, both in the preference for specific digits and in the summary index. For reasons suggested above, the drop in the index between 1950 and 1960 was greater than was to be expected from the trend of earlier years. On the other hand, there was little difference in the indexes for 1960 and 1970. The index was only

TABLE F. Adjusted Percent of Population With Ages Ending in Each Digit 0 to 9: 1880 to 1970
(Myers' Blended Method based on ages 23 to 99 for 1880 to 1960(A) and ages 23 to 82 for 1960(B) and 1970)

Digit of age	1880	1890	1900	1910	1920	1930	1940	1950 ¹	1960 ² A	1960 ³ B	1970
All digits	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
0	16.8	15.1	13.2	13.2	12.4	12.3	11.6	11.2	9.9	10.0	10.6
1	6.7	7.4	8.3	7.7	8.0	8.0	8.5	8.9	9.9	10.0	9.9
2	9.4	9.7	9.8	10.2	10.2	10.3	10.4	10.2	9.9	10.0	10.0
3	8.6	9.1	9.3	9.2	9.4	9.4	9.6	9.7	9.8	9.6	9.6
4	8.8	9.0	9.5	9.4	9.4	9.6	9.7	9.7	10.1	10.0	9.8
5	13.4	12.3	11.3	11.5	11.3	11.2	10.7	10.6	10.3	10.2	10.0
6	9.4	9.6	9.4	9.6	9.7	9.6	9.6	9.8	9.9	9.9	9.9
7	8.5	8.9	9.3	9.1	9.4	9.3	9.6	9.7	10.1	10.1	10.2
8	10.2	10.4	10.2	10.7	10.6	10.5	10.3	10.2	9.8	9.8	10.0
9	8.2	8.5	9.7	9.4	9.6	9.8	10.0	10.1	10.3	10.4	10.1
Index ⁴	10.4	7.8	4.7	5.6	4.5	4.3	3.0	2.2	0.8	0.7	0.8

¹ Based on a 20-percent sample.

² Based on a 25-percent sample. Age range is 23 to 99.

³ Based on a 25-percent sample. Age range is 23 to 82.

⁴ The index is one-half the sum of the deviations from 10.0 percent, each taken without regard to sign.

Sources: 1880-1950, Robert J. Myers, "Accuracy of Age Reporting in the 1950 United States Census," *Journal of the American Statistical Association*, Vol. 49, No. 268, December 1954, p. 828, table 1.
1960 and 1970, computed by the Bureau of the Census.

0.7 in 1960 and 0.8 in 1970 (for ages 23 to 82). The apparent slight rise between 1960 and 1970 should not be interpreted to indicate a deterioration in age reporting. The Myers' index is too crude a measure of digital preference to identify such small changes in heaping.

In addition to errors resulting from preference for an avoidance of certain terminal digits, the published data for single years of age are also affected by other types of age biases and by coverage error (i.e., excess of omissions over duplications). As digit preference is reduced to relatively low levels, these other types of errors tend to become the more important ones in the tabulated data on single years of age. This shift may already have occurred by 1960.

Data in 5-year age groups are not much affected by digital bias, although some residual error resulting from this tendency may remain. For example, when indexes of digital bias are combined for ages ending in 0 to 4 and 5 to 9 in 1970 to reflect the effect of "heaping" in age statistics tabulated in the conventional 5-year groups, the resulting figures differ from the expected 50.0 by 0.2. In 1960, this index was 0.4.

In each census since 1940 the Bureau of the Census has estimated the age of a person when it was not reported. In censuses before 1940, with the exception of 1880, persons of unknown age were shown as a separate category.

The summary totals for "14 years and over" and "21 years and over" for earlier censuses included all persons of "unknown age" since there is evidence that most of the persons for whom age was not reported were in the age classes above these limits. In 1960 and 1970 assignment of unknown ages was

performed by the allocation procedure.

SEX

The data on sex were derived from answers to question 3 (see facsimile of questionnaire item on page App-53). At the time of field review, most of the comparatively small number of cases in which sex was not reported were resolved by determining the appropriate entry from the person's given name and household relationship. For the remaining cases, sex was assigned through the allocation process.

RACE

The data on race were derived from answers to question 4, which was asked of all persons (see facsimile of questionnaire item, page App-53). The concept of race as used by the Bureau of the Census does not denote any scientific definition of biological stock. Rather it reflects self-identification by respondents. Since the 1970 census obtained information on race primarily through self-enumeration, the data represent essentially self-classification by people according to the race with which they identify themselves.

For persons of mixed parentage who were in doubt as to their classification, the race of the person's father was to be used. In 1960, persons who reported mixed parentage of white and any other race were classified according to the other race; mixtures of races other than white were classified according to the race of the father.

The category "white" includes persons who indicated their race as white, as well as persons who did not classify themselves in one of the

specific race categories on the questionnaire but entered Mexican, Puerto Rican, or a response suggesting Indo-European stock. In the 1930 census reports, Mexicans were classified as in the "other" race category; however, the 1930 data in this report have been revised to include Mexicans in the white population, as is the case for all other census years shown in this report.

The category "Negro" includes persons who indicated their race as Negro or Black, as well as persons who did not classify themselves in one of the specific race categories on the questionnaire but who had such entries as Jamaican, Trinidadian, West Indian, Haitian, and Ethiopian. The term "Negro and other races" includes persons of all races other than white.

The category "Indian" includes persons who indicated their race as American Indian or who did not indicate a specific race category but reported the name of an Indian tribe.

Other races shown separately in some tables of this report are Japanese, Chinese, Filipino, Korean, and Hawaiian. The residual category "all other races" includes all races for which data are not shown separately in the particular table. Thus, the category may include certain of the races just mentioned as well as Aleut and Eskimo, which appeared as separate race categories on the questionnaires for Alaska. In addition, this category includes races covered by the "other" race category on the questionnaire, which was defined to include Malayan, Polynesian, Thai, and other races not included in the specific categories listed on the questionnaire.

A number of persons who marked "other" supplied a write-in entry (e.g., Mexican, Puerto Rican, or Jamaican) which indicated they belonged in one

of the specific race categories. Edit and review operations were performed to correct the questionnaire marking for such persons, and the statistics in chapters C and D of this report reflect the effect of those corrections. At the time of the 100-percent processing, however, not all of these cases had been identified, and the residual race category, consequently, is overstated for some areas in the tables in chapter B. Differences between the statistics on race in chapter B, based on 100-percent data, and those in chapters C and D, based on sample data, are partly due to this editing operation.

If the race entry was missing on the questionnaire for a member of a household, an answer was assigned in the computer according to the race of other household members, using specific rules of precedence of relationship. If race was not entered for anyone in the household, the race of the head of the preceding household was assigned. This procedure is a variation of the general allocation process described in Appendix C, "Accuracy of the Data."

NATIVITY, PLACE OF BIRTH, AND PARENTAGE

The data on nativity, place of birth, and parentage were derived from answers to questions 13, 14, 15, and 16 (see facsimiles of questionnaire items and instructions on pages App-54 and 57). Question 13 was asked of all persons in the 20-percent sample; questions 14 and 15, of all persons in the 15-percent sample; and question 16, of all persons in the 5-percent sample.

Nativity.—Information on place of birth is used to classify the population of the United States into two major

categories: native and foreign born. The category "native" comprises persons born in the United States, in the Commonwealth of Puerto Rico, in an outlying area of the United States, or at sea. Also included in this category is the small number of persons who, although they were born in a foreign country, have at least one native American parent. When information on place of birth was missing, nativity was assigned on the basis of related information. In previous censuses persons for whom nativity was not reported were generally classified as native. Persons not classified as native are classified as "foreign born." The population of the United States has been classified as native or foreign born in every census since 1850.

Statistics on nativity obtained from the 15-percent and the 5-percent samples may differ for reasons other than sampling variability. Persons born in a foreign country were classified as native if they had at least one native parent. On the 15-percent sample, nativity of parents was determined by the entry for birthplace of parents (questions 14 and 15). On the 5-percent sample, where there was no question on birthplace of parents, nativity of persons born in a foreign country was determined by the entry in question 16a; that is, those with an entry of "Born abroad of American parents" were counted as native and all others as foreign born.

Place of birth.—Data on the State of birth of the native population have been collected in each census beginning with that of 1850. For the more recent censuses, State of birth has been published for the native population of the urban, rural-nonfarm, and rural-farm parts of States, and of

individual cities above a specified minimum size. In this report, the native population is classified into the following groups: persons born in the State in which they were residing at the time of the census; persons born in a different State; persons born in Puerto Rico or in an outlying area of the United States; persons born abroad of native American parents or at sea; and persons whose place of birth was not reported. Respondents were instructed to report place of birth in terms of the mother's usual State of residence at the time of the birth rather than in terms of the location of the hospital if the birth occurred in a hospital.

The statistics on State of birth are of value mainly for the information they provide on the historic movements of the native population from one State to another within the United States from the time of birth to the date of the census. The statistics afford no indication of the amount of migration within a given State; nor do they take any account of intermediate moves between the time of a person's birth and the time of the census.

Foreign-born persons were asked to report their country of birth according to international boundaries as recognized by the United States government on April 1, 1970. Since numerous changes in boundaries of foreign countries have occurred in the last century, some foreign-born persons may have reported their country of birth in terms of boundaries that existed at the time of their birth or emigration, or in accordance with their own national preference.

Parentage.—Information on birthplace of parents is used to classify the native population into two categories: native of native parentage and native of

foreign or mixed parentage. The category native of native parentage comprises native persons with both parents born in the United States. The category native of foreign or mixed parentage includes native persons with one or both parents foreign born. The rules for determining the nativity of parents are generally the same as those for determining the nativity of the person himself.

Foreign stock.—The category "foreign stock" includes the foreign-born population and the native population of foreign or mixed parentage. Persons of foreign stock thus comprise all first- and second-generation Americans. In this report, persons of foreign stock are classified according to their country of origin, with separate distributions shown for the foreign born and the native of foreign or mixed parentage. Native persons of foreign parentage whose parents were born in different foreign countries are classified according to the country of birth of the father. Natives of mixed parentage are classified according to the country of birth of the foreign-born parent.

CITIZENSHIP AND YEAR OF IMMIGRATION

Data on citizenship and year of immigration were derived from answers to questions 16a and 16b (see facsimiles of questionnaire items and instructions on pages App-54 and 57). The questions were asked of persons in the 5-percent sample who reported being born in a foreign country. Persons born abroad or at sea who had at least one American parent were to report themselves as "Born abroad of American parents."

Citizenship.—Information on citizenship was used to classify the population into two major categories: citizens and aliens. Citizens are further classified as native or naturalized. "Native" includes all persons born in the United States, Puerto Rico, the Canal Zone, Guam, American Samoa, or the Virgin Islands and persons born abroad of American parents or at sea. It was assumed that all natives were citizens. Similar questions on citizenship were asked in the censuses of 1820, 1830, 1870, and 1890 through 1950.

Year of immigration.—The question was asked of foreign-born persons in the 5-percent sample. The respondent was to indicate the period which covered the year he came to stay permanently in the United States. Information on year of immigration permits the classification of the foreign-born population as long-term residents or recent arrivals. A question on year of immigration was previously asked in every census from 1890 to 1930.

MOTHER TONGUE

Definition.—The data on mother tongue were derived from answers to question 17 (see facsimiles of questionnaire item and instructions on pages App-54 and 57).

The question was asked of all persons in the 15-percent sample. Information on mother tongue is used to assist in identification of the various ethnic groups in the population. In particular, the Spanish language population is defined primarily on this basis. The data on mother tongue may not reflect a person's current language skills since the vast majority of persons

reporting a mother tongue other than English have learned to speak English during or after their childhood.

Comparability with earlier census data.—Before the 1960 census a question on mother tongue was asked in the censuses of 1910, 1920, 1930, and 1940. The comparability of these data is limited to some extent by changes in question wording, in the categories of the population to whom the question was addressed, and in the detail that was published. In the 1910 and 1920 censuses, statistics on mother tongue were published for the foreign white stock; in 1930, they were published for the foreign-born white population; and in 1940, they were published for the native white of native parentage as well as the foreign white stock. In 1960, the data on mother tongue were shown for the foreign-born population of all races combined. In 1970, they are shown for all persons and according to various subgroups. In 1960 and 1970, if both English and another mother tongue were reported, preference was always given to the language other than English. This procedure may reduce somewhat the proportion of the foreign-born population classified as having English as their mother tongue.

SPANISH HERITAGE

Social and economic characteristics are presented for the population of Spanish heritage, which is identified in various ways, using information derived from the 15-percent sample. In 42 States and the District of Columbia, this population is identified as "Persons of Spanish language"; in five Southwestern States, as "Persons of Spanish language or Spanish

surname"; and in the three Middle Atlantic States, as "Persons of Puerto Rican birth or parentage." The specific definitions involved in identifying these population groups are given below. The number of persons in each component of the population of Spanish heritage is shown in tables 86, 97, 108, and 136. In tables 88 and 89, the statistics on disability, vocational training, and marital history in the columns for persons of Spanish heritage refer to persons of Spanish origin or descent (see definition below); those characteristics were collected on a 5-percent sample basis and, therefore, can be cross-tabulated only with the 5-percent item on Spanish origin.

Spanish language.—Persons of Spanish language comprise persons of Spanish mother tongue and all other persons in families in which the head or wife reported Spanish as his or her mother tongue.

Spanish surname.—In five Southwestern States (Arizona, California, Colorado, New Mexico, and Texas), persons with Spanish surnames were identified by means of a list of over 8,000 Spanish surnames originally compiled by the Immigration and Naturalization Service⁴ (and later updated by the Bureau of the Census). In the five Southwestern States, the population of Spanish heritage consists of persons of Spanish language combined with all other persons of Spanish surname. The number of these additional persons is shown in the

⁴U.S. Immigration and Naturalization Service, *Supplement to Manual of Immigration Spanish-Spanish Personal Names*, selected by Inspector George Lockwood, New York, 1936.

category "Other persons of Spanish surname."

Puerto Rican birth or parentage.—The population of Puerto Rican birth or parentage includes persons born in Puerto Rico and persons born in the United States or an outlying area with one or both parents born in Puerto Rico. In New York, New Jersey, and Pennsylvania, the population of Spanish heritage consists of persons of Puerto Rican birth or parentage.

In chapter D, for the Wilmington, Del.-N.J.-Md. SMSA, the population of Spanish heritage is the sum of persons of Spanish language in the Delaware and Maryland portions of the area and persons of Puerto Rican birth or parentage in the New Jersey portion.

SPANISH ORIGIN OR DESCENT

On the 5-percent sample questionnaire, a question was asked to identify persons of Spanish origin or descent (see facsimile of questionnaire item 13b, page App-54) and was used in cross-tabulations with 5-percent sample data. A person was classified as being of Spanish origin or descent if his or her entry for this question was any of the following: Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish.

For certain areas, the number of persons of Spanish origin or descent is overstated because some respondents apparently misunderstood the question and interpreted "Central or South American" to mean central or southern United States. Available evidence suggests that this misinterpretation resulted in an overstatement which was substantial in some southern States and may have occurred, to a lesser degree, in States in the central area of the country.

YEAR MOVED INTO PRESENT HOUSE

The data on year moved into present house were derived from the answers to question 18 (see facsimiles of questionnaire item and instructions, pages App-54 and 57).

The question was asked of all persons in the 15-percent sample. As in 1960, respondents were asked to answer in terms of the most recent move they had made. The intent was to obtain the year when the person established his usual residence in the housing unit. Thus, a person who had moved back into the same house (or apartment) in which he had previously lived was asked to give the date at which he began the present occupancy. If a person had moved from one apartment to another in the same building, he was expected to give the year when he moved into the present apartment. The category "always lived in this house or apartment" consists of persons who reported that their residence on April 1, 1970, was the same as their residence at birth and who had never had any other place of residence.

RESIDENCE IN 1965

The data on residence in 1965 were derived from answers to question 19 on the 15-percent sample questionnaire and question 36 on the 5-percent sample questionnaire (see facsimiles of questionnaire items and instructions, pages App-54, 56, and 57, 58). Question 19 asked the State (or foreign country), the county, and, if applicable, the city of residence on April 1, 1965. Question 36 asked only the State of residence and was asked only of persons 14 years old and over. In question 36 the respondent was asked to mark "This State" if his State of

residence at the time of the 1970 enumeration was the same as in April 1965. Otherwise, the name of the State or foreign country of residence in 1965 was to be entered.

Residence on April 1, 1965, is the usual place of residence 5 years before enumeration. Residence in 1965 was used in conjunction with residence in 1970 to determine the extent of residential mobility of the population. The category "same house" includes all persons 5 years old and over who did not move during the 5 years as well as those who had moved but by 1970 had returned to their 1965 residence.

Persons who had changed residence from 1965 to 1970 were classified into groups according to type of move. The category "different house in United States" includes persons who, on April 1, 1965, lived in the United States in a different house from the one they occupied on April 1, 1970, and for whom sufficient information concerning the 1965 residence was collected. These persons were subdivided into three groups according to their 1965 residence: "different house, same county," "different county, same State," and "different State." The second and third groups make up the population classified as "migrants." The third group was further subdivided by region of 1965 residence.

The category "abroad" includes those with residence in a foreign country, Puerto Rico, or an outlying area of the United States in 1965, including Armed Forces stationed overseas. Persons 5 years old and over who indicated they had moved into their present residence after April 1, 1965, but for whom sufficiently complete and consistent information regarding residence on April 1, 1965, was not collected, are included in the

group "moved, 1965 residence not reported." When no information was reported for the person himself, information for other members of the family was used, if available. The category "moved, 1965 residence not reported" also includes persons who gave no information on residence on April 1, 1965, but were classified as having moved into their present house since that date on the basis of the final edited information reported for question 18, "When did this person move into this house (or apartment)?" (All nonresponses on the latter question were allocated.)

The number of persons who were living in a different house in 1965 is somewhat less than the total number of moves during the 5 years. Some persons in the same house at the two dates had moved during the 5-year period but by the time of enumeration had returned to their 1965 residence. Other persons who were living in a different house had made two or more intermediate moves. For similar reasons, the number of persons living in a different county or a different State may be understated.

Similar questions on mobility were asked in the 1960, 1950, and 1940 censuses. The questions in the 1950 census, however, applied to residence one year earlier rather than 5 years earlier. Although the questions in the 1940 census covered a 5-year period, comparability with that census is reduced somewhat because of different definitions and categories of tabulation.

The data on State of residence in 1965 obtained from question 36 were used primarily to provide information on geographic mobility for cross-tabulation with occupational mobility for the period 1965 to 1970. The treatment of nonresponse to this ques-

tion was somewhat different from that accorded to nonresponse to question 19.

Persons who failed to report residence in 1965 in response to question 19 were allocated to "same house" or "moved, residence in 1965 not reported" based on answers to the question on year moved in. Persons who failed to answer question 36, however, were allocated to "abroad in 1965" if they reported having immigrated to the United States since 1965, and the remainder were split equally between "same State" and "different State."

In the data on geographic and occupational mobility presented in chapter D, two categories of geographic mobility are used: "same State," including the allocations to this category, and "different State," including the allocations to this category as well as persons who reported, or were allocated to, abroad in 1965.

SCHOOL ENROLLMENT

Most of the data on school enrollment were derived from answers to question 20, which was asked of all persons in the 15-percent sample. However, in tables containing cross-classifications with social or economic characteristics based on the 20-percent or 5-percent sample, school enrollment was obtained from question 22, which was asked of persons in the 20-percent sample. (See facsimiles of questionnaire items and instructions, pages App-54 and 57.)

The data on year of school in which enrolled were obtained from responses, for those who were enrolled, to the question on highest grade attended, question 21 (see facsimiles of questionnaire item and instructions, pages App-54 and 57).

Schooling included.—Persons were included as enrolled in school if they reported attending a “regular” school or college at any time between February 1, 1970, and the time of enumeration. According to the census definition, “regular” schooling refers to formal education obtained in public and private (denominational or non-denominational) nursery schools, kindergartens, elementary and secondary schools, colleges, universities, or professional schools, whether day or night school, and whether attendance was full time or part time. That is, “regular” schooling is that which may advance a person toward an elementary school certificate or high school diploma, or a college, university, or professional degree. Schooling that was not obtained in a regular school and schooling from a tutor or through correspondence courses were counted only if the credits obtained were regarded as transferable to a school in the regular school system. Persons were included as enrolled in nursery school only if the school included instruction as an important and integral phase of its program. Children enrolled in “Head Start” programs, or similar programs sponsored by local agencies to provide preprimary education to young children, are included as enrolled in school. Persons who had been enrolled in a regular school since February 1, 1970, but who had not actually attended, for example because of illness, were counted as enrolled in school.

Schooling excluded.—Persons were excluded from the enrollment figures if the only schools they had been attending at any time since February 1, 1970, were *not* “regular” (unless courses taken at such schools could have been counted for credit at a

regular school). Schooling which is generally regarded as *not* “regular” includes that given in nursery schools which simply provide custodial day care; in specialized vocational, trade, or business schools; in on-the-job training; and through correspondence courses.

Level and year of school in which enrolled.—Persons who were enrolled in school were classified according to the level and year of school in which they were enrolled. The levels which are separately identified in this report are nursery school, kindergarten, elementary school, high school, and college. Children in “Head Start” or similar programs are counted under “Nursery” or “Kindergarten” as appropriate. Elementary school, as defined here, includes grades 1 to 8, and high school includes grades 9 to 12. If a person was attending a junior high school, the equivalent in terms of 8 years of elementary school and 4 years of high school was obtained. (See the section on “Years of School Completed” for a discussion of variations in school organization.) The term “college” includes junior or community colleges, regular 4-year colleges, and graduate or professional schools.

Public, parochial, or other private school.—Persons who were enrolled in school were also classified as attending a public, parochial, or other private school. In general, a “public” school is defined as any school which is controlled and supported primarily by a local, State, or Federal government agency. A “parochial” school is defined here as a private school which is controlled or supported primarily by a religious organization. An “other private” school is defined as a school

controlled or supported primarily by private groups other than religious organizations.

Enumeration of college students.—In the 1970 census, as in 1960 and 1950, college students were to be enumerated where they lived while attending college. In most earlier censuses they were enumerated at their parental home.

Comparability with earlier census data.—The corresponding question on schooling in the 1930 census applied to a somewhat longer period, the period since the preceding September 1. Furthermore, in that census the question was not restricted as to the type of school the person was attending. In 1940 the question referred to the period since the preceding March 1. In 1950 the reference period was changed to that between February 1 (the usual date for beginning the second semester) and the time of enumeration. The same reference period was used in 1960 and 1970.

In 1950, kindergarten enrollment was separately identified, but the number of children enrolled in kindergarten was not included with the 1950 statistics on enrollment. In 1960, kindergarten enrollment was separately identified and included with the regular enrollment figures. In 1970, both kindergarten and nursery school enrollment were separately identified and included with the regular enrollment figures.

The age range for which enrollment data have been obtained has varied for the several censuses. Information on enrollment was recorded for persons of all ages in 1930 and 1940, for persons 5 to 29 years old in 1950, for those 5 to 34 years old in 1960, and for those 3 years old and over in 1970.

Most of the published enrollment figures relate, however, to ages 5 to 20 in 1930, 5 to 24 in 1940, 5 to 29 in 1950, 5 to 34 in 1960, and 3 to 34 in 1970. The extended age coverage for the published enrollment data in the recent censuses reflects the increasing number of persons in their late twenties and in their thirties who are attending regular colleges and universities.

Comparability with data from other sources.—Data on school enrollment are also collected and published by other Federal, State, and local governmental agencies. This information is generally obtained from reports of school systems and institutions of higher learning and from other surveys and censuses. These data are only roughly comparable with data collected by the Bureau of the Census, however, because of differences in definitions, subject matter covered, time references, and enumeration methods.

YEARS OF SCHOOL COMPLETED

The data on years of school completed were derived from answers to questions 21 and 22 (see facsimiles of questionnaire items and instructions, pages App-54 and 57).

These questions on educational attainment applied only to progress in "regular" schools, as defined above. Both questions were asked of persons in the 20-percent sample.

The data on "Years of school completed for selected age groups" which appear in tables 89, 100, 111, and 137 exclude persons who never attended school. These data are shown for males 20 to 49 years old and for females 15 to 44 years old because these are the main ages for marriage, divorce, and childbearing. Thus, the

data are intended for use as bases for vital rates classified by educational attainment, primarily for areas below the State level.

Highest grade of school attended.—The first question called for the highest grade attended, regardless of "skipped" or "repeated" grades. In some areas in the United States, the school system formerly had 11 years of school (7 years of elementary school and 4 years of high school) rather than the more conventional 12 years (8 years of elementary school and 4 years of high school, or equivalent years of elementary school, junior high school, and senior high school). Persons who had progressed beyond the 7th grade in this type of school system were treated as though they had progressed beyond the 8th grade of elementary school.

Persons whose highest grade of attendance was in a foreign school system, or in an ungraded school whose highest level of schooling was measured by "readers," or whose training was received through a tutor were instructed to report the approximate equivalent grade in the regular United States school system.

Completion of grade.—The second question on educational attainment asked whether or not the highest grade attended had been finished. It was to be answered "Yes" if the person had successfully completed the entire grade or year indicated in response to the previous question. If the person had completed only a half grade or a semester, or had dropped out or failed to pass the last grade attended, the question was to be answered "No." If the person was still attending school in that grade, he answered "Now attending."

The number in each category of highest grade of school completed represents the combination of (a) persons who reported that they had attended the indicated grade and had finished it, (b) those who had attended the next higher grade but had not finished it, and (c) those still attending the next higher grade. Persons who have not completed the first year of elementary school are classified as having no years of school completed.

Comparability with earlier census data.—In 1940, a single question was asked on highest grade of school completed. However, respondents frequently reported the grade or year in which they were enrolled, or had last been enrolled, instead of the one completed. The two-question approach used in 1950, 1960, and 1970 was designed to reduce this kind of error.

Median school years completed.—The median number of school years completed was computed after the statistics on years of school completed had been converted to a continuous series of numbers (e.g., completion of the 1st year of high school was treated as completion of the 9th year and completion of the 1st year of college as completion of the 13th year). Persons completing a given school year were assumed to be distributed evenly within the interval from .0 to .9 of the year. In fact, at the time of census enumeration, most of the enrolled persons had completed at least three-fourths of a school year beyond the highest grade completed, whereas a large majority of persons who were not enrolled had not attended any part of a grade beyond the highest one completed. The effect of the assumption is to place the median for

younger persons slightly below, and for older persons slightly above, the true median.

The same procedure for computing this median has been used in the 1940, 1950, 1960, and 1970 censuses. Because of the inexact assumption as to the distribution within an interval, this median is more appropriately used for comparing different groups and the same group at different dates than as an absolute measure of educational attainment.

VOCATIONAL TRAINING

The data on vocational training were derived from answers to questions 27a and b (see facsimiles of questionnaire items and instructions, pages App-55 and 57).

These questions were asked of persons 14 years old and over in the 5-percent sample. Included as "vocational training" were formal vocational training programs completed in high school, through an apprenticeship program, in a school of business, in a nursing school or trade school, in a technical institute, in the Armed Forces, or in Job Corps Training. Excluded from "vocational training" programs were single courses which were not part of an organized program of study, on-the-job training, training in company schools, training by correspondence, and basic training in the Armed Forces. Persons who reported having completed a vocational training program were asked to designate their main field of vocational training.

In 1970, the question on vocational training was asked of the general population for the first time in a decennial census. Data on vocational training have been collected by the Bureau of the Census through its Current Population Survey and by

other Federal, State, and local governmental agencies through reports of training institutions and from other surveys and censuses. These data, like those on school enrollment collected from other sources, are only roughly comparable with data collected in the decennial census.

VETERAN STATUS

The data on veteran status were derived from answers to question 26 (see facsimiles of questionnaire item and instructions, pages App-54 and 57).

This question was asked of males 14 years old and over in the 15-percent sample. As defined in this report, a "veteran" is a male 16 years old or over who has served but is not now serving in the Armed Forces of the United States. All other civilian males 16 years old and over are classified as nonveterans. The questions on veteran status were asked only of males because relatively few females have served in the Armed Forces of this country.

The veteran population is classified according to period of service. The periods of service are the same as in the 1960 census except for the addition of the Vietnam conflict. Veterans who served in both the Korean conflict and World War II are presented as a separate group. All other persons with more than one period of service reported are shown according to the most recent wartime period of service.

MARITAL STATUS

The data on marital status were derived from question 8 (see facsimiles of questionnaire item and instructions on page App-53).

This question was asked of all persons. The marital status classification refers to the status at the time of enumeration. Persons classified as "married" consist of those who have been married only once and those who remarried after having been widowed or divorced. Persons reported as separated (either legally separated or otherwise absent from their spouse because of marital discord) are classified as a subcategory of married persons. Persons in common-law marriages are classified as married, and persons whose only marriage had been annulled are classified as never married. All persons classified as never married are shown as "single" in this report. Differences between the number of married males and the number of married females arise from the fact that some husbands and wives have their usual residences in different areas, and to a lesser extent, from the different sample weights applied to them.

Married persons with "spouse present" are men or women whose wife or husband was enumerated as a member of the same household even though he or she may have been temporarily absent on business or vacation, visiting, in a hospital, etc., at the time of enumeration. The small number of persons living with their spouse in group quarters are classified as married, spouse absent; if a married person in group quarters was in the sample, his spouse was unlikely to be in the sample, because in group quarters the sample consisted of every fifth person in order of enumeration.

By definition, the number of married men, spouse present, shown in this report should be identical with the number of married women, spouse present. However, the two figures may not be exactly the same because, in

the weighting of the sample, husbands and their wives were sometimes given different weights.

Married persons with "spouse absent—other" comprise married persons employed and living away from their homes, those whose spouse was absent in the Armed Forces, immigrants whose spouse remained in other areas, husbands or wives of inmates of institutions, married persons (other than separated) who were living in group quarters, and all other married persons whose place of residence was not the same as that of their spouse.

MARITAL HISTORY

The data on marital history were derived from answers to question 24 (see facsimiles of questionnaire item and instructions, pages App-54 and 57).

Information on whether married more than once and on age at first marriage has been obtained in each census since 1940. In 1970, the question on how the first marriage ended was included for the first time in a decennial census. For all persons in the 5-percent sample reported as married (including separated), widowed, or divorced at the time of the enumeration, data were obtained on the date of the first marriage. From this information and from current age, data on age at first marriage were derived. For each person who had been married more than once, information was obtained on the reason for termination of the first marriage. Persons shown as "known to have been widowed" include widowed persons and those currently married or divorced persons whose first marriage ended in widowhood. Persons shown as "known to have been divorced" include divorced

persons and those currently married or widowed persons whose first marriage did not end in widowhood.

HOUSEHOLD, RELATIONSHIP TO HOUSEHOLD HEAD, AND GROUP QUARTERS

The data on household relationship were derived from answers to question 2 and entries in item B (see facsimiles of questionnaire items and instructions, pages App-53 and 59).

The question on household relationship was asked of all persons. The item on type of unit was filled by the enumerator or in the census office for each household.

Household

A household includes all the persons who occupy a group of rooms or a single room which constitutes a housing unit. A group of rooms or single room is regarded as a housing unit when it is occupied as separate living quarters, that is, when the occupants do not live and eat with any other persons in the structure, and when there is either (1) direct access from the outside of the building or through a common hall or (2) complete kitchen facilities for the exclusive use of the occupants of the household.

The average population per household is obtained by dividing the population in households by the number of household heads. Population per household shown for a racial subgroup of the population, especially in small areas, may not in all cases be a true representation of the household size for those subgroups. For example, some persons of a given race may be roomers or domestic employees living with household heads of a different race.

Relationship to Household Head

Detailed categories of relationship to head of household are recognized in this report.

Head of household.—One person in each household is designated as the "head," that is, the person who is regarded as the head by the members of the household. However, if a married woman living with her husband was reported as the head, her husband was considered the head for the purpose of simplifying the tabulations.

Two types of household heads are distinguished—the head of a family and a primary individual. A family head is a household head living with one or more persons related to him by blood, marriage, or adoption. A primary individual is a household head living alone or with nonrelatives only.

Wife of head.—A woman married to and living with a household head, including women in common-law marriages as well as women in formal marriages. The number of women in this category may not always be the same as the number of "husband-wife households" and the number of "husband-wife families," because of differences in the weighting of the sample data.

Child of head.—A son, daughter, stepchild, or adopted child of the head of the household of which he is a member, regardless of the child's age or marital status. The category excludes sons-in-law and daughters-in-law. (See definition of "own child" below.)

Grandchild of head
Parent of head or wife
Son- or daughter-in-law of head
Brother or sister of head or wife

Other relative of head.—Any person related to the household head by blood, marriage, or adoption, who is not included in one of the specific relationship categories shown in the particular table.

Not related to head.—All persons in the household not related to the head by blood, marriage, or adoption. Roomers, boarders, lodgers, partners, resident employees, wards, and foster children are included in this category.

Group Quarters

Living quarters were classified as housing units or group quarters on the basis of answers to question 2 and item B (see facsimiles of questionnaire items and instructions, pages App-53 and 59). This information was obtained for all persons. All persons not living in households are classified by the Bureau of the Census as living in group quarters. Two general categories of persons in group quarters are recognized:

Inmate of institution.—Persons under care or custody in institutions at the time of enumeration are classified as "inmate of institution" regardless of their length of stay in that place and regardless of the number of people in that place. Institutions are a subcategory of group quarters and include homes, schools, hospitals, or wards for juveniles, for the physically handicapped, or for the mentally handicapped; hospitals for mental, tubercular, or chronic disease patients; homes for unwed mothers; nursing, convalescent and rest homes; homes for the aged and dependent; and correctional institutions. Inmates of mental hospitals and homes for the aged are shown separately in this report.

Other persons in group quarters.—This category includes all persons living in group quarters who are not inmates of institutions. Living quarters are called group quarters if there are five or more persons unrelated to the head; or, when no head is designated, if six or more unrelated persons share the unit. Rooming and boarding houses, communes, workers' dormitories, and convents or monasteries fall into this category. Persons residing in certain other types of living arrangements are classified as living in group quarters regardless of the number or relationship of people in the unit. These include persons residing in military barracks, on ships, in college dormitories, or in sorority and fraternity houses; patients in short-term medical and surgical wards of hospitals who have no usual residence elsewhere; staff members in institutional quarters; and persons enumerated in missions, flophouses, Salvation Army shelters, railroad stations, etc.

Residents of selected types of group quarters are shown separately in this report:

Rooming house.—In addition to residents in rooming houses and in living quarters with 5 or more persons not related to the head, this category includes the small number of persons temporarily residing in hotels, motels, Y's, and residential clubs at the time of enumeration who had no permanent residence elsewhere.

Military barracks.—Military personnel living in barracks or on ships are included in this category. Residents of housing units on military bases are included with the population in households.

College dormitory.—As used here, this term includes college students in dormitories, in fraternity and sorority

houses, and in rooming houses in which most occupants are college students.

Certain places and counties have a high proportion of their total population in institutions, colleges, military posts, and other places where many persons live in group quarters. These areas tend to have an unusual age distribution and to have other characteristics that seriously affect not only birth, marriage, and death rates but also other social and economic characteristics of the residents. Therefore, data on the population in households (which excludes the population in group quarters) are often more useful for such areas than data on the total population. Accordingly, in table 39 of the State parts, age, race, and sex for persons in households only are shown for those places and counties with a population of 1,000 or more living in group quarters.

Comparability With Earlier Census Data

The 1970 definition of a household differs from that used in the 1960 census only in the change in the definition of housing unit to require "complete kitchen facilities" in 1970, as compared with "cooking equipment" previously. The definitions for 1970 group quarters are basically the same as those for 1960 but are more specific.

MARRIED COUPLE, FAMILY, AND SUBFAMILY

Married couple.—In the 1970 census, a married couple is defined as a husband and his wife enumerated as members of the same household. Statistics on married couples were compiled in 1970 only for persons in sample

housing units; the number of married couples, as shown in this report, is identical to the number of married men with wife present. By definition, the number of married couples in any area should also be identical to the number of married women with husband present; however, the two figures may not be exactly the same in this report, because the methods used to inflate the sample sometimes gave different weights for husbands than for their wives.

A "married couple with own household" is a married couple in which the husband is a household head; the number of such married couples is the same as the number of "husband-wife families." Married couples without own household are, by definition, the same as married couples in subfamilies.

Family and subfamily.—According to 1970 census definitions, a family consists of a household head and one or more other persons living in the same household who are related to the head by blood, marriage, or adoption; all persons in a household who are related to the head are regarded as members of his (her) family. A "husband-wife family" is a family in which the head and his wife are enumerated as members of the same household. Not all households contain families, because a household may be composed of a group of unrelated persons or one person living alone. The mean size of family is derived by dividing the number of persons in families by the total number of families.

A "family" has the same meaning in the 1970 census as a "primary family" in the 1960 census. Secondary families were defined in the 1960 census as groups of persons related to each other but unrelated to the house-

hold head, such as lodgers, friends, partners, or resident employees. However, the number of such families became so small (95,000 in 1969, according to the Current Population Survey) that the Bureau of the Census decided to include persons in these families in the count of secondary individuals for 1970.

A subfamily is a married couple with or without children, or one parent with one or more single children under 18 years old, living in a household and related to, but not including, the head of the household or his wife. The most common example of a subfamily is a young married couple sharing the home of the husband's or wife's parents. Members of a subfamily are also included among the members of a family. The number of subfamilies, therefore, is not included in the number of families.

OWN CHILDREN AND RELATED CHILDREN

Statistics on the presence of "own" children are shown in this report for married couples, families, subfamilies, and women of childbearing age. In the 1970 census, as in 1960, a child under 18 years old is defined as an "own" child if he or she is a single (never married) son, daughter, stepchild, or adopted child of a married couple or of a family or subfamily head. In the 1970 census, the term "sons/daughters under 25" is used with the same meaning as "own children under 25" in the 1960 census; these and other similar terms that include persons 18 years old and over relate to all children of the head regardless of marital status. The number of "children living with both parents" includes stepchildren and adopted children as well

as sons and daughters born to the couple. The number of own children under 5 years old shown for women of childbearing age is limited to those living with mothers who have ever been married, whereas the number of own children in families or subfamilies includes those living with parents who have never married.

Certain tables show the number of "related children" under 18 years old in the family. This includes not only "own" children, as defined above, but also all other family members, regardless of marital status, who are under 18 years old (except the head or wife). In the tables on poverty status, the mean number of related children under 18 is derived by dividing the number of children under 18 in families by the number of families having children of that age.

UNRELATED INDIVIDUAL

An unrelated individual may be (1) a household head living alone or with nonrelatives only, (2) a household member who is not related to the head, or (3) a person living in group quarters who is not an inmate of an institution. Thus, included with unrelated individuals are the small number of household members who are related to each other but not related to the head of the household (e.g., a family of lodgers or an employee and his wife) and groups of related persons living in group quarters. Unrelated individuals who are household heads are called "primary individuals"; those who are not household heads are called "secondary individuals." In the tables on income and poverty status, unrelated individuals are limited to those 14 years of age or older. In the statistics on poverty status of un-

related individuals, college students living in dormitories and members of the Armed Forces living in barracks are excluded.

CHILDREN EVER BORN

The data on children ever born were derived from answers to question 25, (see facsimiles of questionnaire item and instructions, pages App-54 and 57).

In this report the statistics presented on this subject are for women ever married who were in the 20-percent sample. Similar information collected from single women was not included because of anticipated weaknesses in the data and because more complete comparability with previous censuses was achieved thereby. In tables showing rates of children ever born to all women, single women have been counted for this report as having no children ever born even though it is known that some of these women have had children. A subsequent report will present national data on fertility that incorporate information for single women.

Although the data on children ever born in this report are for women ever married, the number of children reported undoubtedly includes some illegitimate births. It is likely that some unwed mothers living with an illegitimate child reported themselves as having been married. Also, many of the mothers who married after the birth of an illegitimate child counted that child (as they were expected to do). Respondents were instructed to include children born to the woman before her present marriage, children no longer living, and children away from home, as well as children born to the woman who were still living in the home. On the other hand, the data are,

no doubt, less complete for illegitimate than for legitimate births.

In the 1970 census, a terminal category of "12 or more" was used for recording the number of children ever born. For purposes of computing the total number of children ever born, the terminal category was given a mean value of 13.

Comparability with earlier census data.—The wording of the question on children ever born was the same in 1970 as in 1960, except that in 1960 it was asked only of women ever married. Because the present report counts only the children of women ever married, the data should be strictly comparable with those for 1960.

Replacement index.—Some of the tables show a "replacement index" for women 35 to 44 years old. This index is derived from the statistics on children ever born. An index of 100 means that the women had borne just enough children for replacement of their generation. An index of 120 means that the women had borne children at a rate that would increase the population by 20-percent per generation.

The replacement index was computed by dividing the number of children ever born per 1,000 women 35 to 44 years old by a national replacement quota of 2,070 and by expressing the result on a per 100 basis. The replacement quota is based on (1) an assumption that the women 35 to 44 years old had completed about 97 percent of their eventual lifetime fertility, (2) the number of births of both sexes needed to yield 1,000 daughters as potential replacements for 1,000 women, and (3) mortality conditions prevailing at the

time the women were at the mean age of childbearing (about age 27). More precisely, ratios of gross reproduction rates to net reproduction rates in 1955 to 1960 were used to allow for mortality. Separate quotas by race have not been used because the quota for Negroes is less than one percent higher than that for whites.

WORK DISABILITY

The data on work disability were derived from answers to question 28 (see facsimiles of questionnaire item and instructions, pages App-55 and 57).

Data were obtained for persons 14 to 64 years old in the 5-percent sample but were published for persons 16 to 64 years old. The information was used to identify persons hindered because of a health or physical condition from working at a job. The question refers to a serious illness that has lasted (or is likely to last) for a relatively long time, or a serious physical or mental impairment or handicap. Also determined was whether such persons were able to work at all and how long each person had been limited in his working ability.

In 1970, information on disability was collected for the first time in a decennial census. Other government agencies have collected such statistics but, due to differences in enumeration techniques, the data may not be comparable.

ECONOMIC CHARACTERISTICS

EMPLOYMENT STATUS

The data on employment status were derived from answers to questions 29a,

29b, 30, and 31 (see facsimiles of questionnaire items and instructions, pages App-55 and 57).

The series of questions on employment status were asked of all persons 14 years old and over in the 20-percent sample and were designed to identify, in this sequence: (a) persons who worked at any time during the reference week; (b) persons who did not work during the reference week but who had jobs or businesses from which they were temporarily absent (excluding layoff); (c) persons on layoff; and (d) persons who did not work during the reference week, but who were looking for work during the past four weeks and were available for work during the reference week.

Most of the employment status data shown in this and other 1970 census reports relate to persons 16 years old and over. In 1940, 1950, and 1960, employment status data were presented for persons 14 years old and over. The change in the universe for 1970 was made to achieve conformity with the official measurement of the labor force as revised in January 1967. Selected employment status data, however, are shown for persons 14 and 15 years old.

Reference week.—Data on employment status refer to the calendar week prior to the date on which respondents completed their questionnaires or were interviewed by enumerators. Since the week of enumeration was not the same for all persons, the reference week for employment data is not entirely uniform. For many persons, the reference week for answering the 1970 census employment status questions was the last week in March. Good Friday occurred during this week, and some workers took time off for this occasion. The effect of this holiday on

the 1970 census employment status data varies from area to area depending on the leave practices and time of census enumeration in the area. It is not likely that there was much effect on the overall measurement of employment since employment is based on the work activity during the entire week. The effect of the holiday on the statistics on hours worked should, however, be considered in any interpretation or other use of the data.

Employed.—Employed persons comprise all civilians 16 years old and over who were (a) "at work"—those who did any work at all as paid employees or in their own business or profession, or on their own farm, or who worked 15 hours or more as unpaid workers on a family farm or in a family business; or (b) were "with a job but not at work"—those who did not work during the reference week but had jobs or businesses from which they were temporarily absent due to illness, bad weather, industrial dispute, vacation, or other personal reasons. Excluded from the employed are persons whose only activity consisted of work around the house or volunteer work for religious, charitable, and similar organizations.

Unemployed.—Persons are classified as unemployed if they were civilians 16 years old and over and: (a) were neither "at work" nor "with a job but not at work" during the reference week, (b) were looking for work during the past 4 weeks, and (c) were available to accept a job. Examples of jobseeking activities are: (1) registering at a public or private employment office, (2) meeting with prospective employers, (3) checking with friends or relatives, (4) placing or answering advertisements, (5) writing letters of

application, and (6) being on a union or professional register.

Also included as unemployed are persons who did not work at all during the reference week and were waiting to be called back to a job from which they had been laid off.

Experienced unemployed.—Unemployed persons who have worked at any time in the past are classified as the "experienced unemployed."

Civilian labor force.—The civilian labor force consists of persons classified as employed or unemployed in accordance with the criteria described above.

Experienced civilian labor force.—The "experienced civilian labor force" is comprised of the employed and the experienced unemployed.

Labor force.—The labor force includes all persons classified in the civilian labor force plus members of the Armed Forces (persons on active duty with the United States Army, Air Force, Navy, Marine Corps, or Coast Guard).

Not in labor force.—All persons 16 years old and over who are not classified as members of the labor force are defined as "not in labor force." This category consists mainly of students, housewives, retired workers, seasonal workers enumerated in an "off" season who were not looking for work, inmates of institutions, disabled persons, and persons doing only incidental unpaid family work (less than 15 hours during the reference week).

Wife in paid labor force.—In tables 261 and 316, the term "wife in paid labor force" refers to wives who were

employed during the reference week and reported earnings in 1969.

Worker.—The term “worker” appears in connection with several subjects in this report: nonworker-worker ratio, place of work, means of transportation, activity 5 years ago, and weeks worked in 1969. Its meaning varies and, therefore, should be determined in each case by referring to the definition of the subject in which it appears.

Nonworker-worker ratio.—This is the ratio of persons not in the labor force (including persons under 14 years of age) to persons 14 years old and over in the labor force.

Comparability with earlier census data.—The questionnaire items and employment status concepts for the 1970 census differed in many respects from those associated with the 1950 and 1960 censuses. The employment status concepts were revised to conform with the official government concepts of employment and unemployment instituted in January 1967. The employment status items for 1970 differed from the series of items asked in the earlier censuses in the following ways:

1. The 1970 questionnaire introduced a distinction between persons “looking for work” and persons “on layoff.” (In 1960 the two groups were combined.)
2. A specific time period—during the past four weeks—was added to the “looking for work” question. This was done to introduce an explicit time reference for jobseeking activities and to extend the one-week time reference, which was implied but not stated in the 1960 and 1950 jobseeking items.

3. The requirement that a person be currently available for work in order to be counted as unemployed was added for 1970. Therefore, a choice of responses designed to determine availability to accept a job was provided in the question on looking for work.

4. Persons reported as being temporarily absent from a job during the reference week for reasons other than layoff were classified as “employed, with a job but not at work” even if they were looking for work. In 1960, such persons were classified as unemployed if they were looking for work.

Comparability with data from other sources.—Because employment data from the census are obtained from respondents in households, they differ from statistics based on reports from individual business establishments, farm enterprises, and certain government programs. Persons employed at more than one job are counted only once in the census and are classified according to the job at which they worked the greatest number of hours during the reference week. In statistics based on reports from business and farm establishments, persons who work for more than one establishment may be counted more than once. Moreover, other series, unlike those presented here, may exclude private household workers, unpaid family workers, and self-employed persons, but may include workers less than 16 years of age.

An additional difference in the data arises from the fact that persons who had a job but were not at work are included with the employed in the statistics shown here, whereas many of

these persons are likely to be excluded from employment figures based on establishment payroll reports. Furthermore, the data in this report include persons on the basis of their place of residence regardless of where they work, whereas establishment data report persons at their place of work regardless of where they live. This latter consideration is particularly significant when comparing data for workers who commute between areas.

For a number of reasons, the unemployment figures of the Bureau of the Census are not comparable with published figures on unemployment compensation claims. Generally, persons such as private household workers, agricultural workers, State and local government workers, self-employed workers, new workers, and workers whose rights to unemployment benefits have expired are not eligible for unemployment compensation. Further, many employees of small firms are not covered by unemployment insurance. In addition, the qualifications for drawing unemployment compensation differ from the definition of unemployment used by the Bureau of the Census. Persons working only a few hours during the week and persons temporarily absent from work for reasons other than layoff are sometimes eligible for unemployment compensation but are classified as “employed” in the census reports. Differences in the geographical distribution of unemployment data arise because the place where claims are filed may not necessarily be the same as the place of residence of the unemployed worker.

HOURS WORKED

All persons in the 20-percent sample who reported working during the

reference week were asked to report the number of hours that they worked. The statistics on hours worked pertain to the number of hours actually worked at all jobs and do not necessarily reflect the number of hours usually worked or the scheduled number of hours. The category "at work, full-time" includes persons who worked 35 hours or more during the reference week, and the category "at work, part-time" includes persons who worked 1 to 34 hours during the reference week. The number of persons who worked only a small number of hours is probably understated since such persons sometimes consider themselves as not working. The possible effect on "hours worked" of the occurrence of a holiday during the reference week is discussed in the section on "Reference week," above.

WEEKS WORKED IN 1969

Definition.—The data on weeks worked in 1969 were derived from answers to questions 39a and b (see facsimiles of questionnaire items and instructions on pages App-56 and 58).

The questions were asked of all persons 14 years old and over in the 20-percent sample. In most tables, data are shown for persons 16 years old and over to conform with the universe for employment status data. Data on weeks worked in 1969 for persons 14 and 15 years old are also shown in selected tables.

The data pertain to the number of weeks during 1969 in which a person did any work for pay or profit (including paid vacation and sick leave) or worked without pay on a family farm or in a family business. Weeks of active service in the Armed Forces are also included. It is probable that the number of persons who worked in

1969 and the number of weeks they worked are understated since there is some tendency for respondents to forget intermittent or short periods of employment or to exclude weeks worked without pay.

Comparability with earlier census data.—The data on weeks worked collected in the 1970 census are comparable with data from the 1960 census but may not be entirely comparable with data from the 1940 and 1950 censuses. On the 1970 and 1960 questionnaires, two separate questions were used to obtain this information. The first identified persons with any work experience during the year and, thus, indicated those persons for whom the questions on number of weeks worked and earned income were applicable. In 1940 and 1950, however, the questionnaires contained only a single question on number of weeks worked.

Median weeks worked.—The median weeks worked is the value which divides the distribution of persons with work experience into two equal parts—one-half the cases falling below this value and one-half the cases exceeding this value. The median is based on the distribution among the 6 weeks-worked categories of all persons who reported working during the previous year. If the value fell in the terminal category of 50 to 52 weeks, a median of 52 weeks was assigned; if the value fell in the category 13 weeks or less, a median of 10 weeks was assigned. The determination of set medians for these two categories was based on previous experience with the central tendency of the distribution within the categories. Specifically, a median of 52 weeks reflects the predominance of full-year workers, and a

median of 10 weeks reflects the predominance of students working at summer jobs.

YEAR LAST WORKED

The data on year last worked were derived from answers to question 32 (see facsimiles of questionnaire item and instructions on pages App-55 and 57).

This question was asked of persons 14 years old and over in the 20-percent sample who were not at work during the reference week. The data are presented, in this report, for persons classified as not in the labor force. The "year last worked" pertains to the most recent year in which a person did any work for pay or profit, or worked without pay on a family farm or in a family business, or was on active duty in the Armed Forces. The data from this question were used to define the "experienced unemployed" and persons not in the labor force who have had previous work experience. A similar question was introduced in the 1960 census, but the data are not entirely comparable because of differences in the response categories.

PLACE OF WORK

The data on place of work were derived from answers to question 29c (see facsimiles of questionnaire item and instructions on pages App-55 and 57).

The question was asked of all persons 14 years old and over in the 15-percent sample who reported working during the reference week. Place of work refers to the geographic location at which civilians at work during the reference week and Armed Forces personnel (except those on leave, sick, etc.) carried out their occupational or job activities.

These locations are classified in various ways in the tables of this report. In chapter C, place of work is classified simply as to whether it was in the same county (or equivalent area) as the worker's county of residence or in a different county.

In chapter D two levels of classification are shown. In the statistics for standard metropolitan statistical areas (tables 242, 363, and 364), the locations are: (1) central city (or cities) of the SMSA, divided into the central business district⁵ and elsewhere in the central city; (2) in the SMSA but outside the central city; and (3) the area outside the SMSA. In table 243 the areas are: (1) in the State of residence; (2) in a State contiguous to the State of residence; and (3) in a noncontiguous State or abroad.

In 1960, place of work was identified only by county and city. In 1970, for the first time in a decennial census the exact address (number and street name) for the place of work was asked. Persons working at more than one job were asked to report the location of the job at which they worked the greatest number of hours during the census week. Salesmen, deliverymen, and others who work in several places each week were requested to give the address at which they began work each day, if they

⁵The central business district (CBD) is usually the downtown retail trade area of the city. As defined by the Bureau of the Census, the CBD is an area of very high land valuation characterized by a high concentration of retail business offices, theaters, hotels, and service businesses, and with a high traffic flow. CBD's consist of one or more census tracts and have been defined only in cities with a population of 100,000 or more. In order to be counted as working in the CBD, the respondent had to give the exact address (street name and number) of his place of work. Since all respondents did not do this, the data for CBD's is usually understated by an unknown quantity.

reported to a central headquarters. For cases in which daily work was not begun at a central place each day, the person was asked to report the exact address of the place where he worked the most hours last week. If his employer operated in more than one location (such as a grocery store chain or public school system), the exact address of the location or branch where the respondent worked was requested. When the number or street name could not be given, the name of the building or the name of the company for which he worked was to be entered.

MEANS OF TRANSPORTATION TO WORK

The data on means of transportation to work were derived from the answers to question 29d (see facsimiles of questionnaire item and instructions on pages App-55 and 57).

The question was asked of all persons 14 years old and over in the 15-percent sample who reported working during the reference week. Means of transportation to work refers to the chief means of travel or type of conveyance used in traveling to and from work on the last day the respondent worked at the address given in question 29c (place of work). In 1960 the question on means of transportation to work referred to "last week" rather than the "last day."

If more than one means was used, the respondent was instructed to report the one covering the greatest distance. "Worked at home" was to be marked by a person who worked on a farm where he lived or in an office or shop in his home. In this report, the categories shown are "private automobile, driver," "private automobile, passenger," "public transportation,"

and "other means." The category "public transportation" includes bus, streetcar, subway, elevated, railroad, and taxicab.

OCCUPATION, INDUSTRY, AND CLASS OF WORKER

The data on occupation, industry, and class of worker were derived from answers to questions 33 to 35 (see facsimiles of questionnaire items and instructions on pages App-56 and 57).

This series of questions, asked of all persons in the 20-percent sample, was used to obtain industry, occupation, and class-of-worker information for the employed, the experienced unemployed, and persons not currently in the labor force but with previous work experience. The data presented for the last two categories relate to persons who had worked at some time during the previous ten years. All three items refer to one specific job held by the person. For an employed person, the information refers to the job held during the reference week; and, for a person employed at two or more jobs, the information refers to the job at which he worked the greatest number of hours during the reference week. For experienced unemployed persons and for those not in the labor force, the information refers to the last job they held.

This report presents industry and occupation data for the employed, for the experienced civilian labor force, and for persons with work experience but not currently in the labor force. Occupation data are shown also for the experienced unemployed; industry data for this group may be derived by subtraction of the employed from the experienced civilian labor force in each industry category. Class-of-worker information is shown only for employed persons.

The written occupation and industry descriptions from the questionnaire were converted to identifying codes by relating these descriptions to an entry in the 1970 Census of Population, **Alphabetical Index of Industries and Occupations**, U.S. Government Printing Office, Washington, D.C., 1971. For the industrial code, however, the first coding attempt was by reference to the **Company Name List**. This list, prepared from the master address file of the 1967 Censuses of Business, Construction Industries, Manufactures, and Mineral Industries, contains the name of the establishment and its Standard Industrial Code converted to the equivalent code in the population census industrial classification system. This listing facilitates coding and helps maintain industrial classification comparability.

The classification systems used to prepare the **Alphabetical Index of Industries and Occupations** for the 1970 census were developed in consultation with many individuals, private organizations, and government agencies. For occupation, the primary consultant was the Interagency Occupational Classification Committee under the auspices of the United States Office of Management and Budget.

Occupation

Classification system.—The system developed for the 1970 census consists of 441 specific occupational categories arranged into 12 major occupation groups. In this report several levels of classification are presented. Classification by "detailed occupation" appears in tables 221 to 223. Here, the 441 occupational categories are regrouped into 407 occupations, which are

shown for employed persons and for the experienced civilian labor force. In this most detailed level of classification some of the 407 categories represent subgroupings of an occupation on the basis of industry or class of worker.

In tables presenting cross-tabulations of occupation by various demographic and economic characteristics, less detailed occupational classifications are used. In some of these tables, e.g., table 202, statistics are presented by major occupation group. In others, an intermediate classification is used. This intermediate classification consists of 158 categories for males and 86 for females (see table 224, for example). In tables showing greater detail in cross-tabulations with other subjects or considerable area detail, various condensed versions of the occupation classification are used, or information is shown only for the major groups. The classification shown in chapter C (tables 91, 102, and 113, for example) consists of 32 categories for the total employed and 22 categories for females.

The relationship between the detailed and intermediate levels of classification is provided in list A for males and list B for females on pages App-43 and 46. Lists C and D (page App-49) show the relationship between the intermediate classification and the condensed version shown in chapter C.

Four occupation divisions.—The major groups are arranged in four divisions as follows:

White collar.—Professional, technical, and kindred workers; managers and administrators, except farm; sales workers; and clerical and kindred workers.

Blue collar.—Craftsmen and kindred workers; operatives, except transport; transport equipment operatives; and laborers, except farm.

Farm workers.—Farmers and farm managers, farm laborers and farm foremen.

Service workers.—Service workers including private household.

The sequence in which these four divisions appear is not intended to imply that any division has a higher social or skill level than another.

Relation to Dictionary of Occupational Titles classification.—The occupational classification system of the population census is generally comparable with the system used in the **Dictionary of Occupational Titles (DOT)** with the exception of the blue collar workers.⁶ The DOT structure for these occupations is quite different from that used by the Bureau of the Census, largely because the two systems are designed to meet different needs and to be used under different circumstances. The DOT system is basically a job-defining scheme and is more detailed than the system used by the Bureau of the Census, which is data collection oriented. Thus, job classification by DOT often requires more detailed information than is obtained on the census questionnaires.

Industry

Classification system.—The industry classification system developed for the 1970 Census of Population consists of 227 categories classified into 12 major

⁶See United States Department of Labor, Bureau of Employment Security, **Dictionary of Occupational Titles**, Third edition, Vols. I and II, Washington, D.C., 1965.

industry groups. Several levels of classification are presented in this report. The most detailed classification, containing all 227 categories, appears in tables 235 and 236 for employed persons and the experienced civilian labor force. An intermediate level is used in tables 237 to 241, which present cross-tabulations of industry by demographic and economic characteristics. This intermediate level consists of 82 categories and represents combinations of the categories in the detailed system. In tables showing greater detail in cross-tabulations with other subjects or greater area detail, various condensed versions of the industry classification are used, or information is shown only for the major groups. The classification shown in chapter C (tables 92, 103, and 114, for example) consists of 40 industry groups.

The relationship between the detailed and intermediate classification levels is shown in list E, page App-50. List F, page App-52, shows the relationship between the intermediate classification and the condensed version shown in chapter C.

Relation to Standard Industrial Classification.—The Standard Industrial Classification (SIC) was developed under the sponsorship of the Office of Management and Budget and is designed for the classification of establishments by type of industrial activity in which they are engaged.⁷ One of the major purposes of the SIC is to promote uniformity and comparability in the presentation of statistical data

⁷See Executive Office of the President, Bureau of the Budget, *Standard Industrial Classification Manual* (1967). For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

collected by various agencies. Accordingly, in the Census of Population, the industry categories are defined in these terms. However, census reports, which are collected from households, differ in nature and detail from those obtained from establishment reports. Therefore, the census classification system, though defined in SIC terms, cannot reflect the full detail in all categories. Moreover, there is an important distinction between the census and SIC classification of government establishments. The census system distributes all activities into their respective industrial categories regardless of whether government-operated or not. The SIC, however, incorporates all government-related activities, regardless of the industry, in government categories 91 to 94. The SIC does allow for some industrial detail (two-digit) within this framework. Thus, uniquely governmental activities, e.g., judicial and legislative, are identified by code 90 in the third and fourth digits. This is the equivalent of the industry "Public administration" in the census.

The census identifies all government workers in its "class of worker" item (see below). This identification allows for cross-classification with industry data, thus providing the full array of industry categories in both government and nongovernment terms.

In addition to such classification differences, census data may differ from other industrial data because the dates to which the data refer may not be the same; workers who live in one geographic area and work in another may be reported at their place of residence by the census but at their place of work in other surveys; and dual jobholders may be counted in the reports of two establishments but

counted in the census for only their major job.

Relation to certain occupation groups.—Although some occupation groups are closely related to certain industries, the industry categories are broader and include occupations other than those concentrated in that industry. For example, persons employed in agriculture include truck drivers and bookkeepers in addition to farm workers; persons employed in the transportation industry include mechanics and secretaries in addition to transport operatives; and persons employed in the private household industry include occupations such as chauffeur, gardener, and secretary.

Class of Worker

As noted earlier, the economic activity of each person is classified in three distinct dimensions—occupation, industrial attachment, and class of worker. The last dimension shows the type of ownership of the employing organization. Placement of a person in a particular class-of-worker category is, in most cases, independent of the occupation or industry in which he worked. The class-of-worker item on the questionnaire consists of seven categories which are defined as follows:

Private wage and salary workers.—Persons who worked for a private employer for wages, salary, commissions, tips, pay "in kind," or pay at piece rates.

Government workers.—Persons who worked for any governmental unit, regardless of the activity of the particular agency. This category is subdivided by the level of government: a) Federal, b) State, and c) local (county, city, village, township, etc.).

Self-employed workers.—

- a. Own business not incorporated.—Persons who worked for profit or fees in their own unincorporated business, profession, or trade, or who operated a farm. Included here are the owner-operators of large stores and manufacturing establishments as well as small merchants, independent craftsmen and professional men, farmers, peddlers, and other persons who conducted enterprises on their own.
- b. Own business incorporated.—Persons who consider themselves self-employed but work for corporations. (In most cases the respondents will own or be part of a group that owns controlling interest in the corporation.) Since all workers of a corporation are defined as wage and salary workers, this category is tabulated with "private wage and salary workers." (The category is shown separately in some tables of chapter C.)

*Unpaid family workers.—*Persons who worked without pay on a farm or in a business operated by a person to whom they are related by blood or marriage. These are usually the children or the wife of the owner of a business or farm. About one-half of the unpaid family workers are farm laborers.

In some States, teachers in elementary and secondary schools, who were in fact local government workers, tended to report themselves as State government workers. The result is an overstatement of the number of State government workers.

Special Edit and Allocation Procedures

A factor to be considered in the interpretation of these data is that occasionally respondents returned oc-

cupation, industry, or class-of-worker designations which were not sufficiently specific for precise classification. Many such cases were corrected through the field editing process and during the coding and editing operations. In the coding operation certain types of incomplete entries or errors were corrected using the **Alphabetical Index of Industries and Occupations**. The Index, besides providing a code for each occupation or industry, also reflects some restrictions such as occupations that occur only within one industry or for which only one class-of-worker code is allowed. Moreover, in certain situations, it provides for the assignment of an industry code on the basis of the occupation reported.

Following the coding operation, there was a computer edit and allocation process. The edit first determined whether a respondent was in the universe which required an occupation and industry code. For those with an incomplete code or one for which no valid category exists (impossible codes), a valid code was assigned. The items (industry, occupation, and class of worker) were then edited for internal consistency.

If one or more of the occupation, industry, or class-of-worker items were blank after edit, the respondent was "allocated" to a major group on the basis of sex, age, farm or nonfarm residence, education, and weeks worked. In the presentation of data in this report where only the major group is shown, the allocated cases are included in the appropriate major group. Where subcategories of the major group are shown, the allocation cases are included in the "other" category for each major group.

Since industry and occupation data from earlier censuses were not allocated, the tables which compare

1970 data with 1960 data show the not reported cases for 1970 as a separate category, rather than allocated to the major groups.

Additional information on edit and allocation procedures is presented in Appendix C, "Accuracy of the Data."

Comparability

Data from earlier censuses.—Changes made in the classification systems for each of the three decennial censuses since 1940 limit the comparability of the data from one census to another. Between 1960 and 1970 the number of categories was greatly increased. A new major group, "transport equipment operatives," added to the occupation classification in 1970, includes occupations formerly part of the "operatives" major group. The allocation of "not reported" cases to the major groups in 1970 (see preceding section) increased the size of those totals relative to the totals for 1960, when there was no allocation of these characteristics. Unemployed persons who last worked in 1949 or earlier were included with the "not reported" in 1960, but the corresponding group, persons who last worked in 1959 or earlier, were shown separately in 1970. The age coverage for statistics on these subjects in 1960 included persons 14 years old and over, in accordance with the definition of the labor force at that time; whereas most of the 1970 statistics are shown for persons 16 years old and over, to agree with the current definition of the labor force.

In tables 81, 82, 221, and 235, comparable statistics for 1960 and 1970 are presented for persons 14 years old and over. Adjustments have been made in the 1960 data to achieve as close comparability with the 1970

classification systems as possible. Since these adjustments sometimes involved estimates, the reader should exercise caution in interpreting small changes between the two censuses. In the figures for persons 14 years old and over, the "not reported" cases are treated according to the 1960 presentation; that is the cases allocated to major groups in 1970 are removed from those groups and combined into a separate "not reported" category. The 1970 category "unemployed, last worked 1959 or earlier," also is included with the "not reported" for consistency with the 1960 presentation.

Two additional occupation questions were included on the 1970 census questionnaire. These questions were added to obtain more complete answers from respondents and, therefore, facilitate more accurate coding.

In 1970, as noted above, persons who reported that they were self-employed in own business but had marked "own business incorporated" were tabulated as private wage and salary workers. Since no attempt was made in earlier censuses to determine the validity of the respondent's classification as self-employed, there is probably an overstatement of this category in the figures shown for 1940 to 1960.

The following publications contain information on the various factors affecting comparability and are particularly useful for understanding differences in the occupation and industry information from earlier censuses: U.S. Bureau of the Census, *Sixteenth Census Reports, Population, Comparative Occupation Statistics for the United States, 1870 to 1940*; U.S. Bureau of the Census, *Occupation Trends in the United States, 1900 to 1950*, Working Paper No. 5, 1959;

U.S. Bureau of the Census, *Changes Between the 1950 and 1960 Occupation and Industry Classifications—With Detailed Adjustments of 1950 Data to the 1960 Classifications*, Technical Paper No. 18, 1968; and U.S. Bureau of the Census, *1970 Occupation and Industry Classification Systems in Terms of Their 1960 Occupation and Industry Elements*, Technical Paper No. 26, 1972.

Data from other sources.—Comparability between the statistics presented in this report and statistics from other sources is frequently affected by the use of different classification systems, and by many of the differences in reporting described in the paragraphs on comparability with data from other sources, page App-28, under the section on "Employment Status." Occupation data from the census and data from government licensing agencies, professional associations, trade unions, etc., are not directly comparable. Such listings may include persons not in the labor force or persons devoting all or most of their time to another occupation; or the same person may be included in two or more different listings. Moreover, relatively few organizational listings attain complete coverage of membership in a particular occupation field.

ACTIVITY 5 YEARS AGO

The data on "activity 5 years ago" were obtained from answers to question 37 (see facsimiles of questionnaire item and instructions, pages App-56 and 58).

The series of questions on activity in April 1965 were asked of all persons 14 years old and over in the 20-percent sample. In 1970, this question was asked for the first time in a

decennial census. Data obtained from this question are presented in this report in connection with the subjects "Residence in 1965," "Labor mobility," and "Occupation 5 years ago."

A person was classified as a worker in 1965 if he answered "Yes" to either (a) working or (b) in the Armed Forces. All other persons were classified as nonworkers in 1965. Since there were no imputation procedures for nonresponses to this question, the category "nonworkers in 1965" includes persons who failed to answer parts "a" and "b" of the question. Tests have shown that the number of persons who were working in April 1965 is probably understated to some extent since there is a tendency for respondents to forget intermittent or short periods of employment. To minimize this error, published data have been restricted to those age groups with the highest degree of reliability in reporting this information.

Data on labor mobility for males pertain to men who were 30 to 49 years old as of April 1, 1970. The tabulations cover the work status of these men in both 1965 and 1970. The category "worker in 1970" includes the employed plus members of the Armed Forces; "nonworker in 1970" includes the unemployed and persons not in the labor force. The terms "unemployed" and "labor force" are defined in the section on "Employment Status."

Data for females pertain to women 16 to 44 years old in April 1965 (21 to 49 years old in April 1970). The tabulations concentrate on the working patterns of women in childbearing years with reference to marital status and the presence and age of children. The definitions of workers and non-

workers in 1965 and 1970 are the same for females as for males.

OCCUPATION 5 YEARS AGO

The data on "occupation 5 years ago" were derived from answers to question 38 (see facsimile of questionnaire item, page App-56).

This question, relating to industry, occupation, and class of worker in 1965, was asked of persons in the 5-percent sample who answered "Yes" to "Working at a job or business" in item 37a. The data on occupation were tabulated for persons 25 years old and over. There are indications that, because of failure of the respondent to recall accurately, the responses on occupation in 1965 are subject to greater error than those on current occupation. Therefore, the occupational classification in 1965 presented in this report is restricted to the major occupation group.

INCOME IN 1969

The data on income were derived from answers to questions 40 and 41 (see facsimiles of questionnaire items and instructions, pages App-56 and 58).

Information on money income received in the calendar year 1969 was requested from all persons 14 years old and over in the 20-percent sample. "Total income" is the algebraic sum of the amounts reported in item 40a (Wage or salary income), item 40b (Nonfarm net self-employment income), item 40c (Farm net self-employment income), item 41a (Social Security or railroad retirement income), item 41b (Public assistance or welfare income), and item 41c (All other income). "Earnings" is the algebraic sum of the amounts reported as

wage or salary income and nonfarm and farm net self-employment income. The figures represent the amount of income received before deductions for personal income taxes, Social Security, bond purchases, union dues, medicare deductions, etc.

Receipts from the following sources were not included as income: money received from the sale of property (unless the recipient was engaged in the business of selling such property, in which case, the net proceeds would be counted as income from self-employment); the value of income "in kind" such as free living quarters or food produced and consumed in the home; withdrawal of bank deposits; money borrowed; tax refunds; exchange of money between relatives living in the same household; gifts and lump-sum inheritances, insurance payments, and other types of lump-sum receipts.

Definitions

Type of income.—The six types of income reported in the census are defined as follows:

Wage or salary income.—Total money earnings received for work performed as an employee at any time during the calendar year 1969. It includes wages, salary, pay from Armed Forces, commissions, tips, piece-rate payments, and cash bonuses earned.

Nonfarm net self-employment income.—Net money income (gross receipts minus business expenses) received from a business, professional enterprise, or partnership in which the person was engaged on his own account. Gross receipts include the value of all goods sold and services rendered. Business expenses include

cost of goods purchased, rent, heat, light, power, depreciation charges, wages and salaries paid, business taxes (not personal income taxes), etc.

Farm net self-employment income.—Net money income (gross receipts minus operating expenses) received from the operation of a farm by a person on his own account, as an owner, renter, or sharecropper. Gross receipts include the value of all products sold, governmental subsidies, money received from the rental of farm equipment to others, and incidental receipts from the sale of wood, sand, gravel, etc. Operating expenses include the cost of fuel, fertilizer, seed, and other farming supplies, cash wages paid to farmhands, depreciation charges, cash rent, interest on farm mortgages, farm building repairs, farm taxes (not Federal, State, and local income taxes), etc. The value of fuel, food, and other farm products used for family living is not included as part of net income.

Social Security or railroad retirement income.—Cash receipts of Social Security pensions, survivors' benefits, permanent disability insurance payments, and special benefit payments made by the Social Security Administration (under the national old-age, survivors, disability, and health insurance programs) before deductions of health insurance premiums. Medicare reimbursements are not included. Cash receipts of retirement, disability, and survivors' benefit payments made by the U.S. Government under the Railroad Retirement Act are also included.

Public assistance income.—Cash receipts of payments made under the

following public assistance programs: aid to families with dependent children, old-age assistance, general assistance, aid to the blind, and aid to the permanently and totally disabled. Separate payments received for hospital or other medical care are excluded from this item.

Income from all other sources.—Money income received from sources such as interest; dividends; net income (or loss) from property rentals; net receipts from roomers or boarders; veterans' payments; public or private pensions; periodic receipts from insurance policies or annuities; unemployment insurance benefits; workmen's compensation cash benefits; net royalties; periodic payments from estates and trust funds; alimony or child support from persons who are not members of the household; net gambling gains; nonservice scholarships and fellowships; and money received for transportation and/or subsistence by persons participating in special governmental training programs, e.g., under the Manpower Development and Training Act.

Income of families and unrelated individuals.—This report includes information on income of families, unrelated individuals 14 years old and over, and persons 14 years old and over by detailed social and economic characteristics. In compiling statistics on family income, the incomes of all members 14 years old and over in each family are summed and treated as a single amount. However, in compiling the income data for unrelated individuals and persons 14 years old and over, the total amount of their own income is used. Although the income statistics cover the calendar year 1969, the characteristics of persons and the

composition of families refer to the time of enumeration (April 1970). Thus, the income of the family does not include amounts received by persons who were members of the family during all or part of the calendar year 1969 if these persons no longer resided with the family at the time of enumeration. On the other hand, family income amounts reported by related persons who did not reside with the family during 1969 but who were members of the family at the time of enumeration were included. For most families, however, the income reported was received by persons who were members of the family throughout 1969.

Income of households.—Income of households includes the income of the household head and all other persons 14 years old and over in the household, whether related to the head or not. Since many households consist of only one person, average household income is usually less than average family income.

Median, mean, and per capita income.—The median income was generally computed on the basis of the income intervals shown in each table; however, median incomes in some tables were calculated on the basis of more detailed income intervals. For families and unrelated individuals the median income is based on the distribution of the total number of families and unrelated individuals, whereas for persons the medians are based on the distribution of persons 14 years old and over with income. The medians for wage or salary income, nonfarm self-employment income, farm self-employment income, Social Security income, public assistance income, and all other in-

come are based on the distributions of families and unrelated individuals having these types of income. When the median income falls in the terminal category of a distribution, the method of presentation is to show the initial value of the terminal category followed by a plus sign; thus, for example, if the median income falls in the terminal category "\$25,000 or more," it is shown as "\$25,000+."

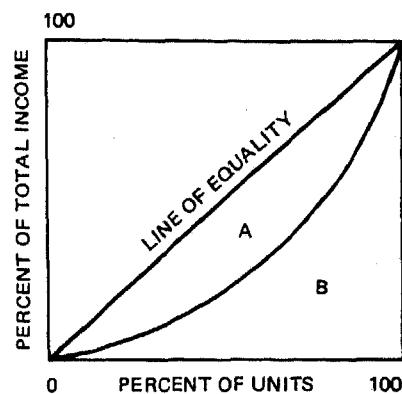
The mean income is the amount obtained by dividing the total income of a particular statistical universe by the number of units in that universe. Thus, mean family income is obtained by dividing total family income by the total number of families. Mean income for persons is obtained by dividing the total income of persons (including patients or inmates in institutional quarters) by the number of persons with income. For the six income types the means are based on families or unrelated individuals having those types of income. When the mean income for an area or population subgroup is a net loss, the dollar amount is shown preceded by a minus sign (e.g., -\$123). Per capita income is the mean income computed for every man, woman, and child in a particular group. It is derived by dividing the total income of a particular group by the total population (including patients or inmates in institutional quarters) in that group. It should be noted that the maximum income amount that can be aggregated for each family or unrelated individual is 1.3 million dollars for total income and \$995,000 for any one type of income. Thus, it is conceivable that the sum of the aggregates of all income types may exceed the aggregate of the total.

Care should be exercised in using and interpreting mean income values

in the statistics for small subgroups of the population. Since the mean is strongly influenced by extreme values in the distribution, it is especially susceptible to the effects of sampling variability, misreporting, and processing errors. The median, which is not affected by extreme values, is, therefore, a better measure than the mean when the population base is small. The mean, nevertheless, is shown in this report for most small subgroups because, when weighted according to the number of cases, the means can be added to obtain summary measures for areas and groups other than those shown in this report.

Index of income concentration.—The index of income concentration is a statistical measure derived from the Lorenz Curve. The Lorenz Curve is obtained by plotting the cumulative percent of units (families, unrelated individuals, or persons) on the abscissa against the cumulative percent of aggregate income on the ordinate as accounted for by these units. Aggregate income is obtained by multiplying the frequency in each income class interval by an assumed mean for that income class interval. Midpoints were used for income intervals below \$15,000. For income distributions of families, adjusted mean values were used for the \$15,000 to \$19,999 interval and the \$20,000 to \$24,999 interval. In general, the means for the open-end intervals (\$25,000 or more for families and \$15,000 or more for unrelated individuals and persons) were obtained by fitting a Pareto Curve to the data. When the use of the Pareto formula resulted in what appeared to be an extraneous mean value, exceeding \$75,000 for families or exceeding \$40,000 for unrelated individuals or persons, the assumed

mean was set at \$36,000 for families and \$23,000 for unrelated individuals or persons. If all units had exactly the same relative income, perfect equality would be represented by the diagonal shown in the diagram. Curves drawn to actual data invariably fall below this line and the greater the inequality in the distribution of income, the greater the area between the diagonal line and the Lorenz Curve.



The index of income concentration is defined as the ratio of the area between the diagonal and the Lorenz Curve to the total area under the diagonal. This relationship can be expressed as follows, using the notation in the diagram above.

$$L = \frac{A}{A+B} = \frac{\text{area betw. curve and diagonal}}{\text{area under diagonal}}$$

The index of income concentration ranges from 0.0 to 1.0. As the index approaches the limit of 1.0, the inequality of the income distribution increases. For more detailed information on this measure, see *Trends in the Income of Families and Persons in the United States 1947 to 1964*, Technical Paper No. 17, published in August 1967 by the Bureau of the Census.

Limitations of the Data

Since the reporting of income is frequently based on memory rather than on records, there is a tendency to underreport or fail to report some elements of income. This is especially pronounced for income sources that are not derived from earnings, such as Social Security payments, public assistance, interest and dividends, etc. For example, it has been determined that income earned from wages or salary in the Current Population Survey (CPS) tends to be much better reported than other sources of income and is nearly equal to independently derived benchmark estimates. By contrast, income data collected annually in the CPS on Social Security and public assistance income payments to beneficiaries have in recent years averaged approximately 80 and 75 percent, respectively, of their benchmark estimates. In the census the underreporting of these specified types of income and the number of recipients of such income compared with administrative information reflects, for the most part, the failure of some respondents to report them accurately, rather than the failure to enumerate persons receiving them.

In addition, there are errors of reporting due to misunderstanding of the income questions. One such error is the reporting of gross instead of net dollar amounts for the two questions on net self-employment income, which results in an overstatement of these items. Another common error is the reporting of identical dollar amounts in two of the six income items where a respondent with only one source of income assumed that the second amount should be entered to represent total income. Such instances of overreporting would have an impact on the level of mean nonfarm or farm self-

employment income and mean total income published for the various geographical subdivisions of the State. Telephone callback procedures were instituted in the coding operation to reduce some of these reporting errors and to improve the accuracy of income data. Moreover, many reporting errors were rectified through the coding and the computer editing procedures, with the result that consistency of reported income items with work experience, occupation, and class-of-worker information was improved. For example, if a person reported that he was self-employed on his own farm, not incorporated, but had reported wage and salary earnings only, the latter amount was shifted to net farm self-employment income. Another type of problem involved nonreporting of income data. Where income information was not reported, editing and allocation procedures were devised to impute appropriate values (either "none" or positive or negative dollar amounts) for the missing entries. These procedures are described in more detail in Appendix C, "Accuracy of the Data."

In income tables for families and unrelated individuals, the lowest income group (less than \$1,000) includes families and individuals that were classified as having no 1969 income as defined in the census. Many of these were living on income "in kind," savings, or gifts; were newly created families; or were families in which the sole breadwinner had recently died or left the household. However, many of the families and unrelated individuals who reported no income probably had some money income which was not recorded in the census.

The income data in this report cover money income only. The fact

that many farm families receive an important part of their income in the form of "free" housing and goods produced and consumed on the farm rather than in money should be taken into consideration in comparing the income of farm and nonfarm residents. Nonmoney income is also received by some nonfarm residents. Such income often takes the form of business expense accounts, use of business transportation and facilities, or partial compensation by business for medical and educational expenses. Many low income families also receive income "in kind" from public welfare programs. In comparing income data for 1969 with earlier years, it should be noted that an increase or decrease in money income does not necessarily represent a comparable change in real income, unless adjustments for changes in prices are made.

Comparability

Data from earlier censuses.—The income data collected in the 1950 and 1960 censuses are basically similar to the 1970 census data, but there are variations in the detail of the questions. In 1960, information on income was obtained from all members in every fourth housing unit and from every fourth person 14 years old and over living in groups quarters. Each person was required to report (a) wage or salary income, (b) net self-employment income, and (c) income other than earnings received in 1959. Between the 1960 and 1970 censuses, there were also some changes in the processing of the data. In the 1960 census, an assumption was made in the editing process that no other type of income was received by a person who reported the receipt of either wage and salary income or self-employment

income but who had failed to report the receipt of other money income. This person was considered as unallocated. In the 1970 census, this assumption was not made. Generally, all missing values were imputed either as "none" or as a dollar amount. If a person reported a dollar amount in (a) wage or salary income, (b) net nonfarm self-employment income, or (c) net farm self-employment income, he was designated as unallocated only if no further dollar amounts were imputed for any additional missing entries. Moreover, there was a difference in the method of computer derivation of aggregate income from individual amounts that were coded in tens, hundreds, and thousands in the coding operation. In the 1960 census processing, \$5, \$50, and \$500, respectively, were added by the computer to the absolute value of each amount that was coded in tens, hundreds, or thousands of dollars. Entries of \$25,000 or more were treated as \$50,000, and losses of \$9,900 or more were treated as minus \$10,500. In the 1970 census, income amounts under \$100,000 were coded in hundreds of dollars, and amounts of \$100,000 or more were coded in tens of thousands; \$50 was added by the computer to each amount coded in hundreds of dollars and \$5,000 to each amount coded in tens of thousands of dollars. Entries of \$990,000 or more were treated as \$995,000, and losses of \$9,900 or more were treated as minus \$9,950, in all of the computer derivations of income aggregates. The coding schemes used in both the 1960 and 1970 censuses were developed to accommodate space limitations on the questionnaires.

In both the 1960 and 1970 censuses, all nonrespondents on income (whether heads of families or

other persons) were assigned the reported income of persons with similar characteristics, as described in Appendix C, "Accuracy of the Data."

In 1950, information on income was obtained from every fifth person 14 years old and over. If the sample person was the head of the family, the income questions were repeated for the other family members as a group in order to obtain the income of the whole family. In the tabulations of family income for the 1950 census, if only the head's income was reported, it was assumed that there was no other income in the family.

In 1940, all persons 14 years old and over were asked to report (a) the amount of wages or salary received in 1939 and (b) whether income amounting to \$50 or more was received in 1939 from sources other than wages or salaries.

Income tax data.—For several reasons, the income data shown in this report are not directly comparable with those which may be obtained from statistical summaries of income tax returns. Income, as defined for tax purposes, differs somewhat from the Bureau of the Census concept. Moreover, the coverage of income tax statistics is different because of the exemptions of persons having small amounts of income and the inclusion of net capital gains in tax returns. Furthermore, members of some families file separate returns and others file joint returns; consequently, the income reporting unit is not consistently either a family or a person.

Social Security Administration earnings record data.—The earnings data shown in this report are not directly comparable with earnings records of the Social Security Administration.

The earnings record data for 1969 exclude the earnings of most civilian government employees, some employees of nonprofit organizations, workers covered by the Railroad Retirement Act, and persons not covered by the program because of insufficient earnings. Furthermore, earnings received from any one employer in excess of \$7,800 in 1969 are not covered by earnings records. Finally, since census data are obtained from household questionnaires, they differ from Social Security Administration earnings record data, which are based upon employers' reports and the Federal income tax returns of self-employed persons.

Bureau of Economic Analysis income series.—The Bureau of Economic Analysis (BEA), formerly the Office of Business Economics, of the Department of Commerce publishes annual data on aggregate and per capita personal income received by the population for each State and selected standard metropolitan statistical areas. Aggregate income estimates based on the income statistics shown in this report would be less than those shown in the BEA income series for several reasons. The Bureau of the Census data are obtained directly from households, whereas the BEA income series is estimated largely on the basis of data from administrative records of business and governmental sources. Moreover, the definitions of income are different. The BEA income series includes some items not included in the income data shown in this report, such as income "in kind," income received by nonprofit institutions, the value of services of banks and other financial intermediaries rendered to persons without the assessment of specific charges, medicare payments,

and the income of persons who died or emigrated prior to April 1, 1970. On the other hand, the census income data include contributions for support received from persons not residing in the same household and employee contributions for social insurance.

POVERTY STATUS IN 1969

The data on poverty status were derived from answers to the same questions as the income data (see income definitions, above). Poverty statistics have not been published in previous decennial census reports. They have, however, been published annually since 1959 from data collected in the annual March Current Population Survey (CPS) by the Bureau of the Census. The population covered in the poverty statistics presented in this report excludes inmates of institutions, members of the Armed Forces living in barracks, college students living in dormitories, and unrelated individuals under 14 years old.

Definition.—The poverty statistics presented in this report are based on a definition originated by the Social Security Administration in 1964 and subsequently modified by a Federal Interagency Committee.⁸ The index provides a range of poverty income cutoffs adjusted by such factors as family size, sex of the family head, number of children under 18 years old, and farm and nonfarm residence. At the core of this definition of poverty is a nutritionally adequate food plan ("economy" plan) designed

⁸For a detailed explanation of the poverty definition, see U.S. Bureau of the Census, Current Population Reports, Series P-23, No. 28, Revision in Poverty Statistics, 1959 to 1968.

by the Department of Agriculture for "emergency or temporary use when funds are low." The index allows for differences in the cost of living between farm and nonfarm families by setting the poverty thresholds for farm families at 85 percent of the corresponding levels for nonfarm families. The poverty income cutoffs are revised annually to allow for changes in the cost of living as reflected in the Consumer Price Index.

In 1969, the poverty thresholds ranged from \$1,487 for a female unrelated individual 65 years old and over living on a farm to \$6,116 for a nonfarm family with a male head and with seven or more persons (table G). The average poverty threshold for a nonfarm family of four headed by a male was \$3,745.

Poverty thresholds are computed on a national basis only. No attempt has been made to adjust these thresholds for regional, State, or other local variations in the cost of living (except for the farm-nonfarm differential described above).

Alternate poverty levels.—Because the poverty levels currently in use by the Federal Government do not meet all the needs of the analysts of the data, two variations of the poverty definition were created: one is set at 75 percent of the official government standard and the other at 125 percent of this standard. Some data based on these two alternate poverty levels are presented in this report.

Poverty thresholds.—The poverty cutoffs used by the Bureau of the Census to determine the poverty status of families and unrelated individuals consist of a set of 124 thresholds based on size of family unit (from one person, i.e., unrelated individual, to

seven-or-more-person family) cross-classified by presence and number of family members under 18 years old (from no children present to six or more children present), sex of head, and farm and nonfarm residence. Unrelated individuals and 2-person families are further differentiated by age of head (under 65 years and 65 years and over). The total family income of each family in the sample is tested against the appropriate poverty threshold to determine the poverty status of that family. If the family's total income is less than its corresponding poverty cutoff, the family is classified as poor. The average thresholds shown in table G, however, were weighted by the presence and number of children. For example, for a given size of family, sex of head, and residence category, the weighted average threshold for that group is obtained by multiplying the dollar amount for each presence and number of children category within the given family size by the number of families in that category. These products are

then aggregated across the entire range of presence and number of children categories, and the total aggregate is divided by the total number of families in the group to yield the weighted average threshold at the poverty level for that size of family.

Because family composition varies by farm and nonfarm residence, the weighted average thresholds at the poverty level for farm families, as shown in table G, will not be exactly 85 percent of the nonfarm levels. Moreover, since family composition does not remain constant from year to year, the weighted average thresholds for 1969 will not reflect exactly the increase in the Consumer Price Index between 1969 and earlier years.

Since the basic thresholds used to determine the poverty status of families and unrelated individuals are applied to all families and unrelated individuals, the weighted poverty thresholds are derived using all families and unrelated individuals rather than just those families and unrelated individuals classified as poor.

TABLE G. Weighted Average Thresholds at the Poverty Level in 1969, by Size of Family Unit and Sex of Head, by Farm and Nonfarm Residence

Size of family unit	Total	Nonfarm			Farm		
		Total	Male head	Female head	Total	Male head	Female head
All unrelated individuals ..	\$1,834	\$1,840	\$1,923	\$1,792	\$1,569	\$1,607	\$1,512
Under 65 years	1,888	1,893	1,974	1,826	1,641	1,678	1,552
65 years and over	1,749	1,757	1,773	1,751	1,498	1,508	1,487
All families	3,388	3,410	3,451	3,082	2,954	2,965	2,757
2 persons	2,364	2,383	2,394	2,320	2,012	2,017	1,931
Head under 65 years	2,441	2,458	2,473	2,373	2,093	2,100	1,984
Head 65 years and							
over	2,194	2,215	2,217	2,202	1,882	1,883	1,861
3 persons	2,905	2,924	2,937	2,830	2,480	2,485	2,395
4 persons	3,721	3,743	3,745	3,725	3,195	3,197	3,159
5 persons	4,386	4,415	4,418	4,377	3,769	3,770	3,761
6 persons	4,921	4,958	4,962	4,917	4,244	4,245	4,205
7 or more persons	6,034	6,101	6,116	5,952	5,182	5,185	5,129

Consequently, to obtain the weighted poverty thresholds for families and unrelated individuals below 75 percent and below 125 percent of the poverty level, the weighted poverty thresholds shown in table G may be multiplied directly by 0.75 and 1.25, respectively.

The average weighted thresholds presented in table G are based on the March 1970 Current Population Survey. The complete matrix of poverty thresholds can be found in U.S. Bureau of the Census, **Public Use Samples of Basic Records from the 1970 Census: Description and Technical Documentation**, Washington, D.C., 1972.

Poverty status of persons.—The poverty status of a person who is a family member is determined by the family income and its relation to the appropriate poverty threshold for that family. The poverty status of a person who is an unrelated individual is determined by his or her own income in relation to the appropriate poverty threshold.

The number of persons below the poverty level shown in chapter D may differ slightly from the number presented in chapter C. This difference is caused in part by differences in the weighting procedures used to tabulate the sample data. In chapter D, the number of family members below the poverty level was calculated by adding the sample weights of all family members. In chapter C, the number of family members below the poverty level was calculated by multiplying the number of persons in the family by the sample weight of the family head. Since the sample weight of the family head is not necessarily identical with the sample weight of any other member of the family, the two

weighting procedures may produce different results.

Households below poverty level.—Households below the poverty level are defined as households in which the total income of the family or primary individual is below the poverty level. The incomes of persons in the household other than members of the family or the primary individual are not included in the total income of the family or primary individual when determining poverty status of a household.

The number of households shown in the poverty status tables is the sum of the households for which rent and value data are shown. This number may be less than the total number of household heads (i.e., households) shown in other tables since the rent and value data are tabulated only for households in specified types of housing units as described below in the paragraphs on value and gross rent.

Ratio of family income to poverty level.—This ratio is obtained by dividing the income of a family or unrelated individual by the corresponding poverty threshold.

Income deficit.—The income deficit is the difference between the total income of families and unrelated individuals below the poverty level and their respective poverty thresholds. In computing the income deficit, families reporting a net income loss are assigned zero dollars, and for such cases the income deficit is equal to the poverty threshold. The aggregate income deficit provides an estimate of the amount of money which would be required to raise the incomes of all poor families and unrelated individuals to their respective thresholds at the poverty levels.

Median income deficit.—The median income deficit is the amount which divides the distribution into two equal parts, one having an income deficit above the median and the other having an income deficit below the median.

Mean income deficit.—The mean income deficit is the amount obtained by dividing the aggregate income deficit of a group below the poverty level by the number of families or unrelated individuals (as appropriate) in that group.

Percentage distribution by type of income.—Two percentage distributions by type of income are shown in tables 264 and 319. In the first, which is a distribution of aggregate family income by type of income, a negative (–) sign denotes a net loss from that particular type of income. Some types of income may be shown as contributing more than 100 percent of the total aggregate because of losses from other types. In the second distribution, which is a percentage distribution of families by type of income received, the figures may add to more than 100 percent, since some families receive income from more than one source.

Housing Items Related to Poverty Status

Occupied housing unit.—A housing unit is a group of rooms or a single room occupied as separate living quarters. A housing unit can be occupied by a family, a family and unrelated persons living together, a group of unrelated persons living together, or by one person.

For each occupied housing unit there is one household. The former term refers to a type of living quarters,

and the latter term refers to the persons who occupy the quarters. Thus, the total number of households in the United States is equal to the total number of occupied housing units in the United States.

Tenure.—The data on tenure were derived from answers to question H9 (see facsimiles of questionnaire item and instructions, pages App-59 and 60). A housing unit is tabulated as "owner occupied" if the owner or co-owner lives in the unit, even if it is mortgaged or not fully paid for; a cooperative or condominium is "owner occupied" only if the owner or co-owner lives in it. All other occupied units are classified as "renter occupied."

Value.—The data on value were derived from answers to question H11 (see facsimiles of questionnaire item and instructions, pages App-59 and 60).

Value data are tabulated for owner-occupied one-family houses which are located on a place of less than 10 acres and which do not have a commercial establishment or medical office on the property. Cooperatives,

condominiums, mobile homes, and trailers are excluded from the value tabulations.

Mean value is the sum of the individual values reported divided by the number of owner-occupied units for which value is shown. For purposes of computation, the midpoints of the intervals were used, except that a mean value of \$3,500 was assigned housing units in the interval "less than \$5,000" and a mean of \$60,000 was assigned units in the interval "\$50,000 or more."

Gross rent.—The data on gross rent are based on the information reported for contract rent and the cost of utilities and fuel from questions H12 and H13 (see facsimiles of questionnaire items and instructions, pages App-59 and 60). Rent data are tabulated for renter-occupied units, excluding one-family houses on 10 acres or more.

Monthly gross rent is the summation of contract rent plus the estimated average monthly cost of utilities (water, electricity, gas) and fuels (oil, coal, kerosene, wood, etc.) if these items are paid for by the renter. Thus, gross rent eliminates individual differences which result from varying

practices with respect to the inclusion of utilities and fuel as part of the contract rental payment. While the estimated costs of water and fuel are reported on a yearly basis, they are converted to monthly figures in the computation process.

Mean gross rent is the sum of the individual rental amounts divided by the number of renter-occupied units, excluding one-family houses on 10 acres or more.

Plumbing facilities.—Data on plumbing facilities were derived from answers to questions H5, H6, and H7 (see facsimiles of questionnaire items and instructions, pages App-59 and 60).

"With all plumbing facilities" consists of units which have hot and cold piped water, and also a flush toilet and a bathtub or shower inside the structure for the exclusive use of the occupants of the unit.

Units "lacking some or all plumbing facilities" may lack hot water, bathtub (or shower), or flush toilet, or all of these facilities. Also included in this category are units having no piped water inside the structure and units with toilet or bathing facilities which are also used by another household.

APPENDIX B—Continued

List A. Intermediate Occupational Classification for Males (158 Items) With Component Detailed Items Used in Chapter D

This listing presents the relationship between the detailed occupation stub (e.g., table 221) and the intermediate occupation stub (e.g., table 224). The occupation groups marked with an asterisk (*) are not shown in the tables using the intermediate classification but can be derived by subtraction.

1. Accountants	23. Secondary	Assessors, controllers, and treasurers; local public administration
2. Architects	* Other teachers	Construction inspectors, public administration
3. Computer specialists	Adult education teachers	Inspectors, except construction; public administration
Computer programmers	Teachers, except college and university, n.e.c.	Officials and administrators; public administration, n.e.c.
Computer systems analysts	24. Engineering and science technicians	Postmasters and mail superintendents
Computer specialists, n.e.c.	25. Draftsmen and surveyors	34. Other specified managers and administrators
4. Engineers, aeronautical and astronautical	Draftsmen	Bank officers and financial managers
5. Engineers, civil	Surveyors	Credit men
6. Engineers, electrical and electronic	26. Electrical and electronic engineering technicians	Funeral directors
7. Engineers, mechanical	* Other engineering and science technicians	Health administrators
8. Other engineers	Agriculture and biological, except health	Managers and superintendents, building
Engineers, chemical	Chemical	Officers, pilots, and pursers; ship
Engineers, industrial	Industrial engineering	Officials of lodges, societies, and unions
Engineers, metallurgical and materials	Mechanical engineering	Railroad conductors
Engineers, mining	Mathematical	Restaurant, cafeteria, and bar managers
Engineers, petroleum	Engineering and science, n.e.c.	Managers and administrators, except farm—allocated
Engineers, sales	27. Technicians, except health, and engineering and science	35. Managers and administrators, n.e.c.—salaried
Engineers, n.e.c.	28. Airplane pilots	36. Manufacturing
9. Lawyers and judges	Other technicians, except health, and engineering, and science	37. Wholesale and retail trade
Judges	Air traffic controllers	Wholesale trade
Lawyers	Embalmers	Hardware, farm equipment, and building material retailing
10. Life and physical scientists	Flight engineers	General merchandise stores
11. Chemists	Radio operators	Food stores
* Other life and physical scientists	Tool programmers, numerical control	Motor vehicles and accessories retailing
Agricultural	Technicians, n.e.c.	Gasoline service stations
Atmospheric and space	29. Writers, artists, and entertainers	Apparel and accessories stores
Biological	Actors	Furniture, home furnishings, and equipment stores
Geologists	Athletes and kindred workers	Other retail trade
Marine	Authors	38. Transportation, communications, and other public utilities
Physicists and astronomers	Dancers	Transportation
Life and physical, n.e.c.	Designers	Communications, and utilities and sanitary services
12. Dentists	Editors and reporters	39. All other industries
13. Pharmacists	Musicians and composers	Construction
14. Physicians, medical and osteopathic	Painters and sculptors	Finance, insurance, and real estate
15. Other related practitioners	Photographers	Business and repair services
Chiropractors	Public relations men and publicity writers	Personal services
Optometrists	Radio and television announcers	All other industries
Podiatrists	Writers, artists, and entertainers, n.e.c.	40. Managers and administrators, n.e.c.—self-employed
Veterinarians	30. Other professional, technical, and kindred workers	41. Construction
Health practitioners, n.e.c.	Actuarial	42. Manufacturing
16. Health technologists and technicians	Archivists and curators	43. Wholesale and retail trade
Clinical laboratory technologists and technicians	Dietitians	Wholesale trade
Dental hygienists	Farm management advisors	Hardware, farm equipment, and building material retailing
Health record technologists and technicians	Foresters and conservationists	General merchandise stores
Radiologic technologists and technicians	Home management advisors	Food stores
Therapy assistants	Librarians	Motor vehicles and accessories retailing
Health technologists and technicians, n.e.c.	Mathematicians	Gasoline service stations
17. Religious workers	Operations and systems researchers and analysts	Apparel and accessories stores
Clergymen	Personnel and labor relations workers	Furniture, home furnishings, and equipment stores
18. Social scientists	Registered nurses	Other retail trade
Economists	Research workers, not specified	44. All other industries
Political scientists	Statisticians	Transportation
Psychologists	Therapists	Communications, and utilities and sanitary services
Sociologists	Vocational and educational counselors	Finance, insurance, and real estate
Urban and regional planners	Professional, technical, and kindred workers—allocated	Business and repair services
Social scientists, n.e.c.	31. Buyers, purchasing agents, and sales managers	Personal services
19. Social and recreation workers	Buyers and shippers, farm products	All other industries
Social	Buyers, wholesale and retail trade	45. Insurance agents, brokers, and underwriters
Recreation	Purchasing agents and buyers, n.e.c.	
20. Teachers	Sales managers and department heads, retail trade	
21. College and university	Sales managers, except retail trade	
Biology	32. School administrators	
Chemistry	School administrators, college	
Engineering	School administrators, elementary and secondary	
Physics	33. Specified managers and administrators, public administration	
Other life and physical sciences		
Mathematics		
Economics		
English		
History		
Miscellaneous social sciences		
Other specified teachers		
Not specified teachers		
22. Elementary and prekindergarten		
Elementary school		
Prekindergarten and kindergarten		

APPENDIX B—Continued

List A.—Continued

- | | | |
|--|--|---|
| <p>46. Real estate agents and brokers
 47. Sales representatives, manufacturing industries
 48. Sales representatives, wholesale trade
 49. Sales clerks, retail trade
 50. Salesmen, retail trade
 51. Salesmen of services and construction
 52. Other sales workers
 Advertising agents and salesmen
 Auctioneers
 Demonstrators
 Hucksters and peddlers
 Newsboys
 Stock and bond salesmen
 Sales workers—allocated
 53. Bank tellers and cashiers
 Bank tellers
 Cashiers
 54. Bookkeepers and billing clerks
 Billing clerks
 Bookkeepers
 55. Mail handlers and postal clerks
 Mail carriers, post office
 Mail handlers, except post office
 Postal clerks
 56. Other clerical and kindred workers
 Clerical assistants, social welfare
 Clerical supervisors, n.e.c.
 Collectors, bill and account
 Counter clerks, except food
 Dispatchers and starters, vehicle
 Enumerators and interviewers
 Estimators and investigators, n.e.c.
 Expediteurs and production controllers
 File clerks
 Insurance adjusters, examiners, and investigators
 Library attendants and assistants
 Messengers, including telegraph, and office boys
 Meter readers, utilities
 Bookkeeping and billing machine operators
 Calculating machine operators
 Computer and peripheral equipment operators
 Duplicating machine operators
 Key punch operators
 Tabulating machine operators
 Office machine operators, n.e.c.
 Payroll and timekeeping clerks
 Proofreaders
 Real estate appraisers
 Receptionists
 Secretaries
 Shipping and receiving clerks
 Statistical clerks
 Stenographers
 Stock clerks and storekeepers
 Teacher aides, except school monitors
 Telegraph operators
 Telephone operators
 Ticket, station, and express agents
 Typists
 Weighers
 Miscellaneous clerical workers
 Not specified clerical workers
 Clerical and kindred workers—allocated
 57. Apparel craftsmen and upholsterers
 Furriers
 Tailors
 Upholsterers
 58. Bakers
 59. Cabinetmakers
 60. Carpenters
 61. Excavating, grading, and road machine operators
 Bulldozer operators
 Excavating, grading, and road machine operators; except bulldozer</p> | <p>62. Electricians
 63. Masons and tile setters
 Brickmasons and stonemasons
 Tile setters
 64. Painters, construction and maintenance; and paperhangers
 Painters, construction and maintenance
 Paperhangers
 65. Plasterers and cement finishers
 Cement and concrete finishers
 Plasterers
 66. Plumbers and pipe fitters
 67. Other construction craftsmen
 Floor layers, except tile setters
 Roofers and slaters
 Structural metal craftsmen
 68. Foremen, n.e.c., manufacturing
 Durable goods
 Nondurable goods
 69. Foremen, n.e.c., nonmanufacturing industries
 Construction
 Transportation, communications, and other public utilities
 All other industries
 70. Linemen and servicemen, telephone and power
 Electric power linemen and cablemen
 Telephone installers and repairmen
 Telephone linemen and splicers
 71. Locomotive engineers and firemen
 Locomotive engineers
 Locomotive firemen
 72. Mechanics and repairmen, air-conditioning, heating, and refrigeration
 73. Mechanics and repairmen, aircraft
 74. Mechanics and repairmen; automobile, including body
 Automobile body repairmen
 Automobile mechanics
 75. Mechanics and repairmen, radio and television
 76. Other mechanics and repairmen
 Data processing machine repairmen
 Farm implement
 Heavy equipment mechanics, incl. diesel
 Household appliance and accessory installers and mechanics
 Loom fixers
 Office machine
 Railroad and car shop
 Miscellaneous mechanics and repairmen
 Not specified mechanics and repairmen
 77. Machinists and job and die setters
 Job and die setters, metal
 Machinists
 78. Sheetmetal workers and tinsmiths
 79. Tool and die makers
 80. Other metal craftsmen
 Blacksmiths
 Boilermakers
 Forgemen and hammermen
 Heat treaters, annealers, and temperers
 Millwrights
 Molders, metal
 Pattern and model makers, except paper
 Rollers and finishers, metal
 Shipfitters
 81. Printing craftsmen
 82. Compositors and typesetters
 83. Pressmen and plate printers, printing
 • Other printing craftsmen
 Bookbinders
 Electrotypers and stereotypers
 Photoengravers and lithographers</p> | <p>84. Stationary engineers and power station operators
 Power station operators
 Stationary engineers
 85. Other craftsmen and kindred workers
 Automobile accessories installers
 Carpet installers
 Cranemen, derrickmen, and hoistmen
 Decorators and window dressers
 Dental laboratory technicians
 Engravers, except photoengravers
 Furniture and wood finishers
 Glaziers
 Inspectors, scalers, and graders; log and lumber
 Inspectors, n.e.c.
 Construction
 Railroads and railway express service
 Jewelers and watchmakers
 Millers; grain, flour, and feed
 Motion picture projectionists
 Opticians, and lens grinders and polishers
 Piano and organ tuners and repairmen
 Shoe repairmen
 Sign painters and letterers
 Stone cutters and stone carvers
 Craftsmen and kindred workers, n.e.c.
 Former members of the Armed Forces
 Craftsmen and kindred workers—allocated
 86. Assemblers
 87. Checkers, examiners, and inspectors; manufacturing
 88. Garage workers and gas station attendants
 89. Laundry and dry cleaning operatives, n.e.c.
 90. Meat cutters and butchers
 Meat cutters and butchers, except manufacturing
 Meat cutters and butchers, manufacturing
 91. Mine operatives, n.e.c.
 92. Packers and wrappers, except produce
 Meat wrappers, retail trade
 Packers and wrappers, except meat and produce
 93. Painters, manufactured articles
 94. Precision machine operatives
 Drill press operatives
 Grinding machine operatives
 Lathe and milling machine operatives
 Precision machine operatives, n.e.c.
 95. Sawyers
 96. Stationary firemen
 97. Textile operatives
 Carding, lapping, and combing operatives
 Knitters, loopers, and toppers
 Spinners, twistors, and winders
 Weavers
 Textile operatives, n.e.c.
 98. Welders and flamecutters
 99. Other metal working operatives
 Filers, polishers, sanders, and buffers
 Furnacemen, smeltermen, and pourers
 Heaters, metal
 Metal platers
 Punch and stamping press operatives
 Riveters and fasteners
 Solderers
 100. Other specified operatives, n.e.c.
 Asbestos and insulation workers
 Blasters and powdermen
 Bottling and canning operatives</p> |
|--|--|---|

APPENDIX B—Continued

List A.—Continued

	Chainmen, rodmen, and axmen; surveying		Boatmen and canalmen		141. Communications, and utilities and sanitary services
	Clothing ironers and pressers		Conductors and motormen, urban rail transit		142. Wholesale and retail trade
	Cutting operatives, n.e.c.		Fork lift and tow motor operatives		143. All other industries
	Dressmakers and seamstresses, except factory		Motormen; mine, factory, logging camp, etc.		Business and repair services
	Drillers, earth		Parking attendants		Public administration
	Dry wall installers and lathers		Railroad brakemen		All other industries
	Dyers		Railroad switchmen		144. Farmers and farm managers
	Graders and sorters, manufacturing		Railroad switchmen		(All occupations in this major group)
	Produce graders and packers, except factory and farm		Transport equipment operatives—allocated		145. Paid farm laborers and farm foremen
	Milliners	125. Construction laborers			Farm foremen
	Mixing operatives	Carpenters' helpers			Farm laborers, wage workers
	Oilers and greasers, except auto	Construction laborers, except carpenters' helpers			Farm service laborers, self-employed
	Photographic process workers				Farm laborers and farm foremen—allocated (class of worker other than unpaid family worker)
	Sailors and deckhands	126. Freight, stock, and material handlers			146. Unpaid family workers
	Sewers and stitchers	Freight and material handlers			Unpaid family workers
	Shoemaking machine operatives	Garbage collectors			Farm laborers and farm foremen—allocated (unpaid family class of worker)
	Winding operatives, n.e.c.	Longshoremen and stevedores			147. Service workers, except private household
	Operatives, except transport—allocated	Stockhandlers			148. Cleaning service workers
101. Machine operatives, miscellaneous specified		Warehousemen, n.e.c.			Chambermaids and maids, except private household
102. Machine operatives, not specified		127. Other specified laborers			Cleaners and charwomen
103. Miscellaneous operatives		Animal caretakers, except farm			Janitors and sextons
104. Not specified operatives		Fishermen and oystermen			149. Food service workers
104. Miscellaneous and not specified operatives by industry		Gardeners and groundskeepers, except farm			150. Cooks, except private household
105. Wood products, including furniture		Lumbermen, raftsmen, and wood-choppers			151. Busboys and dishwashers
Lumber and wood products, except furniture		Teamsters			Busboys
Furniture and fixtures		Vehicle washers and equipment cleaners			Dishwashers
106. Primary metal industries		Laborers, except farm—allocated			* Other food service workers
Blast furnaces, steel works, and rolling and finishing mills		128. Miscellaneous laborers			Bartenders
* Other primary metal industries		129. Not specified laborers			Food counter and fountain workers
107. Fabricated metal industries		Miscellaneous and not specified laborers by industry			Waiters
108. Machinery, including electrical		130. Wood products, including furniture			Food service workers, n.e.c., except private household
Machinery, except electrical		Lumber and wood products, except furniture			152. Health service workers
Electrical machinery, equipment, and supplies		Furniture and fixtures			Dental assistants
109. Motor vehicles and equipment		131. Metal industries			Health aides, except nursing
110. Transportation equipment, except motor vehicles		Primary metal industries			Health trainees
111. Other durable goods		Blast furnaces, steel works, and rolling and finishing mills			Lay midwives
Stone, clay, and glass products		* Other primary metal industries			Nursing aides, orderlies, and attendants
Professional and photographic equipment, and watches		Fabricated metal industries, including not specified metal			153. Personal service workers
Ordnance		132. Machinery, including electrical			Airline stewardesses
Miscellaneous manufacturing industries		Machinery, except electrical			Attendants, recreation and amusement
Durable goods—allocated		Electrical machinery, equipment, and supplies			Attendants, personal service, n.e.c.
112. Food and kindred products		133. Transportation equipment			Baggage porters and bellhops
113. Apparel and other fabricated textile products		134. Motor vehicles and motor vehicle equipment			Barbers
114. Paper and allied products		* Other transport equipment			Boarding and lodging house keepers
115. Chemicals and allied products		135. Other durable goods			Bootblacks
116. Other nondurable goods		Stone, clay, and glass products			Child care workers, except private household
Tobacco manufactures		Professional and photographic equipment, and watches			Elevator operators
Printing, publishing, and allied industries		Ordnance			Hairdressers and cosmetologists
Petroleum and coal products		Miscellaneous manufacturing industries			Housekeepers, except private household
Rubber and miscellaneous plastic products		Durable goods—allocated			School monitors
Leather and leather products		136. Nondurable goods			Ushers, recreation and amusement
Nondurable goods—allocated		137. * Other nondurable goods			Welfare service aides
117. Not specified manufacturing industries		Tobacco manufactures			154. Protective service workers
118. Transportation, communications, and other public utilities		Textile mill products			155. Firemen, fire protection
119. Wholesale and retail trade		Apparel and other fabricated textile products			156. Guards and watchmen
120. All other industries		Paper and allied products			157. * Policemen and detectives
Construction		Printing, publishing, and allied industries			Other protective service workers
Business and repair services		Chemicals and allied products			Crossing guards and bridge tenders
Public administration		Petroleum and coal products			Marshalls and constables
All other industries		Rubber and miscellaneous plastic products			Sheriffs and bailiffs
121. Bus drivers		Leather and leather products			* Service workers, except private household—allocated
122. Taxicab drivers and chauffeurs		Nondurable goods—allocated			158. Private household workers
123. Truck drivers and deliverymen		138. Not specified manufacturing industries			(All occupations in this major group)
Deliverymen and routemen		139. Railroads and railway express service			
Truck drivers		140. Transportation, except railroads			
124. Other transport equipment operatives					

APPENDIX B—Continued

List B. Intermediate Occupational Classification for Females (86 Items) With Component Detailed Items Used in Chapter D

This listing presents the relationship between the detailed occupation stub (e.g., table 221) and the intermediate occupation stub (e.g., table 224). The occupation groups marked with an asterisk (*) are not shown in the tables using the intermediate classification but can be derived by subtraction.

1. Accountants	Flight engineers	ers; local public administration
2. Computer specialists	Radio operators	Bank officers and financial managers
Computer programmers	Tool programmers, numerical control	Credit men
Computer systems analysts	Technicians, n.e.c.	Funeral directors
Computer specialists, n.e.c.	18. Writers, artists, and entertainers	Health administrators
3. Librarians	19. Actors and dancers	Construction inspectors, public administration
4. Mathematical specialists	Actors	Inspectors, except construction, public administration
Actuaries	Dancers	Managers and superintendents, building
Mathematicians	20. Authors, editors, and reporters	Officers, pilots, and pursers; ship
Statisticians	Authors	Officers and administrators; public administration, n.e.c.
5. Life and physical scientists	Editors and reporters	Officers of lodges, societies, and unions
Agricultural	* Other writers, artists, and entertainers	Postmasters and mail superintendents
Atmospheric and space	Athletes and kindred workers	Railroad conductors
Biological	Designers	Managers and administrators, except farm—allocated
Chemists	Musicians and composers	26. Managers and administrators, n.e.c.—salaried
Geologists	Painters and sculptors	27. Wholesale and retail trade
Marine	Photographers	Wholesale trade
Physicists and astronomers	Public relations men and publicity writers	Hardware, farm equipment, and building material retailing
Life and physical, n.e.c.	Radio and television announcers	General merchandise stores
6. Nurses, dietitians, and therapists	Writers, artists, and entertainers, n.e.c.	Food stores
7. Dietitians	21. Other professional, technical, and kindred workers	Motor vehicles and accessories retailing
8. Registered nurses	Architects	Gasoline service stations
* Therapists	Archivists and curators	Apparel and accessories stores
9. Health technologists and technicians	Chiropractors	Furniture, home furnishings, and equipment stores
Clinical laboratory technologists and technicians	Clergymen	Other retail trade
Dental hygienists	Dentists	* All other industries
Health record technologists and technicians	Engineers, aeronautical and astronautical	Construction
Radiologic technologists and technicians	Engineers, chemical	Manufacturing
Therapy assistants	Engineers, civil	Transportation
Health technologists and technicians, n.e.c.	Engineers, electrical and electronic	Communications, and utilities and sanitary services
10. Social scientists	Engineers, industrial	Finance, insurance, and real estate
Economists	Engineers, mechanical	Business and repair services
Political scientists	Engineers, metallurgical and materials	Personal services
Psychologists	Engineers, mining	All other industries
Sociologists	Engineers, petroleum	28. Managers and administrators, n.e.c.—self-employed
Urban and regional planners	Engineers, sales	29. Wholesale and retail trade
Social scientists, n.e.c.	Engineers, n.e.c.	Wholesale trade
11. Social and recreation workers	Farm management advisors	Hardware, farm equipment, and building material retailing
Social	Foresters and conservationists	General merchandise stores
Recreation	Health practitioners, n.e.c.	Food stores
12. Teachers: College and university	Home management advisors	Motor vehicles and accessories retailing
Biology	Judges	Gasoline service stations
Chemistry	Lawyers	Apparel and accessories stores
Engineering	Operations and systems researchers and analysts	Furniture, home furnishings, and equipment stores
Physics	Optometrists	Other retail trade
Other life and physical sciences	Personnel and labor relations workers	* All other industries
Mathematics	Pharmacists	Construction
Economics	Physicians, medical and osteopathic	Manufacturing
English	Podiatrists	Transportation
History	Religious workers, n.e.c.	Communications, and utilities and sanitary services
Miscellaneous social sciences	Research workers, not specified	Finance, insurance, and real estate
Other specified teachers	Veterinarians	Business and repair services
Not specified teachers	Vocational and educational counselors	Personal services
13. Teachers: Elementary and prekindergarten	Professional, technical, and kindred workers—allocated	All other industries
Elementary school	22. Buyers, purchasing agents, and sales managers	30. Demonstrators, hucksters, and peddlers
Prekindergarten and kindergarten	Buyers and shippers, farm products	Demonstrators
14. Teachers: Secondary	Buyers, wholesale and retail trade	Hucksters and peddlers
15. Other teachers	Purchasing agents and buyers, n.e.c.	31. Insurance, real estate agents, and brokers
Adult education teachers	Sales managers and department heads, retail trade	Insurance agents, brokers, and underwriters
Teachers, except college and university, n.e.c.	Sales managers, except retail trade	
16. Engineering and science technicians	23. Restaurant, cafeteria, and bar managers	
Agriculture and biological, except health	24. School administrators	
Chemical	School administrators, college	
Draftsmen	School administrators, elementary and secondary	
Electrical and electronic engineering	25. Other specified managers and administrators	
Industrial engineering	Assessors, controllers, and treasurers	
Mechanical engineering		
Mathematical		
Surveyors		
Engineering and science, n.e.c.		
17. Technicians, except health, and engineering and science		
Airplane pilots		
Air traffic controllers		
Embalmers		

APPENDIX B—Continued

List B.—Continued

- Real estate agents and brokers
- 32. Sales clerks, retail trade
- 33. Salesmen, retail trade
- 34. Other sales workers
 - Advertising agents and salesmen
 - Auctioneers
 - Newsboys
 - Stock and bond salesmen
 - Sales representatives, manufacturing industries
 - Sales representatives, wholesale trade
 - Salesmen of services and construction
 - Sales workers—allocated
- 35. Bank tellers
- 36. Bookkeepers
- 37. Cashiers
- 38. Counter clerks, except food
- 39. Enumerators and interviewers
- 40. File clerks
- 41. Office machine operators
- 42. Bookkeeping and billing machine
- 43. Key punch
 - * Other office machine operators
 - Calculating machine
 - Computer and peripheral equipment
 - Duplicating machine
 - Tabulating machine
 - Office machine, n.e.c.
- 44. Payroll and timekeeping clerks
- 45. Receptionists
- 46. Secretaries
- 47. Stenographers
- 48. Telephone operators
- 49. Typists
- 50. Other clerical and kindred workers
 - Billing clerks
 - Clerical assistants, social welfare
 - Clerical supervisors, n.e.c.
 - Collectors, bill and account
 - Dispatchers and starters, vehicle
 - Estimators and investigators, n.e.c.
 - Expeditors and production controllers
 - Insurance adjusters, examiners, and investigators
 - Library attendants and assistants
 - Mail carriers, post office
 - Mailhandlers, except post office
 - Messengers, including telegraph, and office boys
 - Meter readers, utilities
 - Postal clerks
 - Proofreaders
 - Real estate appraisers
 - Shipping and receiving clerks
 - Statistical clerks
 - Stock clerks and storekeepers
 - Teacher aides, except school monitors
 - Telegraph operators
 - Ticket, station, and express agents
 - Weighers
 - Miscellaneous clerical workers
 - Not specified clerical workers
 - Clerical and kindred workers—allocated
- 51. Craftsmen and kindred workers
- 52. Foremen, n.e.c.
 - Construction
 - Durable goods manufacturing
 - Nondurable goods manufacturing
 - Transportation, communications, and other public utilities
 - All other industries
 - * Other craftsmen and kindred workers (All other occupations in this major group)
- 53. Assemblers
- 54. Bottling and canning operatives

- 55. Checkers, examiners, and inspectors; manufacturing
- 56. Dressmakers and seamstresses, except factory
- 57. Laundry and drycleaning operatives, including ironers
 - Clothing ironers and pressers
 - Laundry and drycleaning operatives, n.e.c.
- 58. Graders and sorters, manufacturing
- 59. Packers and wrappers, except produce
 - Meat wrappers, retail trade
 - Packers and wrappers, except meat and produce
- 60. Sewers and stitchers
- 61. Textile operatives
 - Carding, lapping, and combing operatives
 - Knitters, loopers, and toppers
 - Spinners, twistors, and winders
 - Weavers
 - Textile operatives, n.e.c.
- 62. Other specified operatives
 - Asbestos and insulation workers
 - Blasters and powdermen
 - Chainmen, rodmen, and axmen; surveying
 - Cutting operatives, n.e.c.
 - Drillers, earth
 - Dry wall installers and lathers
 - Dyers
 - Filters, polishers, sanders, and buffers
 - Furnacemen, smeltermen, and pourers
 - Garage workers and gas station attendants
 - Produce graders and packers, except factory and farm
 - Heaters, metal
 - Meat cutters and butchers, except manufacturing
 - Meat cutters and butchers, manufacturing
 - Metal platers
 - Milliners
 - Mine operatives, n.e.c.
 - Mixing operatives
 - Oilers and greasers, except auto
 - Painters, manufactured articles
 - Photographic process workers
 - Drill press operatives
 - Grinding machine operatives
 - Lathe and milling machine operatives
 - Precision machine operatives, n.e.c.
 - Punch and stamping press operatives
 - Riveters and fasteners
 - Sailors and deckhands
 - Sawyers
 - Shoemaking machine operatives
 - Solderers
 - Stationary firemen
 - Welders and flamecutters
 - Winding operatives, n.e.c.
 - Operatives, except transport—allocated
 - Miscellaneous and not specified operatives by industry
- 63. Machinery, including electrical
 - Machinery, except electrical
 - Electrical machinery, equipment, and supplies
- 64. Other durable goods
 - Lumber and wood products, except furniture
 - Furniture and fixtures
 - Stone, clay, and glass products
 - Primary metal industries
 - Fabricated metal industries
 - Transportation equipment

- Professional and photographic equipment, and watches
- Ordnance
- Miscellaneous manufacturing industries
- Durable goods—allocated
- 65. Nondurable goods: Manufacturing
- 66. Food and kindred products
- 67. Apparel and other fabricated textile products
 - Textile mill products
 - Apparel and other fabricated textile products
 - * Other nondurable goods
 - Tobacco manufactures
 - Paper and allied products
 - Printing, publishing, and allied industries
 - Chemicals and allied products
 - Petroleum and coal products
 - Rubber and miscellaneous plastic products
 - Leather and leather products
 - Nondurable goods—allocated
 - Not specified manufacturing
- 68. Nonmanufacturing industries
 - Construction
 - Transportation, communications, and other public utilities
 - Wholesale and retail trade
 - Business and repair services
 - Public administration
 - All other industries
- 69. Transport equipment operatives (All occupations in this major group)
- 70. Laborers, except farm (All occupations in this major group)
- 71. Farmers and farm managers (All occupations in this major group)
- 72. Paid farm laborers and farm foremen
 - Farm foremen
 - Farm laborers, wage workers
 - Farm service workers, self-employed
 - Farm laborers and farm foremen—allocated (class of worker other than unpaid family worker)
- 73. Unpaid family workers
 - Unpaid family workers
 - Farm laborers and farm foremen—allocated (unpaid family class of worker)
- 74. Service workers, except private household
 - Cleaning service workers
- 75. Chambermaids and maids, except private household
- * Other cleaning service workers
 - Cleaners and charwomen
 - Janitors and sextons
- 77. Food service workers
- 78. Cooks, except private household
- 79. Waiters and food counter workers
 - Food counter and fountain workers
 - Waiters
 - * Other food service workers
 - Bartenders
 - Busboys
 - Dishwashers
 - Food service workers, n.e.c., except private household
- 80. Health service workers
- 81. Nursing aides, orderlies, and attendants
- 82. Practical nurses
 - * Other health service workers
 - Dental assistants
 - Health aides, except nursing
 - Health trainees

APPENDIX B—Continued

List B.—Continued

<p>83. Lay midwives Personal service workers 84. Hairdressers and cosmetologists * Other personal service workers Airline stewardesses Attendants, recreation and amusement Attendants, personal service, n.e.c. Baggage porters and bellhops Barbers Boarding and lodging house keepers Bootblacks Child care workers, except private household</p>	<p>Elevator operators Housekeepers, except private household School monitors Ushers, recreation and amusement Welfare service aides • Service workers, except private household—allocated, and protective service workers 85. Private household workers—living in Child care workers, private household Cooks, private household Housekeepers, private household Laundresses, private household</p>	<p>Maids and servants, private household Private household workers—allocated 86. Private household workers—living out Child care workers, private household Cooks, private household Housekeepers, private household Laundresses, private household Maids and servants, private household Private household workers—allocated</p>
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APPENDIX B—Continued

List C. Condensed Occupational Classification Used for Total Employed in Chapter C as Related to Component Detailed Items Presented in List A

(Numbers in parentheses refer to items in list A)

<p>Professional, technical, and kindred workers Engineers (Items 4, 5, 6, 7, 8) Physicians, dentists, and related practitioners (Items 12-15) Health workers, except practitioners (Item 16) Teachers, elementary and secondary school (Items 22, 23) Technicians, except health (Items 24, 27) Other professional workers (Items 1, 2, 3, 9, 10, 17, 18, 19, part 20, 29, 30)</p> <p>Managers and administrators, except farm (Items 31-35, 40) Salaried: Manufacturing Retail trade Other industries Self-employed: Retail trade Other industries</p> <p>Sales workers (Items 45-52) Manufacturing and wholesale trade Retail trade Other industries</p> <p>Clerical and kindred workers Bookkeepers (Part item 54)</p>	<p>Secretaries, stenographers, and typists (Part item 56) Other clerical workers (Items 53, part item 54, 55, part item 56)</p> <p>Craftsmen and kindred workers Automobile mechanics, including body repairmen (Item 74) Mechanics and repairmen, except auto (Items 72, 73, 75, 76) Machinists (Part item 77) Metal craftsmen, except mechanics and machinists (Part item 77, 78, 79, 80) Carpenters (Item 60) Construction craftsmen, except carpenters (Items 61-67) Other craftsmen (Items 57, 58, 59, 68-71, 81, 84, 85)</p> <p>Operatives, except transport (Items 86-104) Durable goods, manufacturing Nondurable goods, manufacturing Nonmanufacturing industries</p> <p>Transport equipment operatives Truck drivers (Part item 123)</p>	<p>Other transport equipment operatives (Items 121, 122, part item 123, 124)</p> <p>Laborers, except farm Construction laborers (Item 125) Freight, stock, and material handlers (Item 126) Other laborers, except farm (Items 127, 128, 129)</p> <p>Farmers and farm managers (Item 144) Farm laborers and farm foremen (Items 145, 146) Service workers, except private household¹ (Item 147) Cleaning service workers (Item 148) Food service workers (Item 149) Health service workers (Item 152) Personal service workers (Item 153) Protective service workers (Item 154) Private household workers (Item 158)</p>
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¹ Includes allocated cases not shown separately.

List D. Condensed Occupational Classification Used for Female Employed in Chapter C as Related to Component Detailed Items Presented in List B

(Numbers in parentheses refer to items in list B)

<p>Professional, technical, and kindred workers Nurses (Item 8) Health workers, except nurses (Items 6, 7, 9) Teachers, elementary and secondary schools (Items 13, 14) Technicians, except health (Items 16, 17) Other professional workers (Items 1-5, 10, 11, 12, 15, 18, 21)</p> <p>Managers and administrators, except farm (Items 22-26, 28)</p> <p>Sales workers (Items 30-34) Retail trade Other than retail trade</p> <p>Clerical and kindred workers Bookkeepers (Item 36)</p>	<p>Secretaries, stenographers, and typists (Items 46, 47, 49) Other clerical workers (Items 35, 37-41, 44, 45, 48, 50)</p> <p>Craftsmen, foremen, and kindred workers (Item 51)</p> <p>Operatives, except transport (Items 53-62, 63, 64, 65, 68) Durable goods, manufacturing Nondurable goods, manufacturing Nonmanufacturing industries</p> <p>Transport equipment operatives (Item 69)</p> <p>Laborers, except farm (Item 70)</p>	<p>Farmers and farm managers (Item 71) Farm laborers and farm foremen (Items 72, 73)</p> <p>Service workers, except private household¹ (Item 74) Cleaning service workers (Item 75) Food service workers (Item 77) Health service workers (Item 80) Personal service workers (Item 83) Protective service workers (Part item 74)</p> <p>Private household workers (Items 85, 86)</p>
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¹ Includes allocated cases not shown separately.

APPENDIX B—Continued

List E. Intermediate Industrial Classification With Component Detailed Items Used in Chapter D

This listing presents the relationship between the detailed industry stub (e.g., in table 236) and the intermediate industry stub (e.g., in table 237). The industry groups marked with an asterisk (*) are not shown in the tables using the intermediate classification but can be derived by subtraction. Numbers in parentheses following the industry categories are the SIC definitions.

1. Agriculture Agricultural production (01) Agricultural services, except horticultural (07 except 0713 and 073) Horticultural services (073) Agriculture, forestry, and fisheries—allocated	Not specified electrical machinery, equipment, and supplies	Soaps and cosmetics (284) Paints, varnishes, and related products (285) Agricultural chemicals (287) Miscellaneous chemicals (286, 289) Not specified chemicals and allied products
2. Forestry and fisheries Forestry (08) Fisheries (09)	18. Motor vehicles and motor vehicle equipment (371)	34. Petroleum and coal products Petroleum refining (291) Miscellaneous petroleum and coal products (295, 299)
3. Mining (All industries in this major group) (10-14)	19. Aircraft and parts (372)	35. Rubber and miscellaneous plastic products Rubber products (301-303, 306) Miscellaneous plastic products (307)
4. Construction (All industries in this major group) (15-17)	20. Other transportation equipment Ship and boat building and repairing (373) Railroad locomotives and equipment (374) Mobile dwellings and campers (3791) Cycles and miscellaneous transportation equipment (375, 3799)	36. Footwear, except rubber (313, 314)
5. Logging (241)	21. Professional and photographic equipment, and watches Scientific and controlling instruments (381, 382) Optical and health services supplies (383, 384, 385) Photographic equipment and supplies (386) Watches, clocks, and clockwork-operated devices (387) Not specified professional equipment	37. Other nondurable goods Tobacco manufactures (21) Tanned, curried, and finished leather (311) Leather products, except footwear (312, 315-317, 319) Manufacturing, nondurable goods—allocated
6. Sawmills, planing mills, and mill work (242, 243)	22. Ordnance (19)	38. Not specified manufacturing industries
7. Miscellaneous wood products (244, 249)	23. Miscellaneous manufactures and durable goods—allocated Miscellaneous manufacturing industries (39) Manufacturing, durable goods—allocated	39. Transportation, communications, and other public utilities
8. Furniture and fixtures (25)	24. Meat products (201)	40. Railroads and railway express service (40)
9. Stone, clay, and glass products	25. Canning and preserving produce, sea foods, and beverages Canning and preserving fruits, vegetables, and sea foods (203) Beverage industries (208)	41. Street railways and bus lines (411, 413-415, 417)
10. Cement, concrete, gypsum, and plaster products (324, 327)	26. Bakery products (205)	42. Trucking service and warehousing Trucking service (421, 423) Warehousing and storage (422)
* Other stone, clay, and glass products Glass and glass products (321-323) Structural clay products (325) Pottery and related products (326) Miscellaneous nonmetallic mineral and stone products (328-329)	27. Other food industries Dairy products (202) Grain-mill products (204, 0713) Confectionery and related products (207) Miscellaneous food preparation and kindred products (206, 209) Not specified food industries	43. Water transportation (44)
11. Primary iron and steel industries Blast furnaces, steel works, rolling, and finishing mills (3312, 3313) Other primary iron and steel industries (3315-3317, 332, 3391, part 3399)	28. Yarn, thread, and fabric mills (221-224, 228)	44. Air transportation (45)
12. Primary nonferrous industries Primary aluminum industries (3334, part 334, 3352, 3361, part 3392, part 3399) Other primary nonferrous industries (3331-3333, 3339, part 334, 3351, 3356, 3357, 3362, 3369, part 3392, part 3399)	29. Other textile mill products Knitting mills (225) Dyeing and finishing textiles, except wool and knit goods (226) Floor coverings, except hard surface (227) Miscellaneous textile mill products (229)	45. All other transportation Taxicab service (412) Pipe lines, except natural gas (46) Services incidental to transportation (47)
13. Fabricated metal industries, including not specified metal Cutlery, hand tools, and other hardware (342) Fabricated structural metal products (344) Screw machine products (345) Metal stamping (346) Miscellaneous fabricated metal products (341, 343, 347, 348, 349) Not specified metal industries	30. Apparel and other fabricated textile products Apparel and accessories (231-238) Miscellaneous fabricated textile products (239)	46. Communications Radio broadcasting and television (483) Telephone (wire and radio) (481) Telegraph and miscellaneous communication services (482, 489)
14. Machinery, except electrical	31. Paper and allied products Pulp, paper, and paperboard mills (261-263, 266) Miscellaneous paper and pulp products (264) Paperboard containers and boxes (265)	47. Electric and gas utilities Electric light and power (491) Electric-gas utilities (493) Gas and steam supply systems (492, 496)
15. Office, accounting, and computing machines Office and accounting machines (357 except 3573) Electronic computing equipment (3573) * Other machines, except electrical Engines and turbines (351) Farm machinery and equipment (352) Construction and material handling machines (353) Metalworking machinery (354) Machinery, except electrical, n.e.c. (355, 356, 358, 359) Not specified machinery	32. Printing, publishing, and allied industries Newspaper publishing and printing (271) Printing, publishing, and allied industries, except newspapers (272-279)	48. Water supply, sanitary services, and other utilities Water supply (494) Sanitary services (495) Other and not specified utilities (497)
16. Electrical machinery, equipment, and supplies	33. Chemicals and allied products Industrial chemicals (281) Plastics, synthetics, and resins, except fibers (282, except 2823 and 2824) Synthetic fibers (2823, 2824) Drugs and medicines (283)	* Transportation, communications, and other public utilities—allocated
17. Radio, television, and communication equipment (365, 366)		49. Wholesale trade
* Other electrical machinery, equipment, and supplies Household appliances (363) Electrical machinery, equipment, and supplies, n.e.c. (361, 362, 364, 367, 369)		50. Food and farm products Food and related products (504) Farm products—raw materials (505) * Other wholesale trade Motor vehicles and equipment (501) Drugs, chemicals, and allied products (502) Dry goods and apparel (503) Electrical goods (506) Hardware, plumbing, and heating supplies (507) Not specified electrical and hardware products Machinery, equipment, and supplies (508) Metals and minerals, n.e.c. (5091) Petroleum products (5092) Scrap and waste materials (5093) Alcoholic beverages (5095)

APPENDIX B—Continued

List E.—Continued

- Paper and its products (5096)
- Lumber and construction materials (5098)
- Wholesalers, n.e.c. (5094, 5097, 5099)
- Not specified wholesale trade
- Wholesale trade—allocated
- 51. Hardware, farm equipment, and building material retailing
 - Lumber and building material retailing (521-524)
 - Hardware and farm equipment stores (525)
- 52. General merchandise stores
 - Department and mail order establishments (531, 532)
 - Limited-price variety stores (533)
 - Vending machine operators (534)
 - Direct-selling establishments (535)
 - Miscellaneous general merchandise stores (539)
- 53. Food stores
 - Grocery stores (541)
 - Dairy products stores (545)
 - Retail bakeries (546)
 - Food stores, n.e.c. (542-544, 549)
- 54. Motor vehicles and accessories retailing
 - Motor vehicle dealers (551, 552)
 - Tire, battery, and accessory dealers (553)
 - Miscellaneous vehicle dealers (559)
- 55. Gasoline service stations (554)
- 56. Apparel and accessories stores
 - Apparel and accessories stores, except shoe stores (56 except 566)
 - Shoe stores (566)
- 57. Furniture, home furnishings, and equipment stores
 - Furniture and home furnishings stores (571)
 - Household appliances, television, and radio stores (572, 573)
- 58. Eating and drinking places (58)
- 59. Drug stores (591)
- 60. Other retail trade
 - Liquor stores (592)
 - Farm and garden supply stores (596)
 - Jewelry stores (597)
 - Fuel and ice dealers (598)
 - Retail florists (5992)
 - Miscellaneous retail stores (593-595, 599 except 5992)
 - Not specified retail trade
 - Retail trade—allocated
- 61. Banking and credit agencies
 - Banking (60)
 - Credit agencies (61)
- 62. Insurance (63, 64)
- 63. Other finance and real estate
 - Security, commodity brokerage, and investment companies (62, 67)
 - Real estate, including real estate - insurance - law offices (65, 66)
 - Finance, insurance, and real estate—allocated
- 64. Advertising (731)
- 65. Commercial research, management, and programing services
 - Commercial research, development, and testing labs (7391, 7397)
 - Business management and consulting services (part 7392)
 - Computer programing services (part 7392)
- 66. Automobile services
 - Automobile services, except repair (751, 752, 754)
 - Automobile repair and related services (753)
- 67. Other business and repair services
 - Services to dwellings and other buildings (734)
 - Employment and temporary help agencies (736, 7398)
 - Detective and protective services (7393)
 - Business services, n.e.c. (732, 733, 735, 7394, 7395, 7396, 7399)
 - Electrical repair shops (762, 7694)
 - Miscellaneous repair services (763, 764, 769 except 7694)
 - Business and repair services—allocated
- 68. Private households (88)
- 69. Hotels and lodging places
 - Hotels and motels (701)
 - Lodging places, except hotels and motels (702, 703, 704)
- 70. Laundering, cleaning, and other garment services (721, 727)
- 71. Barber and beauty shops
 - Beauty shops (723)
 - Barber shops (724)
- 72. Other personal services
 - Shoe repair shops (725)
 - Dressmaking shops (part 729)
 - Miscellaneous personal services (722, 726, part 729)
 - Personal services—allocated
- 73. Entertainment and recreation services
 - (All industries in this major group) (78, 79)
- 74. Health services
 - Offices of physicians (801, 803)
 - Offices of dentists (802)
 - Offices of chiropractors (804)
 - Hospitals (806)
 - Convalescent institutions (8092)
 - Offices of health practitioners, n.e.c. (part 8099)
 - Health services, n.e.c. (807, part 8099)
- 75. Educational services, government
 - Elementary and secondary schools (821)
 - Colleges and universities (822)
 - Libraries (823)
 - Educational services, n.e.c. (824, 829)
 - Not specified educational services (These categories include all class-of-worker entries of Federal, State, and local government.)
- 76. Educational services, private
 - (This group includes all of the industries shown in number 75 with class-of-worker entries other than Federal, State, and local government.)
- 77. Welfare, religious, and nonprofit membership organizations
 - Religious organizations (866)
 - Welfare services (part 867)
 - Residential welfare facilities (part 867)
 - Nonprofit membership organizations (861-865, 869)
- 78. Other professional and related services
 - Legal services (81)
 - Museums, art galleries, and zoos (84)
 - Engineering and architectural services (891)
 - Accounting, auditing, and book-keeping services (893)
 - Miscellaneous professional and related services (892, 899)
 - Professional and related services—allocated
- 79. Public administration
- 80. Postal service (part 9190)
- 81. Federal public administration (part 9190, 9490)
- 82. State and local public administration
 - State public administration (9290)
 - Local public administration (9390)
 - Public administration—allocated

APPENDIX B--Continued

List F. Condensed Industrial Classification Used in Chapter C
as Related to Component Detailed Items Presented in List E

(Numbers in parentheses refer to items in list E)

Agriculture, forestry, and fisheries (Items 1, 2)
Mining (Item 3)
Construction (Item 4)
Manufacturing
 Furniture and lumber and wood products (Items 5, 6, 7, 8)
 Primary metal industries (Items 11, 12)
 Fabricated metal industries (including not specified metal) (Item 13)
 Machinery, except electrical (Item 14)
 Electrical machinery, equipment, and supplies (Item 16)
 Motor vehicles and other transportation equipment (Items 18, 19, 20)
 Other durable goods (Items 9, 21, 22, 23)
 Food and kindred products (Items 24, 25, 26, 27)
 Textile mill and other fabricated textile products (Items 28, 29, 30)

Printing, publishing, and allied industries (Item 32)
Chemicals and allied products (Item 33)
Other nondurable goods (including not specified manufacturing industries) (Items 31, 34, 35, 36, 37, 38)
Railroads and railway express service (Item 40)
Trucking service and warehousing (Item 42)
Other transportation (Items 41, 43, 44, 45)
Communications (Item 46)
Utilities and sanitary services (Items 47, 48)
Wholesale trade (Item 49)
Food, bakery, and dairy stores (Item 53)
Eating and drinking places (Item 58)
General merchandise retailing (Item 52)
Motor vehicle retailing and service stations (Items 54, 55)
Other retail trade (Items 51, 56, 57, 59, 60)
Banking and credit agencies (Item 61)
Insurance, real estate, and other finance (Items 62, 63)

Business services (Items 64, 65, part item 67)
Repair services (Items 66, part item 67)
Private households (Item 68)
Other personal services (Items 69, 70, 71, 72)
Entertainment and recreation services (Item 73)
Hospitals (Part item 74)
Health services, except hospitals (Item 74 except hospitals)
Elementary and secondary schools and colleges
 Government (Part item 75)
 Private (Part item 76)
Other education and kindred services (Residual of Items 75 and 76, and Museums, art galleries, and zoos from 78)
Welfare, religious, and nonprofit membership organizations (Item 77)
Legal, engineering, and miscellaneous professional services (Part item 78)
Public administration (Item 79)

FACSIMILES OF THE POPULATION QUESTIONS ON THE 1970 CENSUS QUESTIONNAIRES
(Questions on this page appeared on all questionnaires)

Line No.	1. WHAT IS THE NAME OF EACH PERSON who was living here on Wednesday, April 1, 1970 or who was staying or visiting here and had no other home?	2. HOW IS EACH PERSON RELATED TO THE HEAD OF THIS HOUSEHOLD? <i>Fill one circle.</i> If "Other relative of head," also give exact relationship, for example, mother-in-law, brother, niece, grandson, etc. If "Other not related to head," also give exact relationship, for example, partner, maid, etc.
	Print names in this order: <ul style="list-style-type: none"> Head of the household Wife of head Unmarried children, oldest first Married children and their families Other relatives of the head Persons not related to the head 	Last name _____ First name _____ Middle initial _____

3. SEX	4. COLOR OR RACE	DATE OF BIRTH				8. WHAT IS EACH PERSON'S MARITAL STATUS?
		5. Month and year of birth and age last birthday	6. Month of birth	7. Year of birth		
• <input type="checkbox"/> Male <input type="checkbox"/> Female	• <input type="checkbox"/> <i>Fill one circle.</i> If "Indian (American)," also give tribe. If "Other," also give race.	Print Month _____ Year _____ Age _____	Fill one circle Jan.-Mar. Apr.-June July-Sept. Oct.-Dec.	Fill one circle for first three numbers Fill one circle for last number		Fill one circle <input type="checkbox"/> Now married <input type="checkbox"/> Widowed <input type="checkbox"/> Divorced <input type="checkbox"/> Separated <input type="checkbox"/> Never married
	• <input type="checkbox"/> White • <input type="checkbox"/> Japanese • <input type="checkbox"/> Hawaiian • <input type="checkbox"/> Chinese • <input type="checkbox"/> Korean • <input type="checkbox"/> Negro or Black • <input type="checkbox"/> Filipino • <input type="checkbox"/> Other— Print race • <input type="checkbox"/> Indian (Amer.) Print tribe →		<input type="checkbox"/> 186- • <input type="checkbox"/> 192- <input type="checkbox"/> 187- • <input type="checkbox"/> 193- <input type="checkbox"/> 188- • <input type="checkbox"/> 194- <input type="checkbox"/> 189- • <input type="checkbox"/> 195- <input type="checkbox"/> 190- • <input type="checkbox"/> 196- <input type="checkbox"/> 191- • <input type="checkbox"/> 197-	<input type="checkbox"/> 0 • <input type="checkbox"/> 5 <input type="checkbox"/> 1 • <input type="checkbox"/> 6 <input type="checkbox"/> 2 • <input type="checkbox"/> 7 <input type="checkbox"/> 3 • <input type="checkbox"/> 8 <input type="checkbox"/> 4 • <input type="checkbox"/> 9		

Note: On the questionnaires used in Alaska, the categories "Aleut" and "Eskimo" were substituted for "Hawaiian" and "Korean" in question 4.

FACSIMILE OF THE RESPONDENT INSTRUCTIONS FOR POPULATION QUESTIONS 1 TO 8

- | | |
|--|--|
| 1. If you are not sure about whether to list a person, see the rules on the flap of the census form.
2. If two or more unrelated people live together and share the rent, mark the first one you list Head of household . Mark the rest Other not related to head and print "partner" in the space.
A stepchild or legally adopted child of the head should be marked Son or daughter . | 5. If the month or year of birth, or the age, is not known, give your best estimate.
6, 7. If you are not sure how to fill these circles, look at the examples shown above.
8. If the person's only marriage was annulled, mark Never married . |
|--|--|

APPENDIX B—Continued

FACSIMILES OF THE POPULATION QUESTIONS ON THE 1970 CENSUS QUESTIONNAIRES —Con.
(Percent indicates sample size)

Name of person on line (1) of page 2		20. Since February 1, 1970, has this person attended regular school or college at any time? Count nursery school, kindergarten, and schooling which leads to an elementary school certificate, high school diploma, or college degree.		15 percent	
Last name _____ First name _____ Initial _____		<input type="radio"/> No <input checked="" type="checkbox"/> <input type="radio"/> Yes, public <input type="radio"/> Yes, parochial <input type="radio"/> Yes, other private			
15 and 5 percent	13a. Where was this person born? If born in hospital, give State or country where mother lived. If born outside U.S., see instruction sheet; distinguish Northern Ireland from Ireland (Eire).		21. What is the highest grade (or year) of regular school he has ever attended?		15 and 5 percent
	<input type="radio"/> This State OR _____ <i>(Name of State or foreign country; or Puerto Rico, Guam, etc.)</i>		Fill one circle. If now attending, mark grade he is in. <input type="radio"/> Never attended school— Skip to 23 <input type="radio"/> Nursery school <input checked="" type="checkbox"/> <input type="radio"/> Kindergarten Elementary through high school (grade or year) 1 2 3 4 5 6 7 8 9 10 11 12 <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> College (academic year) 1 2 3 4 5 6 or more <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
5 percent	b. Is this person's origin or descent— (Fill one circle)				
<input type="radio"/> Mexican <input type="radio"/> Central or South American <input type="radio"/> Puerto Rican <input type="radio"/> Other Spanish <input type="radio"/> Cuban <input type="radio"/> No, none of these		14. What country was his father born in?			
<input type="radio"/> United States OR _____ <i>(Name of foreign country; or Puerto Rico, Guam, etc.)</i>		15. What country was his mother born in?			
<input type="radio"/> United States OR _____ <i>(Name of foreign country; or Puerto Rico, Guam, etc.)</i>		22. Did he finish the highest grade (or year) he attended?		15 and 5 percent	
		<input type="radio"/> Now attending this grade (or year) <input type="radio"/> Finished this grade (or year) <input type="radio"/> Did not finish this grade (or year)			
5 percent	16. For persons born in a foreign country—		23. When was this person born?		5 percent
	a. Is this person naturalized?		<input type="radio"/> Born before April 1956— Please go on with questions 24 through 41. <input type="radio"/> Born April 1956 or later— Please omit questions 24 through 41 and go to the next page for the next person. <input checked="" type="checkbox"/>		
<input type="radio"/> Yes, naturalized <input checked="" type="checkbox"/> <input type="radio"/> No, alien <input type="radio"/> Born abroad of American parents		24. If this person has ever been married—		5 percent	
b. When did he come to the United States to stay?		a. Has this person been married more than once?			
<input type="radio"/> 1965 to 70 <input type="radio"/> 1950 to 54 <input type="radio"/> 1925 to 34 <input type="radio"/> 1960 to 64 <input type="radio"/> 1945 to 49 <input type="radio"/> 1915 to 24 <input type="radio"/> 1955 to 59 <input type="radio"/> 1935 to 44 <input type="radio"/> Before 1915		<input type="radio"/> Once <input type="radio"/> More than once ↓ b. When did he get married? When did he get married for the first time?			
		Month _____ Year _____ Month _____ Year _____			
17. What language, other than English, was spoken in this person's home when he was a child? Fill one circle.		c. If married more than once— Did the first marriage end because of the death of the husband (or wife)?		15 and 5 percent	
<input type="radio"/> Spanish <input checked="" type="checkbox"/> <input type="radio"/> Other— <input type="radio"/> French <input type="radio"/> Specify _____ <input type="radio"/> German <input type="radio"/> None, English only		<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="checkbox"/>			
18. When did this person move into this house (or apartment)? Fill circle for date of last move.		25. If this is a girl or a woman—		15 percent	
<input type="radio"/> 1969 or 70 <input type="radio"/> 1965 or 66 <input type="radio"/> 1949 or earlier <input type="radio"/> 1968 <input type="radio"/> 1960 to 64 <input type="radio"/> Always lived in this house or apartment <input type="radio"/> 1967 <input type="radio"/> 1950 to 59		How many babies has she ever had, not counting stillbirths? 1 2 3 4 5 6 7 8 <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Do not count her stepchildren or children she has adopted. 9 10 11 12 or more None <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>			
15 percent	19a. Did he live in this house on April 1, 1965? If in college or Armed Forces in April 1965, report place of residence there.		26. If this is a man—		15 percent
	<input type="radio"/> Born April 1965 or later } Skip to 20 <input type="radio"/> Yes, this house } <input type="radio"/> No, different house		a. Has he ever served in the Army, Navy, or other Armed Forces of the United States? <input type="radio"/> Yes <input type="radio"/> No		
b. Where did he live on April 1, 1965?		b. Was it during— (Fill the circle for each period of service.)			
(1) State, foreign country, U.S. possession, etc. _____		<input checked="" type="checkbox"/> Vietnam Conflict (Since Aug. 1964) <input type="radio"/> <input type="radio"/> Korean War (June 1950 to Jan. 1955) <input type="radio"/> <input type="radio"/> World War II (Sept. 1940 to July 1947) <input type="radio"/> <input type="radio"/> World War I (April 1917 to Nov. 1918) <input type="radio"/> <input type="radio"/> Any other time <input type="radio"/>			
(2) County _____					
(3) Inside the limits of a city, town, village, etc.?					
<input type="radio"/> Yes <input type="radio"/> No					
(4) If "Yes," name of city, town, village, etc. _____					

FACSIMILES OF THE POPULATION QUESTIONS ON THE 1970 CENSUS QUESTIONNAIRES —Con.
(Percent indicates sample size)

5 percent	<p>27a. Has this person ever completed a vocational training program? <i>For example, in high school; as apprentice; in school of business, nursing, or trades; technical institute; or Armed Forces schools.</i></p> <p><input checked="" type="radio"/> Yes <input type="radio"/> No—Skip to 28</p> <hr/> <p>b. What was his main field of vocational training? Fill one circle.</p> <p><input type="radio"/> Business, office work <input checked="" type="radio"/></p> <p><input type="radio"/> Nursing, other health fields</p> <p><input type="radio"/> Trades and crafts (<i>mechanic, electrician, beautician, etc.</i>)</p> <p><input type="radio"/> Engineering or science technician; draftsman</p> <p><input type="radio"/> Agriculture or home economics</p> <p><input type="radio"/> Other field—Specify <input checked="" type="checkbox"/></p> <p>-----</p>	<p>c. Where did he work last week? <i>If he worked in more than one place, print where he worked most last week.</i> <i>If he travels about in his work or if the place does not have a numbered address, see instruction sheet.</i></p> <p>(1) Address (<i>Number and street name</i>) -----</p> <p>(2) Name of city, town, village, etc. -----</p> <p>(3) Inside the limits of this city, town, village, etc.?</p> <p style="padding-left: 20px;"><input type="radio"/> Yes</p> <p style="padding-left: 20px;"><input type="radio"/> No</p> <p>(4) County -----</p> <p style="text-align: right;">(6) ZIP Code -----</p> <p>(5) State -----</p>	15 percent														
5 percent	<p>28a. Does this person have a health or physical condition which limits the kind or amount of work he can do at a job? <i>If 65 years old or over, skip to question 29.</i></p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p> <hr/> <p>b. Does his health or physical condition keep him from holding any job at all?</p> <p><input type="radio"/> Yes</p> <p><input checked="" type="radio"/> No</p> <hr/> <p>c. If "Yes" in a or b— How long has he been limited in his ability to work?</p> <p><input type="radio"/> Less than 6 months <input type="radio"/> 3 to 4 years</p> <p><input type="radio"/> 6 to 11 months <input type="radio"/> 5 to 9 years</p> <p><input type="radio"/> 1 to 2 years <input type="radio"/> 10 years or more</p>	<p>d. How did he get to work last week? Fill one circle for chief means used on the last day he worked at the address given in 29c.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="radio"/> Driver, private auto</td> <td style="width: 50%; vertical-align: top;"> <input type="radio"/> Taxicab</td> </tr> <tr> <td style="vertical-align: top;"> <input type="radio"/> Passenger, private auto</td> <td style="vertical-align: top;"> <input type="radio"/> Walked only</td> </tr> <tr> <td style="vertical-align: top;"> <input type="radio"/> Bus or streetcar</td> <td style="vertical-align: top;"> <input type="radio"/> Worked at home</td> </tr> <tr> <td style="vertical-align: top;"> <input type="radio"/> Subway or elevated</td> <td style="vertical-align: top;"> <input type="radio"/> Other means—Specify <input checked="" type="checkbox"/></td> </tr> <tr> <td style="vertical-align: top;"> <input type="radio"/> Railroad</td> <td></td> </tr> </table> <p style="text-align: center;"><i>After completing question 29d, skip to question 33.</i></p>	<input type="radio"/> Driver, private auto	<input type="radio"/> Taxicab	<input type="radio"/> Passenger, private auto	<input type="radio"/> Walked only	<input type="radio"/> Bus or streetcar	<input type="radio"/> Worked at home	<input type="radio"/> Subway or elevated	<input type="radio"/> Other means—Specify <input checked="" type="checkbox"/>	<input type="radio"/> Railroad		15 percent				
<input type="radio"/> Driver, private auto	<input type="radio"/> Taxicab																
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<input type="radio"/> Subway or elevated	<input type="radio"/> Other means—Specify <input checked="" type="checkbox"/>																
<input type="radio"/> Railroad																	
15 and 5 percent	<p>QUESTIONS 29 THROUGH 41 ARE FOR ALL PERSONS BORN BEFORE APRIL 1956 INCLUDING HOUSEWIVES, STUDENTS, OR DISABLED PERSONS AS WELL AS PART-TIME OR FULL-TIME WORKERS</p>																
15 and 5 percent	<p>29a. Did this person work at any time last week?</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="radio"/> Yes—Fill this circle if this person did full- or part-time work. <i>(Count part-time work such as a Saturday job, delivering papers, or helping without pay in a family business or farm; and active duty in the Armed Forces)</i></td> <td style="width: 50%; vertical-align: top;"> <input type="radio"/> No—Fill this circle if this person did not work, or did only own housework, school work, or volunteer work. <i>Skip to 30</i></td> </tr> </table> <hr/> <p>b. How many hours did he work last week (at all jobs)? <i>Subtract any time off and add overtime or extra hours worked.</i></p> <p><input type="radio"/> 1 to 14 hours <input checked="" type="radio"/> 40 hours</p> <p><input type="radio"/> 15 to 29 hours <input type="radio"/> 41 to 48 hours</p> <p><input type="radio"/> 30 to 34 hours <input type="radio"/> 49 to 59 hours</p> <p><input type="radio"/> 35 to 39 hours <input type="radio"/> 60 hours or more</p>	<input type="radio"/> Yes—Fill this circle if this person did full- or part-time work. <i>(Count part-time work such as a Saturday job, delivering papers, or helping without pay in a family business or farm; and active duty in the Armed Forces)</i>	<input type="radio"/> No—Fill this circle if this person did not work, or did only own housework, school work, or volunteer work. <i>Skip to 30</i>	<p>30. Does this person have a job or business from which he was temporarily absent or on layoff last week?</p> <p><input type="radio"/> Yes, on layoff</p> <p><input type="radio"/> Yes, on vacation, temporary illness, labor dispute, etc.</p> <p><input type="radio"/> No</p> <hr/> <p>31a. Has he been looking for work during the past 4 weeks?</p> <p><input checked="" type="radio"/> Yes <input type="radio"/> No—Skip to 32</p> <hr/> <p>b. Was there any reason why he could not take a job last week?</p> <p><input type="radio"/> Yes, already has a job</p> <p><input type="radio"/> Yes, because of this person's temporary illness</p> <p><input type="radio"/> Yes, for other reasons (in school, etc.)</p> <p><input type="radio"/> No, could have taken a job</p> <hr/> <p>32. When did he last work at all, even for a few days?</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%; vertical-align: top;"> <input type="radio"/> In 1970</td> <td style="width: 25%; vertical-align: top;"> <input type="radio"/> 1964 to 1967</td> <td style="width: 25%; vertical-align: top;"> <input type="radio"/> 1959 or earlier</td> <td style="width: 25%; vertical-align: top;"> <input type="radio"/> Skip to 36</td> </tr> <tr> <td style="vertical-align: top;"> <input type="radio"/> In 1969</td> <td style="vertical-align: top;"> <input type="radio"/> 1960 to 1963</td> <td style="vertical-align: top;"> <input type="radio"/> Never worked</td> <td></td> </tr> <tr> <td style="vertical-align: top;"> <input type="radio"/> In 1968</td> <td></td> <td></td> <td></td> </tr> </table>	<input type="radio"/> In 1970	<input type="radio"/> 1964 to 1967	<input type="radio"/> 1959 or earlier	<input type="radio"/> Skip to 36	<input type="radio"/> In 1969	<input type="radio"/> 1960 to 1963	<input type="radio"/> Never worked		<input type="radio"/> In 1968				15 and 5 percent
<input type="radio"/> Yes—Fill this circle if this person did full- or part-time work. <i>(Count part-time work such as a Saturday job, delivering papers, or helping without pay in a family business or farm; and active duty in the Armed Forces)</i>	<input type="radio"/> No—Fill this circle if this person did not work, or did only own housework, school work, or volunteer work. <i>Skip to 30</i>																
<input type="radio"/> In 1970	<input type="radio"/> 1964 to 1967	<input type="radio"/> 1959 or earlier	<input type="radio"/> Skip to 36														
<input type="radio"/> In 1969	<input type="radio"/> 1960 to 1963	<input type="radio"/> Never worked															
<input type="radio"/> In 1968																	

APPENDIX B—Continued

FACSIMILES OF THE POPULATION QUESTIONS ON THE 1970 CENSUS QUESTIONNAIRES—Con.
(Percent indicates sample size)

<p>33-35. Current or most recent job activity Describe clearly this person's chief job activity or business last week, if any. If he had more than one job, describe the one at which he worked the most hours. If this person had no job or business last week, give information for last job or business since 1960.</p>	<p>37. In April 1965, was this person— (Fill three circles)</p> <p>a. Working at a job or business (full or part-time)? <input type="radio"/> Yes <input type="radio"/> No</p> <p>b. In the Armed Forces? <input type="radio"/> Yes <input type="radio"/> No</p> <p>c. Attending college? <input type="radio"/> Yes <input type="radio"/> No</p>	<p>15 and 5 percent</p>
<p>33. Industry a. For whom did he work? If now on active duty in the Armed Forces, print "AF" and skip to question 36. ----- (Name of company, business, organization, or other employer)</p>	<p>38. If "Yes" for "Working at a job or business" in question 37— Describe this person's chief activity or business in April 1965.</p> <p>a. What kind of business or industry was this? -----</p> <p>b. What kind of work was he doing (occupation)? -----</p> <p>c. Was he— An employee of a private company or government agency... <input type="radio"/> Self-employed or an unpaid family worker... <input type="radio"/></p>	
<p>b. What kind of business or industry was this? Describe activity at location where employed. ----- (For example: Junior high school, retail supermarket, dairy farm, TV and radio service, auto assembly plant, road construction)</p>	<p>39a. Last year (1969), did this person work at all, even for a few days? <input type="radio"/> Yes <input type="radio"/> No— Skip to 41</p> <p>b. How many weeks did he work in 1969, either full-time or part-time? Count paid vacation, paid sick leave, and military service. <input type="radio"/> 13 weeks or less <input checked="" type="radio"/> 14 to 26 weeks <input type="radio"/> 27 to 39 weeks <input type="radio"/> 40 to 47 weeks <input type="radio"/> 48 to 49 weeks <input type="radio"/> 50 to 52 weeks</p>	<p>15 and 5 percent</p>
<p>c. Is this mainly— (Fill one circle) <input type="radio"/> Manufacturing <input type="radio"/> Retail trade <input type="radio"/> Wholesale trade <input type="radio"/> Other (agriculture, construction, service, government, etc.)</p>	<p>40. Earnings in 1969— Fill parts a, b, and c for everyone who worked any time in 1969 even if he had no income. (If exact amount is not known, give best estimate.)</p> <p>a. How much did this person earn in 1969 in wages, salary, commissions, bonuses, or tips from all jobs? (Before deductions for taxes, bonds, dues, or other items.) \$ _____ .00 (Dollars only) OR <input type="radio"/> None</p>	
<p>34. Occupation a. What kind of work was he doing? ----- (For example: TV repairman, sewing machine operator, spray painter, civil engineer, farm operator, farm hand, junior high English teacher)</p>	<p>b. How much did he earn in 1969 from his own nonfarm business, professional practice, or partnership? (Net after business expenses. If business lost money, write "Loss" above amount.) \$ _____ .00 (Dollars only) OR <input checked="" type="radio"/> None</p>	<p>15 and 5 percent</p>
<p>b. What were his most important activities or duties? ----- (For example: Types, keeps account books, files, sells cars, operates printing press, cleans buildings, finishes concrete)</p> <p>c. What was his job title? -----</p>	<p>c. How much did he earn in 1969 from his own farm? (Net after operating expenses. Include earnings as a tenant farmer or sharecropper. If farm lost money, write "Loss" above amount.) \$ _____ .00 (Dollars only) OR <input type="radio"/> None</p>	
<p>35. Was this person— (Fill one circle)</p> <p>Employee of private company, business, or individual, for wages, salary, or commissions... <input type="radio"/></p> <p>Federal government employee... <input type="radio"/></p> <p>State government employee... <input type="radio"/></p> <p>Local government employee (city, county, etc.)... <input type="radio"/></p> <p>Self-employed in own business, professional practice, or farm— <input checked="" type="radio"/></p> <p>Own business not incorporated... <input type="radio"/></p> <p>Own business incorporated... <input type="radio"/></p> <p>Working without pay in family business or farm <input type="radio"/></p>	<p>41. Income other than earnings in 1969— Fill parts a, b, and c. (If exact amount is not known, give best estimate.)</p> <p>a. How much did this person receive in 1969 from Social Security or Railroad Retirement? \$ _____ .00 (Dollars only) OR <input type="radio"/> None</p>	<p>5 percent</p>
<p>36. In April 1965, what State did this person live in?</p> <p><input type="radio"/> This State OR ----- (Name of State or foreign country, or Puerto Rico, etc.)</p>	<p>b. How much did he receive in 1969 from public assistance or welfare payments? Include aid for dependent children, old age assistance, general assistance, aid to the blind or totally disabled. Exclude separate payments for hospital or other medical care. \$ _____ .00 (Dollars only) OR <input checked="" type="radio"/> None</p> <p>c. How much did he receive in 1969 from all other sources? Include interest, dividends, veterans' payments, pensions, and other regular payments. (See instruction sheet.) \$ _____ .00 (Dollars only) OR <input type="radio"/> None</p>	

15 and 5 percent

5 percent

APPENDIX B—Continued

FACSIMILES OF THE RESPONDENT INSTRUCTIONS FOR POPULATION QUESTIONS IN THE 1970 CENSUS

13. Mark the circle for **This State** if he now lives in the same State as he was born in. If born in a **different State**, print name of State.
If born outside U.S., print name of country, U.S. possession, etc. Use international boundaries as now recognized by the U.S.
16. Mark one circle in part a and one circle in part b for persons born outside the 50 States, District of Columbia, Puerto Rico, Canal Zone, Guam, or Virgin Islands of U.S.
17. If more than one language other than English was spoken, mark principal language.
18. Mark the date for the last time he moved into this particular house or apartment.
- 19a. Mark **Yes** if he lived in this same house or apartment on April 1, 1965, even if he moved away and came back between then and now. Mark **No** if he lived in the same building but in a different apartment on April 1, 1965.
- b. If he lived somewhere else on April 1, 1965, give the address of his usual residence at that time.
- Part (2) For addresses in Louisiana, print the parish name.
For addresses in Alaska, print the borough name.
For addresses in independent cities, print the name of the city and word "city," for example, "Baltimore city."
- Part (3) Mark **Yes** if you know that the address is **now** inside the limits of a city, town, village, or other incorporated place, even if it was not inside the limits on April 1, 1965.
20. Do not count trade or business school, company training, or tutoring unless you think he could get credit for it at a regular school or college.
21. Mark the highest grade he attended even if he did not finish it. If he is still in school, mark the grade he is in now.
If he skipped or repeated grades, mark the highest grade ever attended, regardless of how long it took to get there.
If he finished high school, but did not go to college, mark 12.
For college, mark the highest academic year attended.
22. Mark **Finished this grade (or year)** only if he finished the entire grade or year shown in question 21.
- 24b. If exact dates of marriage are unknown, estimate as closely as possible.
25. Count all the children the girl or woman has ever had, even if some of them have died or no longer live with her.
26. Mark **Yes** if he was ever on active duty in the Army, Navy, Air Force, Marine Corps, or Coast Guard, no matter how short a time he served. Count only active duty in National Guard or Reserves.
Mark **No** if he had only civilian duty in the Armed Forces or merchant marine. Mark **No** if he was in the National Guard or Reserves, but was not called to active duty. Mark **No** if his only military service was in the Armed Forces of another country.
- 27a. Count only programs that he finished. Do not count courses which are not part of an organized program of study. Do not count training he got on-the-job, in company schools, in college after the second year, or by correspondence.
- 28a. **Health condition.** This is a serious illness, or a serious handicap (impairment) affecting some part of the body or mind, which interferes with his ability to work at a job. Answer **No** for pregnancy, common colds, etc.

29a. Mark **Yes** if he worked on any day Sunday through Saturday of last week.

Count as work

- Work for someone else for wages, salary, piece rate, commission, tips, or payment "in kind"
- Work in own business, professional practice, or farm
- Any work in a family business or farm, paid or not
- Any part-time work
- Active duty in the Armed Forces

Do not count as work

- Housework or yard work at own home
- Unpaid volunteer work.
- Work done as an inmate of an institution.

- b. Give the actual number of hours he worked at all jobs last week, even if that was more or fewer hours than he usually works.
- c. For a person who travels about in his work or who works in more than one place--If he usually checks in or out at the same place every day, give the address of that place.
If he does not check in or out at the same place, give the address of the place where he worked the most hours last week.

Give the exact address of the location or branch where he works if his employer operates in more than one location (such as a grocery store chain or public school system).

When you cannot give the number or street name, print the name of the building, if any, or the name of the company for which he works.

- d. Mark **Worked at home** for a person who worked on a farm where he lives or in an office or shop in his home.

30. Mark **No** if he works only during certain seasons or is "on call" to work when needed.

31a. Mark **Yes** if he tried to get a job or to start a business or profession at any time in the past four weeks; for example, if he registered at an employment office, went for a job interview, or did anything toward starting a business. Mark **Yes** if he was waiting to hear from places he had applied to or registered with within the past four weeks.

b. Mark **Yes**, already has a job if he was on layoff or was expecting to report to a job within 30 days.

Mark **Yes**, because of this person's temporary illness if he expects to be able to work within 30 days.

Mark **Yes**, for other reasons for reasons such as going to school or taking care of children.

32. Look at the instruction for 29a to see what work means. Mark **Never worked** if he: (1) never worked at any kind of job or business, either full or part-time, (2) never did any unpaid work in a family business or farm, and (3) never served in the Armed Forces.

33a. If he worked for a company, business, or government agency, print the name of the company, not the name of his supervisor. If he worked for a person or a small business that has no company name, print the name of the person he worked for.

b. Write two or more words to tell what the business, industry, or person named in 33a does. Write what it makes or what it sells or what service it gives. Some examples of acceptable answers are shown on the Census form and here.

Acceptable

- Cattle ranch
- Wholesale grocery store
- Retail gas station
- Metal furniture manufacturing

Unacceptable

- Ranch
- Grocery store
- Oil company
- Furniture company

If a company does more than one thing (like make household electrical appliances and electric generators) describe only the major activity at the place where he works. If, however, he works at a warehouse, repair shop, etc., that is part of and used only by a larger organization, give the major activity of the larger organization; for example, department store warehouse - report department store.

APPENDIX B—Continued

FACSIMILES OF THE RESPONDENT INSTRUCTIONS FOR POPULATION QUESTIONS IN THE 1970 CENSUS—Con.

33c. Mark **Manufacturing** if the factory, plant, mill, etc. makes things, even if it also sells them.

Mark **Wholesale trade** if a business does not make things but buys them to sell to stores or other companies.

Mark **Retail trade** if the business mostly sells things (not services) to individuals.

Mark **Other** if the main purpose of the employer is **not** making or selling things. Some examples of "Other" are services, such as those given by hotels, dry cleaners, repair shops, schools, and banks. Farming and building houses, bridges, roads, are also examples of "Other" kinds of businesses.

34a. Write two or more words to tell the kind of work he does. If he is a trainee, apprentice, or helper, write that down too. See examples of acceptable answers on the Census form and here.

Acceptable

Sales clerk
Carpenter's helper
Practical nurse

Unacceptable

Clerk
Helper
Nurse

b. Write the most important things that he does on the job. Some examples are shown on the Census form.

c. Print his job title (what his employer calls his job). If he has no job title, print **None**.

35. If he was an employee of a **private** non-profit organization, mark the first circle.

Mark **Local government employee** for a teacher in a local public school.

36. Mark **This State** if he now lives in the same State as he did in April 1965.

37. If he had two or more activities during the same period, mark **Yes** for each of these activities.

39. Look at the instruction for question 29a to see what **work** means. Count every week in which he did any work at all, even for a few hours.

40. Enter the amount or fill the **None** circle in a, b, and c. Part 40a includes "sick leave" pay. Part 40a **excludes** military bonuses, reimbursement for business expenses, and pay "in kind." The owner of an **unincorporated** nonfarm business should include his net earnings in part 40b. If the business or farm is **incorporated**, his earnings should be included in part 40a.

41. Enter the amount or fill the **None** circle in a, b, and c.

a. **Social Security or Railroad Retirement**—include U.S. Government payments to retired persons, to dependents of deceased insured workers, or to disabled workers. Include "Medicare" premiums; exclude receipts.

b. **Public assistance or public welfare payments**—include amounts received from Federal, State, or local public programs. Exclude private welfare payments.

c. **Interest, dividends**—include amounts received or credited to your account.

Veterans' payments—include money paid for service-connected disabilities, to survivors of deceased veterans, for education and on-the-job training subsistence allowances, and for "refunds" on "GI" insurance premiums.

Retirement pensions—include amounts paid by former private employers and by unions, and amounts paid by Federal, State, county, or other governmental agencies.

Other regular payments—include such periodic income as net rental income, unemployment insurance benefits, workmen's compensation, private welfare payments, alimony or child support, Armed Forces allotments, and regular contributions from persons who are not members of your household.

Exclude receipts from the sale of personal property, capital gains, lump-sum insurance or inheritance payments, or pay "in kind."

FACSIMILES OF SELECTED HOUSING QUESTIONS ON THE 1970 CENSUS QUESTIONNAIRES
(Percent indicates sample size)

80,
15 and 5
percent

B. Type of unit or quarters

- Occupied
- First form
 - Continuation

- Vacant
- Regular
 - Usual residence elsewhere

- Group quarters
- First form
 - Continuation

For a vacant unit, also fill
C, D, A, H2 to H8, and
H10 to H12

H12. Answer this question if you pay rent for your living quarters.

a. If rent is paid by the month—

What is the monthly rent?

Write amount here → \$ _____ .00 (Nearest dollar)

- and
Fill one circle
- Less than \$30
 - \$30 to \$39
 - \$40 to \$49
 - \$50 to \$59
 - \$60 to \$69
 - \$70 to \$79
 - \$80 to \$89
 - \$90 to \$99
 - \$100 to \$119
 - \$120 to \$149
 - \$150 to \$199
 - \$200 to \$249
 - \$250 to \$299
 - \$300 or more

80,
15 and 5
percent

80,
15 and 5
percent

H5. Is there hot and cold piped water in this building?

- Yes, hot and cold piped water in this building
- No, only cold piped water in this building
- No piped water in this building

H6. Do you have a flush toilet?

- Yes, for this household only
- Yes, but also used by another household
- No flush toilet

H7. Do you have a bathtub or shower?

- Yes, for this household only
- Yes, but also used by another household
- No bathtub or shower

80,
15 and 5
percent

H9. Are your living quarters—

- Owned or being bought by you or by someone else in this household? Do not include cooperatives and condominiums here.
- A cooperative or condominium which is owned or being bought by you or by someone else in this household?
- Rented for cash rent?
- Occupied without payment of cash rent?

H13. Answer question H13 if you pay rent for your living quarters.

In addition to the rent entered in H12, do you also pay for—

a. Electricity?

- Yes, average monthly cost is → \$ _____ .00
- No, included in rent Average monthly cost
- No, electricity not used

b. Gas?

- Yes, average monthly cost is → \$ _____ .00
- No, included in rent Average monthly cost
- No, gas not used

c. Water?

- Yes, yearly cost is → \$ _____ .00
- No, included in rent or no charge Yearly cost

d. Oil, coal, kerosene, wood, etc.?

- Yes, yearly cost is → \$ _____ .00
- No, included in rent Yearly cost
- No, these fuels not used

15 and 5
percent

80,
15 and 5
percent

H11. If you live in a one-family house which you own or are buying—

What is the value of this property; that is, how much do you think this property (house and lot) would sell for if it were for sale?

- Less than \$5,000
- \$5,000 to \$7,499
- \$7,500 to \$9,999
- \$10,000 to \$12,499
- \$12,500 to \$14,999
- \$15,000 to \$17,499
- \$17,500 to \$19,999
- \$20,000 to \$24,999
- \$25,000 to \$34,999
- \$35,000 to \$49,999
- \$50,000 or more

If this house is on a place of 10 acres or more, or if any part of this property is used as a commercial establishment or medical office, do not answer this question.

H17. Is this building—

- On a city or suburban lot?— Skip to H19
- On a place of less than 10 acres?
- On a place of 10 acres or more?

H18. Last year, 1969, did sales of crops, livestock, and other farm products from this place amount to—

- Less than \$50 (or None)
- \$50 to \$249
- \$250 to \$2,499
- \$2,500 to \$4,999
- \$5,000 to \$9,999
- \$10,000 or more

15 and 5
percent

FACSIMILES OF THE RESPONDENT INSTRUCTIONS FOR SELECTED HOUSING QUESTIONS IN THE 1970 CENSUS

- H5. Mark **hot water** even if you have it only part of the time.
- H6, **Also used by another household** means that someone else who lives in the same building, but is not a member of your household, also uses the equipment. Mark this circle also if the occupants of living quarters now vacant would also use the equipment.
- H7.
- H9. **Owned or being bought** means that the living quarters are owned outright or are mortgaged. Also mark **Owned or being bought** if the living quarters are owned but the land is rented.
- Mark **Rented for cash rent** if any money rent is paid. Rent may be paid by persons who are not members of your household.
- Occupied without payment of cash rent** includes, for example, a parsonage, a house or apartment provided free of rent by the owner, or a house or apartment occupied by a janitor or caretaker in exchange for services.
- H11. Include the value of the house, the land it is on, and any other structures on the same property. If the house is owned but the land is rented, estimate the combined value of the house and the land.
- H12. Report the rent agreed to or contracted for, even if the furnishings, utilities, or services are included.
- a. If you pay rent by the month, write in the amount of rent and fill one circle.
- b. If rent is not paid by the month, answer both parts of b. For example, \$20 per week, \$1,500 per year, etc.
- H13. If exact costs are not known, estimate as closely as possible. Report amounts even if bills are unpaid or are paid by someone else. If the bills include utilities or fuel used also by another apartment or a business establishment, estimate the amounts for your own living quarters. If gas and electricity are billed together, enter the combined amount on the electricity line and bracket ({) the two utilities.
- H17. A **city or suburban lot** is usually located in a city, a community, or any built-up area outside a city or community, and is not larger than the house and yard. All living quarters in apartment buildings, including garden-type apartments in the city or suburbs, are considered on a **city or suburban lot**.
- A **place** is a farm, ranch, or any other property, other than a city or suburban lot, on which this **residence** is located.
- H18. Fill the circle for the total (gross) amount of money received from the sales of crops, livestock, and other farm products produced on this place during the calendar year 1969.

Appendix C.—ACCURACY OF THE DATA

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COMPLETENESS OF ENUMERATION

One of the major objectives of a census is to obtain a complete and unduplicated count of the population. The realization of this objective is, of course, difficult. In this country, the length of the enumeration period, the high degree of population mobility, the difficulty of finding many dwelling units, and, in our metropolitan centers, the difficulty of finding apartment dwellers and lodgers at home, the unwillingness of some persons to be enumerated at their home address or elsewhere, and the inexperience of most of the enumerators, all represent relatively serious problems. In some foreign countries, the canvass is completed in a day or so by means of a radically different organization of the field work. The existence of a continuous population register and the

use of permanent government employees as enumerators are factors that may make a quick canvass possible. Everyone may have to remain at home until the entire enumeration is completed or may move about on the streets only with some form of identification to prove that he has been counted. Even with such drastic interference with normal activities, some persons are missed, however.

In the 1970 census, a number of procedures were used, all designed for the purpose of increasing the coverage of the enumeration. They are described in the following paragraphs.

Mail-out/Mail-back Enumeration

This procedure was used to enumerate about 60 percent of the 70 million housing units included in the 1970 census. Housing units enumerated by this method were, for the most part, located in large cities and their suburbs. Preparations for the use of this procedure began well in advance of the census, with the compilation of a definitive list of the addresses of each housing unit in the areas to be covered. An initial set of address labels was prepared from commercial mailing lists on computer tape. With the assistance of the Post Office Department and its individual mailmen on their individual routes, these addresses were corrected or deleted, as necessary, and missing addresses were added.

The computer tape was then revised to reflect the corrections and processed through an "address coding guide" for allocation of necessary geographic information (such as block, census tract, city, county, and congressional district code). Finally, the addresses on tape were identified by census field control codes for district office, enumeration district, and serial number within enumeration

districts. This whole process yielded address labels and address registers for all addresses in each enumeration district.

Beyond the city delivery areas there was no uniformly satisfactory computer list of addresses that could be used as a starting point. Therefore, a special listing operation was conducted before the census. Using enumeration district maps prepared by the Census Bureau, census employees manually compiled address registers and addressed appropriate mailing pieces for each household.

This compilation was supplemented by a "precanvass" in the inner-city areas of 21 of the largest cities in a special effort to locate and add to the address list any housing units that might have been inadvertently omitted in these difficult-to-enumerate locations.

Mailmen rechecked all addresses when packets of questionnaires arrived at the post offices in early March 1970, and again when the questionnaires were delivered to the housing units. Additions and corrections resulting from these checks were forwarded to the appropriate census district offices; the necessary changes were made in the address registers, and questionnaires were mailed to these addresses.

The questionnaires were delivered to each household by mailmen on March 28, 1970. The package included a questionnaire for the specific household, a letter from the Secretary of Commerce, an instruction sheet giving item-by-item directions for completion, and a postpaid return envelope. Householders were asked to fill in the questionnaires and mail them back to the local office on Census Day (April 1).

As the questionnaires were returned, they were reviewed by office

staff or enumerators and checked off the address register. Addresses from which no questionnaires were mailed back were followed up first by telephone and then, if necessary, by personal visit until all the entries on the address register were accounted for.

Overall, the mail-out/mail-back procedure was designed to improve household coverage in the census. In conventional enumeration the level of household coverage depends on the intelligence and dedication of the individual enumerator in locating and enumerating all of the housing units in his assigned enumeration district. Careful and intensive supervision and quality control procedures will preclude gross omissions but will not necessarily insure universal coverage. In contrast, the independent and intensive prelisting operation permitted knowledgeable outside sources, such as the Post Office, to have an input to the list of housing units established for the census and provided automatic checks to insure that a questionnaire was sent to and returned for all known units.

Information Aids for Minority and Selected Ethnic Groups

Traditionally, there has been a large-scale public information program for the decennial census, employing all available public media: magazines, newspapers, radio, television, billboards, and leaflet distribution. Special intensive efforts were made in 1970 to reach people likely to be missed in the census as well as representatives of community organizations, social agencies, and civil rights groups working with people likely to be missed. "Soul" radio stations broadcasted information about the census, and such pamphlets as "We, the Black People of the United States"

and "We, the Mexican-Americans" received wide distribution. Articles and editorials appeared more than a year ahead of the census in newspapers and magazines read by minority groups, appealing to group and self-interest in obtaining a correct census count.

At the national level, the Census Bureau obtained cooperation from other Federal agencies having programs in local communities and from various national organizations. In order to employ most effectively the word-of-mouth advocacy of cooperation with the census, the Bureau organized a staff of persons with ties to inner-city communities. These persons, and the community agencies with which they worked, concentrated on securing cooperation and understanding across cultural and linguistic barriers.

Some questionnaires and instruction sheets were translated into Spanish and Chinese to help respondents understand the census questions in English contained in the regular questionnaires. In selected areas where many of the residents speak and read Spanish, instruction sheets in Spanish for the short form and for the long form were mailed with the English questionnaires. Elsewhere, a form in Spanish which included examples of the various questions and directions for completing the questionnaires was made available through community leaders, post offices, neighborhood stores, and other convenient places. Enumerators in these areas also carried a specially printed form containing the Spanish version of all the questions, both 100-percent and sample. This form was given to Spanish-speaking respondents to follow as the questions were asked during the interview.

The Chinese translations were used in a similar manner, except that none

were mailed, and all were made available through stores, post offices, family societies, and other groups within Chinese-speaking communities. Only one instruction sheet in Chinese was printed, for use with both short and long questionnaires. These forms included examples of the various questions, together with directions for completion. An "Information Copy," in English, which contained both 100-percent and sample questions, was translated into Chinese. Enumerators also carried copies of these, but respondents' answers were entered on the regular census forms.

"Were You Counted?" Forms

During the final stages of the enumeration, many newspapers throughout the United States published "Were You Counted?" forms, which contained the questions asked of 100 percent of the population. The reader was urged to fill in this questionnaire and send it to the district office if he believed that he or members of his family had been missed in the enumeration. The forms were printed not only in English, but also in Spanish, Chinese, Yiddish, Polish, Croatian, Italian, Serbian, and Hungarian; mats and glossy prints were prepared by the Census Bureau and supplied to the newspapers by the census district offices.

Missed Persons Campaigns

In certain cities, local community organizations or civil officials conducted special campaigns to locate individuals who might have been missed by the census. These campaigns sometimes coincided with the "Were You Counted?" drive before the census was concluded; others were conducted after district offices were

closed. "Were You Counted?" forms, or locally printed adaptations, were distributed, and the Census Bureau also furnished cards headed "Please make sure I am counted in the census!" These cards were printed in English, Spanish, and Chinese (the characters of which are also understandable to Japanese and Koreans), and were designed to be filled out by persons who thought they might have been missed. The forms and cards were screened and compared with the census records, and persons not found were added to the census.

Movers Operation

For the larger metropolitan areas, a "movers" operation was conducted to make sure that people who moved to new addresses during the census were enumerated. Each post office serving any part of such an area participated in the movers operation. It prepared and forwarded to the designated census district office a "Transcription of Change of Address Order" for each notice of change of address in the area that was received during the period March 1 through May 1, 1970. In the designated district offices, these forms were checked in and coded to an enumeration district. Address registers and census questionnaires were examined to determine if the movers had been counted. Those forms for persons who moved before Census Day (April 1) were filed in the enumeration district of the new address; those for persons who moved on or after Census Day were placed in the enumeration district of the old address. Enumerators followed up any movers not found during this search whose new address was within the district office area. For some cities, adjacent areas were included in the followup.

Post-Enumeration Post Office Check

Experience in testing plans for the 1970 census had shown that appreciable gains could be made by subjecting the census list of living quarters to a postal review. However, the fact that no such precensus list existed for those areas of the nation which were to be enumerated by conventional means rather than by mail made it necessary to perform this check after the census. An analysis of households missed in the 1960 census indicated that these types of coverage problems were most heavily concentrated in the South. This check was, therefore, restricted to the South.

Subsequent to the census, the enumerators' lists of living quarters for the States in the South region were submitted to the post offices for review. Postmen reviewed the census list and prepared a "Report of Residents Missed by Census" for each household they believed had been missed. Determinations as to whether these households were missed were based both on a search of the census records and a visit to a sample of these households. Computer imputations were made for those households estimated to have been missed by the census enumerators.

Vacancy Recheck

In the analysis of the census results following the 1960 census and subsequent testing of alternative census procedures, it was discovered that a significant factor in coverage was the inability of census enumerators to determine correctly which housing units should be classified as vacant on the census reference day. Several methods for dealing with this problem were tested without success. Double-checking in the field by census

enumerators did not succeed in obtaining the degree of precision required. However, specially trained interviewers with long experience in this problem could make this determination. Consequently, this led the Bureau to utilize such a specially skilled staff to undertake a systematic review of a sample of the original units marked vacant by the enumerator in order to correct for this potential source of underenumeration in the 1970 census.

The findings from this vacancy check were applied to the required proportion of vacant units as computer imputations were made for these households, thus also adding significantly to the number of persons substituted compared with 1960.

EVALUATION OF COVERAGE

Although there is great interest in the degree of completeness of coverage of the census, the problem of measuring it is a difficult one, since it involves the development of a standard for comparison which is necessarily hypothetical. Empirical standards which have been used are, like the census, subject to error, and therefore it is never certain what part of the difference observed between the standard and the census is attributable to errors in the census, and what part is attributable to errors in the standard.

Coverage of Total Population

One method of estimating the comparative completeness of successive censuses involves the use of vital statistics and statistics of immigration and emigration in conjunction with the data of successive censuses. Since the population at a given census should represent the population at the

previous census plus births and immigration minus deaths and emigration in the intervening period, it is possible, given the necessary statistics, to calculate the expected population on a given census date and to compare it with the enumerated population. If this comparison shows that the expected population exceeds the enumerated population, it may be inferred that the absolute amount of underenumeration in the current census exceeded that in the previous census; if, on the other hand, the enumerated population exceeds the expected population, the inference is that the current census is the more complete one. These inferences, of course, rest on the assumption that errors in the measurement of births, deaths, immigration, and emigration are small in relation to the amounts of comparative underenumeration.

Investigation of the coverage of the 1970 census from this point of view suggests that the absolute amount of underenumeration in that year was only slightly greater than the amount of underenumeration in 1960 but that, as a result of the large increase in population between 1960 and 1970, the rate of underenumeration was slightly less than in the earlier year. Pertinent summary figures are as follows:

Population	
April 1, 1970	203,235,000
April 1, 1960	179,323,000
Net increase	23,912,000
Components of change: 1960 to 1970	
Births, adjusted for underregistration . . .	38,941,000
Deaths	18,219,000
Net movement of civilians (aliens and citizens)	3,887,000
Net movement of Armed Forces personnel	-460,000

Expected net increase based on births, deaths, and net movement	24,150,000
Estimated change in coverage	-238,000

Each of the components of change is subject to some degree of error, which has an impact on the estimated net underenumeration. Errors in the intercensal estimates of births, deaths, and military movement are not believed to be of sufficient magnitude to affect the general picture regarding the accuracy of the 1960 and 1970 counts. Errors in civilian immigration data, on the other hand, may be fairly large, and it is not possible to determine the direction and size of the errors.

Although the size of the net civilian immigration component is relatively small compared with that of births and deaths, the uncertainty involved in estimating the size of some of the elements that make up net civilian immigration from abroad is very large. This uncertainty pertains particularly to the amount of alien emigration and net movement of citizens, but it also pertains to the amount of alien immigration. No direct data on alien emigration are available, and only a modest allowance was made for it in deriving the estimate of net immigration shown above, using immigration statistics collected by selected foreign governments. Alien immigration was measured on the basis of tabulations provided by the Immigration and Naturalization Service, but some unrecorded immigration probably occurs. Net movement of U.S. citizens was estimated on the basis of passenger statistics (for those moving between Puerto Rico and the mainland) and counts of U.S. employees and their dependents overseas in 1970 and 1960 provided by the Defense Department

and the Civil Service Commission (for those moving between foreign countries and the United States). In the light of the uncertainties pertaining to the volume of immigration and emigration, it is believed that immigration may reasonably have been as much as one-quarter million greater, and emigration one-half million greater, than allowed for in the estimates of net immigration and intercensal increase, with a corresponding effect on the estimates of change in population coverage between 1960 and 1970.

If we accept the estimate of net civilian immigration given above, the 1970 census appears to have omitted slightly more persons than the 1960 census. The number of persons enumerated in 1970 was about 238,000 smaller than expected on the basis of the 1960 census count and estimates of birth, deaths, and net immigration for the 1960-70 period. On the basis of this fact and the principal estimate of net underenumeration in 1960, 5.1 million, the estimated *amount* of underenumeration in 1970 would be 5.3 million. Because of the increase of 24.1 million in the population between 1960 and 1970, the estimated *rate* of underenumeration in 1970, 2.5 percent, would be slightly less than in 1960, 2.7 percent. This decrease of 0.2 percent occurred in spite of the fact that the change in the age-sex-race composition of the population would have caused a rise of about 0.2 percent in total underenumeration if the error rates for the age, sex, and race groups in 1960 prevailed in 1970.

The previous discussion is concerned primarily with coverage of the 1970 census as compared with the 1960 census and is based principally on the results of the 1960 census evaluation study and estimates of population changes between 1960 and

1970. The major method of studying coverage in the 1960 and 1970 censuses was through demographic analysis, that is, the comparison of the census counts with estimates of expected population derived by the combination, manipulation, and analysis of birth, death, and net immigration statistics, census data, life tables, aggregate administrative data, etc. Demographic analysis indicated a net underenumeration varying from 2.7 percent to 2.9 percent in 1960. These figures fall within the range of estimates resulting from record check studies and a reenumerative survey, the other methods used to study coverage in the 1960 census.⁹ On the basis of these estimates of underenumeration for 1960 and estimates of intercensal population change for 1960 to 1970, net underenumeration in 1970 is estimated at 2.3 percent to 2.8 percent. Considering the evidence not available, the most reasonable estimate of the rate of net underenumeration in 1970 is about 2.5 percent, as compared with an estimate of 2.7 percent in the 1960 census. In absolute terms, this amounts to a net underenumeration in 1970 of 5.3 million people as compared with about 5.1 million people in 1960.¹⁰ These results may be considered in the light of the additional information on the coverage of the 1970 census provided by other phases of the 1970 Evaluation and Research Program, Series PHC(E). For

⁹ For a full discussion of the results, see U.S. Bureau of the Census, *Evaluation and Research Program of the U.S. Censuses of Population and Housing: 1960*, Series ER 60, No. 2, "Record Check Studies of Population Coverage," Washington, D.C., 1964.

¹⁰ See U.S. Bureau of the Census, *Census of Population and Housing: 1970 Evaluation and Research Program*, PHC(E)-4, "Coverage of Population by Sex, Race, and Age: Demographic Analysis," U.S. Government Printing Office, Washington, D.C., 1973.

example, estimates of the coverage of housing units and of persons in enumerated housing units are being obtained from the Current Population Survey-Census Match Study.

Net Errors for Age Groups, by Sex and Race

Studies of age statistics collected in previous censuses have shown that, as the combined result of net underenumeration and misstatement of age, the numbers in some age groups have been understated, whereas those in other age groups have been overstated. One of the expected advantages of self-enumeration in recent censuses was a reduction in age misreporting. The respondent was given an opportunity to discuss his reply with other members of the household before responding. As a result, the 1970 census, like the 1960 census, is believed to suffer less from errors of misreporting than prior censuses.

It is difficult to arrive at highly reliable estimates of net census errors for age groups, and the results obtained by either analytic or survey methods are themselves subject to error. A combination of analytic methods provides some estimates of net census errors for 1960 and 1970 for sex-race groups by age (table H). Note that such figures reflect the accuracy of age, sex, and race reporting as well as completeness of coverage. Even the total (all ages) figures for each race group are affected to some extent by (race) misclassification. Furthermore, the net age reporting error is a larger component of the net census error at some ages than the net coverage error. For most ages, the comparison of net coverage error and net age reporting error results in a net census undercount. A net "overcount" is a result, principally, of misreporting

of age and race, and not a result of duplicate enumeration.

The estimates are fairly reliable for ages under 25 in 1960 and under 35 in 1970. The population under 35 comprised about 58 percent of the total population in 1970. For ages under 25 in 1960 and under 35 in 1970 the estimates are based directly on births, adjusted for subsequent changes. The accuracy of the counts in the older age groups was estimated by use of symptomatic data and relatively indirect methods and, hence, these estimates are subject to greater error.

The "adjusted" estimates for 1970 shown in table H are based on a combination of complete-count tabulations for Negro and sample tabulations for white, and other races. The sample figures include an adjustment for the misclassification of the race of some 327,000 persons, mostly of Spanish ancestry, whose race was not specified for the complete-count tabulations but who were identified mostly as white in the sample tabulations. The census figures also include an adjustment for the overstatement of the number of centenarians by about 103,000, resulting, in part, from exaggerated reports of age and, in part, from a misunderstanding by some respondents of the procedure for filling out the census questionnaire. The persons misclassified with respect to race were distributed by age according to sample census data for counties on the number of persons who had been reclassified during the manual editing and coding of the sample. The excess of centenarians was distributed pro rata over the ages under 100.

A variety of demographic techniques, assumptions, and data were employed to derive this set of estimates of net underenumeration by sex and race, and of net undercounts by age for each sex-race group. The tech-

niques, assumptions, and data differed in part for the various segments of the age range, for each race group, and for males and females. For the age groups under 35 years in 1970 and under 25 years in 1960, the estimates of the expected "true" population were based directly on birth statistics corrected for underregistration, death statistics, and estimates of net immigration. (The Birth Registration Area and the Death Registration Area have comprised the entire United States except Alaska and Hawaii since 1933; records of births and deaths are also on file for Alaska and Hawaii for the period, however.) The resulting estimates of net undercounts in the census are affected by errors in the estimates of unregistered births, in the death statistics by age, and in the statistics and estimates of net immigration by age.

The estimates for the population 65 years and over in 1970 and 55 and over in 1960, by age group, are based on data on medicare enrollments in 1970, adjusted to include an allowance for underenrollment. The estimates for white females 35 to 64 years of age in 1970 and 25 to 54 in 1960 were derived by carrying forward estimates for ages 15 to 44 in 1950 developed by Coale and Zelnik as part of a historical reconstruction of the native white population in single ages from 1880 to 1950.¹¹ In general, this method involved estimating the "true" numbers of births for each year from the census counts for the population in single ages (adjusted for age "heaping") in successive censuses corresponding to each birth cohort, and then aging these births forward to

census dates to represent the corrected population.

The estimates for Negro females 35 to 64 years of age in 1970 were derived by carrying forward estimates for ages 25 to 54 in 1960 developed by Coale and Rives as part of a historical reconstruction of the native Negro population from 1880 to 1970.¹² In general, their method involved establishing the age distribution of the Negro population in 1880 on the assumption that it conformed to a "stable" population model in that year, carrying this population forward by model and official life tables, with the assumption that the proportion of the female population under age 20 in the corrected population conformed to the proportion in the census, and then tying in the preliminary estimates of corrected population with the estimates of population under age 25 in 1960 and under age 35 in 1970 based on survivors of births.

The estimates of net undercounts for white and Negro males 35 to 64 years of age in 1970 and 25 to 54 in 1960 are based on the use of a set of expected "true" sex ratios for whites and for Negroes and other races. The estimates for females at ages 65 and over in 1970 and 55 and over in 1960 were also adjusted to accord with a set of expected sex ratios in these years. Expected "true" sex ratios represent the estimated ratio of males to females expected at the census date on the basis of the balance of the sexes at birth and subsequent changes occurring to the cohort. They were derived from a historical series of sex

ratios of births, adjusted for "sex ratios" of survival rates calculated from a historical series of life tables, civilian and military net movement, and excess mortality due to war.

The percent undercoverage of the white population as a whole in 1970 amounted to about 1.9 percent of the corrected total population, as compared with 2.0 percent in 1960. White females showed a slight reduction in undercoverage, from 1.6 percent to 1.4 percent (table H). There was a modest improvement in the coverage of the Negro population, from 8.0 percent net underenumeration in 1960 to 7.7 percent in 1970, and this improvement appears to have been wholly confined to females.

The net undercount rate for children under 5, regardless of sex or race, fell steadily from 1940 to 1960 but rose between 1960 and 1970 (table I). The rate for children 5 to 9 also reversed direction between 1960 and 1970. On the other hand, as table H shows, the rates for age groups 10 to 24 all declined substantially between 1960 and 1970. The rates for Negroes showed particularly large declines at ages 15 to 24; for example, for Negro males the rate at ages 15 to 19 dropped from 12 percent in 1960 to 4 percent in 1970, and the rate at ages 20 to 24 dropped from 18 percent to 12 percent. The rates for Negro females showed similarly large declines. On the other hand, error rates in the age range 25 to 44 tended to remain about the same or increase. In the range 45 and over the direction of change in the error rates varied. As a result of these changes, many of the undercount rates at ages 20 and over remained high in 1970; this was especially true of the rates for Negro males in the age range 20 to 54, all of which exceeded 12 percent. Error rates for the population 65 and over as a whole appear rela-

¹² Ansley J. Coale and Norfleet W. Rives, Jr., "A Statistical Reconstruction of the Black Population of the United States, 1880-1970: Estimates of True Numbers by Age and Sex, Birth Rates, and Total Fertility," unpublished document reporting research supported by a Project Agreement with the U.S. Bureau of the Census, 1972.

¹¹ Ansley J. Coale and Melvin Zelnik, *New Estimates of Fertility and Population in the United States*, Princeton, N.J., Princeton University Press, 1963.

tively low in 1970; in fact, a moderate overcount is indicated for Negro males. Alternative procedures indicate rather different estimates of census error for the Negro population 65 and over; as a result, there is uncertainty not only about the magnitude of the error rate of the aged population but about its direction as well.

Measures of the quality of data on age, sex, and race have also been obtained by comparing census results with data obtained through intensive interviews of a sample of the population made prior to the census, through intensive interviews of a sample of census respondents, and through matching of census returns with other records. Specifically, these studies are the Current Population Survey-Census Match Study, which will provide a comparison of the reports of age, sex, and race; the Reinterview Study, which will also provide a comparison of these items; and the Medicare Record Check, which will measure coverage error and age, sex, and race misreporting in the census for persons 65 years of age and over. The results of these studies will be published in the Census Bureau's Evaluation and Research series of reports, PHC(E), as soon as they are available.

EDITING OF UNACCEPTABLE DATA

The objective of the processing operation is to produce a set of statistics that describes the population as accurately and clearly as possible. To meet this objective, certain unacceptable entries were edited.

In the field, questionnaires were reviewed for omissions and certain inconsistencies by a census clerk or enumerator, and a followup was made for missing information. The major review occurred in the central process-

ing office, where the editing and coding operation provided an opportunity to correct obvious errors in the respondents' entries for those items which required manual processing. In coding relationship to household head, for example, the clerk made use of written entries, which the computer is not able to read, in determining the correct entry where the machine readable item was blank or contained conflicting information. For a few of the items, the respondents' entries were reviewed for reasonableness or consistency on the basis of other information on the questionnaire. As a rule, however, editing was performed by hand only when it could not be done effectively by machine.

Because of limitations of computer capacity and other resources, a number of complicated editing steps were not introduced when the effect upon the final data was considered to be small. Thus, there may be a small number of cases having unlikely combinations of characteristics.

As one of the first steps in mechanical editing, the configuration of marks on the questionnaire was scanned electronically to determine whether it contained information for a person or merely spurious marks. If the questionnaire contained entries for at least two of the basic characteristics (relationship, sex, race, age, marital status), or for at least two relevant sample characteristics, the inference was made that the marks represented a person. Names were not used as a criterion of the presence of a person because the electronic scanning was unable to distinguish between a name and any other entry in the name space.

If any characteristics for a person were missing, they were, in most cases, supplied by allocation. Allocations, or assignments of acceptable codes in

place of unacceptable entries, were needed most often where an entry for a given item was lacking or where the information reported for a person on that item was inconsistent with other information for the person. As in earlier censuses, the general procedure for changing unacceptable entries was to assign an entry that was consistent with entries for other persons with similar characteristics. Thus, a person who was reported as a 20-year-old son of the household head, but for whom marital status was not reported, was assigned the same marital status as that of the last son processed in the same age group. The assignment of acceptable codes in place of blanks or unacceptable entries, it is believed, enhances the usefulness of the data. The allocation technique may be illustrated by the procedure used in the assignment of wage or salary income. The allocation of this item was carried out in the following steps:

1. The computer stored reported wage or salary income entries, by sex, age, relationship to household head, race, major occupation group, class of worker, and number of weeks worked in 1969, for persons 14 years old and over who worked in 1969.
2. Each stored wage or salary entry was retained in the computer only until a succeeding person having the same characteristics and having wage or salary income reported was processed through the computer during the mechanical edit operation. Then the reported wage or salary income entry of the succeeding person was stored in place of the one previously stored.
3. When the wage or salary income of a person 14 years old or over who worked in 1969 was not reported or

the entry was unacceptable, the wage or salary income assigned to this person was that stored for the last person who otherwise had the same characteristics.

This process insured that the distribution of wage or salary income assigned by the computer for persons of a given set of characteristics would correspond closely to the wage or salary income distribution of persons who had reported that item in the current census.

The editing process also includes another type of correction; namely, the assignment of a full set of characteristics for a person. When there was indication that a housing unit was occupied but the questionnaire contained no information for any person, a previously processed household was selected as a substitute and the full set of characteristics for each substitute person was duplicated. These duplications fall into two classes: (1) "persons substituted due to noninterview," e.g., a housing unit indicated as occupied but the occupants were not listed on the questionnaire and (2) "persons substituted due to mechanical failure," e.g., where the questionnaire page on which persons are listed was not properly microfilmed.

Specific tolerances were established for the number of computer allocations and substitutions that would be permitted. If the number of corrections was beyond tolerance, the questionnaires in which the errors occurred were clerically reviewed. If it was found that the errors resulted from damaged questionnaires, from improper microfilming, from faulty reading by FOSDIC of undamaged questionnaires, or from other types of machine failure, the questionnaires were reprocessed.

ALLOCATION TABLES

The extent of the various editing and allocation procedures and their effect on each of the subjects is shown in tables B-1 to B-5 (which follow table 67) and tables C-1 to C-4 (which follow table 188). Information on the number of substitutions for each State, with separate counts of those for enumeration reasons and those for processing reasons, is presented in table B-6. Tables B-1 to B-6 relate to 100-percent tabulations, and tables C-1 to C-4 relate to sample tabulations.

There is a difference in the method of counting allocations between tables B-1 and B-5 on the one hand, and tables B-3 and B-4 on the other hand. In tables B-1 and B-5, a person with one or more allocations whose record is duplicated for substitution purposes is counted twice (i.e., both "originally" and as a "substitute"). In tables B-3 and B-4, such a person is counted only once.

Table B-6 shows the number of substitutions, classified by type. The category "enumeration reasons" refers to substitutions made mainly for housing units returned as vacant but determined through a sample check to be occupied, housing units returned as occupied but with no persons listed therein, and households reported by postal carriers to have been omitted by the census enumerators. The category "processing reasons" covers such factors as incorrect microfilming and FOSDIC operation. The substitution procedure generally involves the replication of a neighboring household to replace the specified household. The data in table B-6 are not directly comparable with similar statistics shown in the 1960 census reports.

The sum of the percentages of persons having assignments in each population characteristic is greater

than the number of persons with one or more allocations because some persons had allocations for more than one characteristic. Not tallied, and therefore not included in these tables, are the allocations for missing information on quarter of year of birth; these allocations were made on a random basis.

The number of persons and housing units enumerated in the sample is shown in table C-1. The extent of allocations or substitutions for non-response or inconsistency is shown for selected characteristics in tables C-2 and C-4, and distributions as they appeared before allocations or substitutions are shown in table C-3.

In table C-1, the "unweighted sample count" of persons and housing units represents a count of one for each sample person and each sample housing unit readable by the computer; thus, it is the unweighted universe before ratio estimation.

In table C-2, "persons with two or more sample characteristics reported" are persons with acceptable entries in two or more relevant sample characteristics (for example, entries in weeks worked in 1969 and wage or salary income for persons 14 years old and over). The column "persons with sample information" in table C-4 refers to the same information for States and standard metropolitan statistical areas. The characteristics listed in tables C-2 and C-4 cover most of the items that are published in this report. For each subject in tables C-2 and C-4 the universe applicable to the characteristics is described, along with the percent of persons in the relevant universe for whom nonresponses were allocated. In table C-2, the number of persons in each universe is also shown.

The figures in table C-3, representing distributions for each subject as

they appeared before substitution and allocation for nonresponse, may be compared with the corresponding statistics in the appropriate detailed table, category by category, to measure the net effect of substitution and allocation.

The allocation rates shown in these tables are generally, but not always, comparable with the rates shown in similar tables in the 1960 reports. Certain types of response allocation are included as allocations in 1970 but were not so included in 1960. For example, allocations of race are counted for household members when allocating from the race of the household head, and allocations of marital status and sex are counted for persons identified as wives of household heads or as heads of households with wife present. Moreover, the characteristics of sample persons in substituted households are counted as allocations in 1970 but were not so counted in 1960 (except when the person in the substituted household had a nonresponse on a given characteristic).

In tables C-2 and C-4, the allocated characteristics resulting from substituted households include only those substitutions made when a housing unit enumerated as occupied contained no information for any person. Other substitutions made in the processing of the 100-percent data are mainly accounted for in the sample processing by adjusting the weights of the sample persons.

The nonresponse rates shown in tables C-2 to C-4 do not necessarily reflect omissions on the questionnaire. Processing difficulties, particularly as related to the income items, resulted in the loss of some answers and the subsequent treatment of those entries as blanks.

SAMPLE DESIGN

For persons living in housing units at the time of the 1970 census, the housing unit, including all its occupants, was the sampling unit; for persons in group quarters identified in advance of the census, the sampling unit was the person. In nonmail areas, the enumerator canvassed his assigned area and listed all housing units in an address register sequentially in the order in which he first visited the units whether or not he completed the interview. Every fifth line of the address register was designated as a sample line, and the housing units listed on these lines were included in the sample. Each enumerator was given a random line on which he was to start listing and the order of canvassing was indicated in advance, although the instructions allowed some latitude in the order of visiting addresses. In mail areas, the list of housing units was prepared prior to Census Day either by employing commercial mailing lists corrected through the cooperation of the post office or by listing the units in a process similar to that used in nonmail areas. As in other areas, every fifth housing unit of these lists was designated to be in the sample. In group quarters, all persons were listed and every fifth person was selected for the sample.

This 20-percent sample was subdivided into a 15-percent and a 5-percent sample by designating every fourth 20-percent sample unit as a member of the 5-percent sample. The remaining sample units became the 15-percent sample. Two types of sample questionnaires were used, one for the 5-percent and one for the 15-percent sample units. Some questions were included on both the 5-percent and 15-percent sample forms and therefore appear for a sample of

20 percent of the units in the census. Other items appeared on either the 15-percent or the 5-percent questionnaires. The sample rates for various subjects collected in the census are given in Appendix B.

Although the sampling procedure did not automatically insure an exact 20-percent sample of persons or housing units in each locality, the sample design was unbiased if carried through according to instructions; generally for larger areas the deviation from 20 percent was found to be quite small. Biases may have arisen, however, when the enumerator failed to follow his listing and sampling instructions exactly. Quality control procedures were used throughout the census process, however, and where there was clear evidence that the sampling procedures were not properly followed, some enumerators' assignments were returned to the field for resampling. As shown in table C-1 of this report, 19.4 percent of the population and 19.6 percent of the housing units tabulated were enumerated on sample questionnaires. The bases for these percentages included several classes of the population and housing units for which no attempt at sampling was made. These were the relatively small numbers of persons and housing units (in most States, less than one percent) added to the enumeration from the post-census post office check, the various supplemental forms, and the special check of vacant units. If these classes are excluded from the bases the respective proportions become 19.6 and 19.7 percent. (Table C-1 in the State parts of Volume I shows the percentages for each State; however, the comparable descriptive paragraph on page App-54 of the State parts contains a typographical error. The computation of these proportions

"included," not "excluded," several classes of the population for which no attempt at sampling was made.) The ratio estimation procedure described below adjusts the sample data to reflect these classes of population and housing units.

RATIO ESTIMATION

The statistics based on 1970 census sample data are estimates made through the use of ratio estimation procedures, which were applied separately for population and for housing data for each of the 5-, 15-, and 20-percent samples. The first step in carrying through the ratio estimates was to establish the areas within which separate ratios were to be prepared. These are referred to as "weighting areas." For the 15- and 20-percent samples, the weighting areas contained a minimum population size of 2,500. The weighting areas used for the 5-percent ratio estimate were larger areas, having a minimum population size of 25,000 and comprising combinations of the weighting areas used for the 15- and 20-percent samples. Weighting areas were established by a mechanical operation on the computer and were defined to conform, as nearly as possible, to areas for which tabulations are produced. Where these areas do not agree, there may be some differences between complete counts and sample estimates.

The ratio estimation process for population operated in three stages. The first stage employed 19 household-type groups (the first of which was empty by definition). The second stage used two groups, head of household and not head of household, and the third stage used 24 age-sex-race groups.

<i>Group</i>	
	STAGE I
	<i>Male head with own children under 18</i>
1	1-person household
2	2-person household
3	3-person household
.	.
.	.
6	6-or-more-person household
	<i>Male head without own children under 18</i>
7-12	1-person to 6-or-more-person households
	<i>Female head</i>
13-18	1-person to 6-or-more-person households
19	<i>Group quarters persons</i>
	STAGE II
20	<i>Head of household</i>
21	<i>Not head of household (including persons in group quarters)</i>
	STAGE III
	<i>Male Negro</i>
22	Age under 5 years
23	5-13
24	14-24
25	25-44
26	45-64
27	65 and older
	<i>Male, not Negro</i>
28-33	Same age groups as for Male Negro
	<i>Female Negro</i>
34-39	Same age groups as for Male Negro
	<i>Female, not Negro</i>
40-45	Same age groups as for Male Negro

At each stage, for each of the groups, the ratio of the complete count to the weighted sample count of the population in the group was computed and applied to the weight of each sample person in the group. This operation was performed for each of the 19 groups in the first stage, then for the two groups in the second stage and finally for the 24 groups in the third stage. As a rule, the weighted sample counts within each of the 24 groups in the third stage should agree with the complete counts for the weighting areas. Close, although not exact, consistency can be expected for the two groups in the second stage and the 19 groups in the first stage.

There are some exceptions to this general rule, however. As indicated above, there may be differences between the complete counts and sample estimates when the tabulation area is not made up of whole weighting areas. Furthermore, in order to increase the reliability, a separate ratio was not computed in a group whenever certain criteria pertaining to the complete count of persons and the magnitude of the weight were not met. For example, for the 20-percent sample the complete count of persons in a group had to exceed 85 persons and the ratio of the complete count to the unweighted sample count could not exceed 20. Where these criteria were not met, groups were combined in a specific order until the conditions were met. Where this occurred, consistency between the weighted sample and the complete counts would apply as indicated above for the combined group but not necessarily for each of the groups in the combination.

Each sample person was assigned an integral weight to avoid the complications involved in rounding in the final

tables. If, for example, the final weight for a 20-percent group was 5.2, one-fifth of the persons in the group (selected at random) were assigned a weight of 6 and the remaining four-fifths a weight of 5.

The estimates realize some of the gains in sampling efficiency that would have resulted had the population been stratified into the groups before sampling. The net effect is a reduction in both the sampling error and possible bias of most statistics below what would be obtained by weighting the results of the sample by a uniform factor (e.g., by weighting the 20-percent sample results by a uniform factor of 5). The reduction in sampling error will be trivial for some items and substantial for others. A byproduct of this estimation procedure is that estimates for this sample are, in general, consistent with the complete count for the population groups used in the estimation procedure. A more complete discussion of the technical aspects of these ratio estimates will be presented in a separate report.

SAMPLING VARIABILITY

The estimates from the 20-, 15-, and 5-percent sample tabulations are subject to sampling variability. The standard errors of these estimates can be approximated by using the data in tables L through N. The chances are about 2 out of 3 that the difference (due to sampling variability) between the sample estimate and the figure that would have been obtained from a complete count of the population is less than the standard error. The chances are about 19 out of 20 that the difference is less than twice the standard error and about 99 out of 100 that it is less than 2½ times the standard error. The amount by which

the estimated standard error must be multiplied to obtain other odds deemed more appropriate can be found in most statistical textbooks. The sampling errors may be obtained by using the factors shown in table N in conjunction with table L for absolute numbers and in conjunction with table M for percentages. These tables reflect the effect of simple response variance, but not of bias arising in the collection, processing, and estimation steps nor of the correlated errors enumerators introduce; estimates of the magnitude of some of these factors in the total error are being evaluated and will be published at a later date.

Table L shows approximate standard errors of estimated numbers for most statistics based on the 20-percent sample. In determining the figures for this table, some aspects of the sample design, the estimation process, and the population of the area over which the data have been compiled are ignored. Table M shows standard errors of most percentages based on the 20-percent sample. Linear interpolation in tables L and M will provide approximate results that are satisfactory for most purposes.

Table N provides a factor by which the standard errors shown in tables L and M should be multiplied to adjust for the combined effect of the sample design, the estimation procedure, and the sample size (i.e., whether 20-percent, 15-percent, or 5-percent). Some items collected from the 20-percent sample are tabulated from the 15-percent or 5-percent samples in specific tables. Table J shows the tabulation rate for data published in tables 68-188 (chapter C). Table K shows the tabulation rate for data published in tables 188-371 (chapter D).

To estimate the standard error for a given characteristic based on the 15- or 5-percent sample, or for a more precise estimate for the 20-percent sample, locate in table N the factor applying to the characteristic and sample size used to tabulate the data and multiply this factor by the standard error found in table L or M. If the estimate is not identified in table N, use the factor shown for "all other." Where data are shown as cross-classifications of two characteristics, locate and use the larger factor. Similarly, if an item, although collected on one sample basis, has been tabulated for a smaller sample, use the factor appropriate for the smaller sample.

The standard errors estimated from these tables are not directly applicable to differences between two sample estimates. In order to estimate the standard error of a difference, the tables are to be used somewhat differently in the three following situations:

1. For a difference between the sample figure and one based on a complete count (e.g., arising from comparisons between 1970 sample statistics and complete-count statistics for 1960 or 1950), the standard error is identical with the standard error of the 1970 estimate alone.
2. For a difference between two sample figures (that is, one from 1970 and the other from 1960, or both from the same census year), the standard error is approximately the square root of the sum of the squares of the standard errors of each estimate considered separately. This formula will represent the actual standard error quite accurately for the difference between estimates of the same characteristics in two different areas, or

for the difference between separate and uncorrelated characteristics in the same area. If, however, there is a high positive correlation between the two characteristics, the formula will overestimate the true standard error. The approximate standard error for the 1970 sample figure is derived directly from tables L through N. The standard error of a 25-percent 1960 sample figure may be obtained from the relevant 1960 census report or an approximate value may be obtained by multiplying the appropriate value in table L or M by 0.9.

3. For a difference between two sample estimates, one of which represents a subclass of the other, the tables can be used directly with the difference considered as the sample estimate.

The sampling variability of the medians presented in certain tables (median age, median years of school completed, and median income) depends on the size of the base and on the distribution on which the median is based. An approximate method for measuring the reliability of an estimated median is to determine an interval about the estimated median such that there is a stated degree of

confidence the true median lies within the interval. As the first step in estimating the upper and lower limits of the interval (that is, the confidence limits) about the median, compute one-half the number on which the median is based (designated $\frac{N}{2}$). From table L, following the method outlined in other parts of this section, compute the standard error of an estimated number equal to $\frac{N}{2}$. Subtract this standard error from $\frac{N}{2}$. Cumulate the frequencies (in the table on which the median is based) until the total first exceeds the difference between $\frac{N}{2}$ and its standard error and by linear interpolation obtain a value corresponding to this number. In a corresponding manner, add the standard error to $\frac{N}{2}$, cumulate the frequencies in the table, and obtain a value in the table on which the median is based corresponding to the sum of $\frac{N}{2}$ and its standard error. The chances are about 2 out of 3 that the median would lie between these two values. The range for 19 chances out of 20 and for 99 in 100 can be computed in a similar manner by multiplying the standard error by the appropriate factors before sub-

tracting from and adding to one-half the number reporting the characteristic. Interpolation to obtain the values corresponding to these numbers gives the confidence limits for the median.

The sampling variability of a mean, such as the number of children ever born per 1,000 women or mean income, presented in certain tables, depends on the variability of the distribution on which the mean is based, the size of the sample, the sample design (for example, the use of households as the sampling unit), and the use of ratio estimates.

An approximation to the variability of the mean may be obtained as follows: compute the standard deviation of the distribution on which the mean is based; divide this figure by the square root of one-fifth of the total units in the distribution; multiply this quotient by the factor from table N appropriate to the statistic and the actual sample rate on which the mean is based. If the distribution is not published in the detailed tables, calculate the standard deviation from a comparable distribution for a larger area or for a similar population group; divide by the square root of one-fifth of the units on which the mean of interest is based; multiply the quotient by the factor from table N.

TABLE H. Estimates of Net Census Errors by Age, Sex, and Race: 1970 and 1960

(Composite of analytic methods. Base of percentages is the corrected population. Minus sign indicates a net undercount and a plus sign indicates a net overcount. Estimates for 1970 are based on census figures which have been adjusted for race misclassification in the complete count, affecting some 327,000 persons, mostly of Spanish ancestry, and for a gross overstatement of centenarians amounting to about 103,000 persons)

Year and age	All classes	White		Negro	
		Male	Female	Male	Female
1970					
All ages ¹	-2.5	-2.4	-1.4	-9.9	-5.5
Under 5 years	-3.5	-2.3	-2.0	-10.4	-9.8
5 to 9	-3.0	-2.4	-2.2	-7.7	-6.9
10 to 14	-1.3	-1.1	-0.9	-3.5	-2.8
15 to 19	-1.2	-1.3	-0.5	-4.3	-3.2
20 to 24	-2.3	-2.5	-1.1	-12.1	-5.2
25 to 34	-4.3	-4.3	-2.4	-18.5	-6.7
35 to 44	-3.1	-3.6	-0.5	-17.7	-4.0
45 to 54	-2.1	-2.7	-0.1	-12.4	-5.3
55 to 64	-2.6	-2.2	-1.9	-9.2	-7.0
65 and over	-1.8	-1.2	-2.2	+3.1	-4.2
1960					
All ages	-2.7	-2.4	-1.6	-9.7	-6.3
Under 5 years	-2.2	-1.9	-1.1	-6.6	-5.1
5 to 9	-2.3	-2.4	-1.5	-5.1	-4.2
10 to 14	-2.4	-2.5	-1.5	-5.0	-3.9
15 to 19	-4.2	-3.8	-2.4	-12.3	-9.6
20 to 24	-4.7	-4.3	-2.4	-18.4	-9.5
25 to 34	-3.6	-3.6	-1.0	-18.5	-6.5
35 to 44	-1.7	-2.2	+0.2	-11.5	-3.8
45 to 54	-3.3	-2.5	-2.4	-11.0	-9.0
55 to 64	-2.0	-0.5	-1.7	-8.5	-11.6
65 and over	-1.9	—	-3.5	+5.8	-2.8

¹ Unadjusted estimates are as follows: All classes, -2.6 percent; white male, -2.7 percent; white female, -1.6 percent; Negro male, -9.9 percent; and Negro female, -5.5 percent.

TABLE I. Estimates of Net Census Undercounts of Children Under 15 Years of Age,
by Age, Sex, and Race: 1940 to 1970

(Base of percentages is the corrected population)

Age and year	All classes	White		Negro	
		Male	Female	Male	Female
Under 5 years					
1970 ¹	3.5	2.3	2.0	10.4	9.8
1960	2.2	1.9	1.1	6.6	5.1
1950	4.7	4.3	3.6	9.6	9.0
1940	7.1	6.5	6.0	16.0	14.4
5 to 9 years					
1970 ¹	3.1	2.4	2.2	7.7	6.9
1960	2.3	2.4	1.5	5.1	4.2
1950	3.6	3.0	2.4	10.4	8.5
10 to 14 years					
1970 ¹	1.4	1.1	0.9	3.5	2.8
1960	2.4	2.5	1.5	5.0	3.9
1950	1.8	1.0	1.0	7.2	6.0

¹These are adjusted estimates. Adjusted estimates are based on census figures which have been adjusted for race misclassification in the complete count and an overstatement of centenarians. Unadjusted estimates are the same or only slightly higher. For example, the figures are 2.6 percent for white males under 5, 2.7 percent for white males 5 to 9, and 1.3 percent for white males 10 to 14.

APPENDIX C—Continued

TABLE J. Tabulation Rates for Subjects in Tables 68 to 188 (Chapter C)

(Cross-classifications of two or more items are tabulated on the smaller rate)

Subject	Tabulation rate (percent)	Subject	Tabulation rate (percent)	Subject	Tabulation rate (percent)
Sex	20	Mother tongue	15	Activity 5 years ago	20
Race	20	Spanish surname ¹	15	Place of work	15
Age	20	Year moved into present house	15	Means of transportation to work	15
Household relationship	20	Residence in 1965	15	Occupation	20
Family composition	20	School enrollment	15	Industry	20
Families and subfamilies	20	Years of school completed	20	Class of worker	20
Type of group quarters	20	Vocational training	5	Income	20
Marital status	20	Veteran status	15	Poverty status	20
Marital history	5	Disability	5	Tenure of housing unit	20
Children ever born	20	Employment status	20	Farm residence	20
State of birth	20	Labor force participation	20	Value of housing unit	20
Country of origin	15	Weeks worked in 1969	20	Gross rent	20
Spanish origin or descent	5			Plumbing facilities	20
Nativity and parentage	15				

¹ The identification of Spanish surname was performed for both the 15-percent and 5-percent samples, but, for this report, the data were tabulated from the 15-percent sample only.

TABLE K. Tabulation Rates for Subjects in Tables 189 to 371 (Chapter D)

Table number	Tabulation rate (percent)	Table number	Tabulation rate (percent)	Table number	Tabulation rate (percent)	Table number	Tabulation rate (percent)
189-193	15	221-229	¹ 20	277-279	5	336	5
194,195	5	230	5	280-283	¹ 20	337-342	¹ 20
196,197	15	231-233	¹ 20	284	5	343	5
198,199	¹ 20	234	15	285	¹ 20	344-347	¹ 20
200,201	5	235-241	¹ 20	286	(²)	348	15
202	15	242,243	15	287-291	¹ 20	349,350	20
203	5	244-266	¹ 20	292	5	351	5
204-209	¹ 20	267	15	293-321	¹ 20	352-361	¹ 20
210,211	5	268	¹ 20	322-326	15	362	5
212	¹ 20	269-272	15	327-329	20	363,364	15
213	(²)	273	5	330	15	365-368	¹ 20
214-219	¹ 20	274,275	15	331	5	369,370	15
220	5	276	¹ 20	332-335	¹ 20	371	¹ 20

¹ Data for the Spanish heritage population are tabulated from the 15-percent sample.

² In this table, data on marital history are based on the 5-percent sample; data on State of birth and ethnic group are based on the 15-percent sample; and all other data are based on the 15-percent sample when shown for persons of Spanish heritage and on the 20-percent sample when shown for white, Negro, and total.

TABLE L. Approximate Standard Error of Estimated Number Based on 20-Percent Sample

(Range of 2 chances out of 3; for factors to be applied see table N and text)

Estimated number ¹	Number of persons, families, or households in area ²							
	10,000	25,000	100,000	250,000	1,000,000	3,000,000	5,000,000	20,000,000
50	15	15	15	15	15	15	15	15
100	20	20	20	20	20	20	20	20
250	30	30	30	30	30	30	30	30
500	45	45	45	45	45	45	45	45
1,000	60	60	65	65	65	65	65	65
2,500	90	95	100	100	100	100	100	100
5,000	100	130	140	140	140	140	140	140
10,000 . . . . .	...	150	190	200	200	200	200	200
15,000 . . . . .	...	150	230	240	240	240	240	240
25,000 . . . . .	...	...	270	300	310	310	320	320
50,000 . . . . .	...	...	320	400	440	440	440	450
75,000 . . . . .	...	...	270	450	520	540	540	540
100,000 . . . . .	...	...	...	490	600	620	630	630

¹For estimated numbers larger than 100,000, the relative errors are somewhat smaller than for 100,000.

²This relates to the smallest complete geographic area to which the estimate under consideration pertains. Thus, the area may be the State, city, county, standard metropolitan statistical area, urbanized area, or the urban or rural portion of the State or county. The rural farm or rural non-farm persons in the State or county, the Negro families, etc., do not represent complete areas.

TABLE M. Approximate Standard Error of Estimated Percentage Based on 20-Percent Sample

(Range of 2 chances out of 3; for factors to be applied see table N and text)

Estimated percentage	Base of percentage						
	500	1,000	2,500	10,000	25,000	100,000	250,000
2 or 98	1.3	0.9	0.6	0.3	0.2	0.1	0.1
5 or 95	2.0	1.4	0.9	0.4	0.3	0.1	0.1
10 or 90	2.7	1.9	1.2	0.6	0.4	0.2	0.1
25 or 75	3.9	2.7	1.7	0.9	0.5	0.3	0.2
50	4.5	3.2	2.0	1.0	0.6	0.3	0.2

TABLE N. Factor To Be Applied to Standard Error

(For cross-classifications of two or more subjects, locate the factor for each subject at the appropriate tabulation rate and use the largest)

Subject	Factor if tabulation rate is—			Subject	Factor if tabulation rate is—		
	20 percent	15 percent	5 percent		20 percent	15 percent	5 percent
Race	1.1	1.4	2.5	Labor force status or participation	0.8	0.9	1.6
Age	0.8	1.1	1.8	Unemployed	1.0	1.3	2.4
Household relationship	0.5	0.6	1.1	Hours worked	0.8	0.9	...
Families and subfamilies ¹	0.6	0.7	...	Weeks worked in 1969	0.8	0.9	...
Unrelated individuals	1.3	1.5	...	Year last worked	0.8	0.9	...
Type of group quarters	0.6	0.7	...	Activity 5 years ago .....	...	0.9	1.6
Marital status	0.6	0.7	1.4	Place of work .....	...	1.3	...
Marital history .....	...	...	2.0	Means of transportation to work .....	...	1.3	...
Own children under 5 years old ...	0.8	1.1	1.8	Occupation	1.1	1.3	2.3
State of birth	1.3	1.6	2.9	Industry	1.1	1.3	...
Country of origin .....	...	1.6	...	Class of worker	1.1	1.3	...
Country of birth .....	...	1.6	2.9	Income in 1969			
Spanish origin or descent ² .....	...	...	2.9	Persons	1.0	1.2	2.2
Spanish heritage ² .....	...	1.6	...	Families ¹	1.0	1.2	2.3
Nativity and parentage .....	...	1.7	3.1	Poverty status in 1969			
Mother tongue .....	...	1.8	...	Persons	1.8	2.2	4.0
Year moved into present house ...	...	1.9	...	Families ¹	1.1	1.2	2.3
Residence in 1965 .....	...	2.0	3.7	Housing characteristics			
Rural farm-nonfarm residence	1.7	2.0	3.7	Tenure ¹	0.2	0.3	...
School enrollment	0.8	1.0	...	Other ¹	1.0	1.2	...
Years of school completed	1.0	1.2	2.3	All other	1.0	1.2	2.2
Vocational training .....	...	...	1.7				
Veteran status .....	...	0.9	...				
Disability .....	...	...	2.4				

¹When determining the standard error of a number relating to families or households, use the number of families or households in the area for selecting the appropriate column in table L.

²Tabulations of characteristics for persons of Spanish heritage (Puerto Rican birth or parentage, Spanish language or Spanish surname) are based on the 15-percent sample, and the appropriate factor is found in the 15-percent column for the subject or for Spanish heritage, whichever is the larger. Tabulations of characteristics for persons of Spanish origin or descent are based on the 5-percent sample and the appropriate factor is found in the 5-percent column for the subject or for Spanish origin or descent, whichever is the larger.

ILLUSTRATION. Assume table 150 shows that a total of 100,000 males in an area of 2,000,000 have 4 years of high school and some vocational training. This represents a cross-classification of years of school completed and vocational training, which is based on a tabulation rate of 5 percent. The largest of the factors for those subjects at the 5-percent tabulation rate is found in table N to be 2.3. Interpolation in table L shows that the approximate standard error of an estimate of 100,000 in an area of 2,000,000 when based on a 20-percent sample is about 610. The product of 2.3 times 610 is 1,403 which means the chances are about 2 out of 3 the results of a complete census will not differ by more than 1,403 from the estimated 100,000 when based on the 5-percent sample. It also follows there are only 5 chances in 100 that a complete census would differ by as much as 2,806; that is, by about 2 times the number estimated from tables L and N.

Appendix D.—PUBLICATION AND COMPUTER SUMMARY TAPE PROGRAM

The results of the 1970 Census of Population and Housing are being issued in the form of printed reports, microfiche copies of the printed reports, computer summary tapes, computer printouts, and microfilm. Listed below are short descriptions of the final report series and computer tapes, as currently planned. More detailed information on this program can be obtained by writing to the Publications Distribution Section, Bureau of the Census, Washington, D.C. 20233.

Population Census Reports

Volume I. CHARACTERISTICS OF THE POPULATION

This volume consists of 58 "parts"—number 1 for the United States, numbers 2 through 52 for the 50 States and the District of Columbia in alphabetical order, and numbers 53 through 58 for Puerto Rico, Guam, Virgin Islands, American Samoa, Canal Zone, and Trust Territory of the Pacific Islands, respectively. Each part, which is a separate clothbound book, contains four chapters designated as A, B, C, and D. Each chapter (for each of the 58 areas) is issued as an individual paperbound report in four series designated as PC(1)-A, B, C, and D, respectively. The 58 PC(1)-A reports have been specially assembled and issued in a clothbound book, designated as Part A.

■ Series PC(1)-A. NUMBER OF INHABITANTS

Final official population counts are presented for States, counties by urban and rural residence, standard metropolitan statistical areas (SMSA's), urbanized areas, county subdivisions, all incorporated places, and unincorporated places of 1,000 inhabitants or more.

■ Series PC(1)-B. GENERAL POPULATION CHARACTERISTICS

Statistics on age, sex, race, marital status, and relationship to head of household are presented for States, counties by urban and rural residence, SMSA's, urbanized areas, county subdivisions, and places of 1,000 inhabitants or more.

■ Series PC(1)-C. GENERAL SOCIAL AND ECONOMIC CHARACTERISTICS

Statistics are presented on nativity and parentage, State or country of birth, Spanish origin, mother tongue, residence 5 years ago, year moved into present house, school enrollment (public or private), years of school completed, vocational training, number of children ever born, family composition, disability, veteran status, employment status, place of work, means of transportation to work, occupation group, industry group, class of worker, and income (by type) in 1969 of families and individuals. Each subject is shown for some or all of the following areas: States, counties (by urban, rural-nonfarm, and rural-farm residence), SMSA's, urbanized areas, and places of 2,500 inhabitants or more.

■ Series PC(1)-D. DETAILED CHARACTERISTICS

These reports cover most of the subjects shown in Series PC(1)-C, above, presenting the data in considerable detail and cross-classified by age, race, and other characteristics. Each subject is shown for some or all of the following areas: States (by urban, rural-nonfarm, and rural-farm residence), SMSA's, and large cities.

Volume II. SUBJECT REPORTS

Each report in this volume, also designated as Series PC(2), concentrates on a particular subject. Detailed information and cross-relationships are generally provided on a national and regional level; in some reports, data for States or SMSA's also are shown. Among the characteristics covered are national origin and race, fertility, families, marital status, migration, education, unemployment, occupation, industry, and income.

Housing Census Reports

Volume I. HOUSING CHARACTERISTICS FOR STATES, CITIES, AND COUNTIES

This volume consists of 58 "parts"—number 1 for the United States, numbers 2 through 52 for the 50 States and the District of Columbia in alphabetical order, and numbers 53 through 58 for Puerto Rico, Guam, Virgin Islands, American Samoa, Canal Zone, and Trust Territory of the Pacific Islands, respectively. Each part, which is a separate clothbound book, contains two chapters designated as A and B. Each chapter (for each of the 58 areas) is issued as an individual paperbound report in two series designated as HC(1)-A and B, respectively.

■ Series HC(1)-A. GENERAL HOUSING CHARACTERISTICS

Statistics on tenure, kitchen facilities, plumbing facilities, number of rooms, persons per room, units in structure, mobile home, telephone, value, contract rent, and vacancy status are presented for some or all of the following areas: States (by urban and rural residence), SMSA's, urbanized areas, places of 1,000 inhabitants or more, and counties.

■ Series HC(1)-B. DETAILED HOUSING CHARACTERISTICS

Statistics are presented on a more detailed basis for the subjects included in the Series

HC(1)-A reports, as well as on such additional subjects as year moved into unit, year structure built, basement, heating equipment, fuels, air conditioning, water and sewage, appliances, gross rent, and ownership of second home. Each subject is shown for some or all of the following areas: States (by urban, rural-nonfarm, and rural-farm residence), SMSA's, urbanized areas, places of 2,500 inhabitants or more, and counties (by rural and rural-farm residence).

Volume II. METROPOLITAN HOUSING CHARACTERISTICS

These reports, also designated as Series HC(2), cover most of the 1970 census housing subjects in considerable detail and cross-classification. There is one report for each SMSA, presenting data for the SMSA and its central cities and places of 50,000 inhabitants or more, as well as a national summary report.

Volume III. BLOCK STATISTICS

One report, under the designation Series HC(3), is issued for each urbanized area showing data for individual blocks on selected housing and population subjects. The series also includes reports for the communities outside urbanized areas which have contracted with the Census Bureau to provide block statistics from the 1970 census.

Volume IV. COMPONENTS OF INVENTORY CHANGE

This volume contains data on the disposition of the 1960 inventory and the source of the 1970 inventory, such as new construction, conversions, mergers, demolitions, and other additions and losses. Cross-tabulations of 1970 and 1960 characteristics for units that have not changed and characteristics of the present and previous residence of recent movers are also provided. Statistics are shown for 15 selected SMSA's and for the United States and regions.

Volume V. RESIDENTIAL FINANCE

This volume presents data regarding the financing of privately owned nonfarm residential properties. Statistics are shown on amount of outstanding mortgage debt, manner of acquisition of property, homeowner expenses, and other owner, property, and mortgage characteristics for the United States and regions.

**Volume VI.
PLUMBING FACILITIES AND ESTI-
MATES OF DILAPIDATED HOUSING**

This volume will present counts of housing units lacking some or all plumbing facilities and estimates of "dilapidated" units with all plumbing facilities. Comparative 1960 and 1970 data will be shown for the United States and regions, States, SMSA's, counties, and places of 10,000 inhabitants or more.

**Volume VII.
SUBJECT REPORTS**

Each report in this volume concentrates on a particular subject. Detailed information and cross-classifications are generally provided on a national and regional level; in some reports, data for States or SMSA's are also shown. Among the subjects covered are housing characteristics by household composition, housing of minority groups and senior citizens, and households in mobile homes.

Joint Population-Housing Reports

**Series PHC(1).
CENSUS TRACTS**

This series contains one report for each SMSA that is tracted, showing data for most of the population and housing subjects included in the 1970 census.

**Series PHC(2).
GENERAL DEMOGRAPHIC TRENDS FOR
METROPOLITAN AREAS, 1960 TO 1970**

This series consists of one report for each State and the District of Columbia, as well as a national summary report, presenting statistics for the State and for SMSA's and their central cities and constituent counties. Comparative 1960 and 1970 data are shown on population counts by age and race and on such housing subjects as tenure, plumbing facilities, value, and contract rent.

**Series PHC(3).
EMPLOYMENT PROFILES OF SELECTED
LOW-INCOME AREAS**

This series consists of 76 reports, each presenting statistics on the social and economic characteristics of the residents of a particular low-income area. The data relate to low-income neighborhoods in 51 cities and seven rural poverty areas. Each report provides statistics on employment and unemployment, education, vocational training, availability for work, job history, and income, as well as on value or rent and number of rooms in the housing unit.

Additional Reports

**Series PHC(E).
EVALUATION REPORTS**

This open series presents the results of the extensive evaluation program conducted as an integral part of the 1970 census program, and relating to such matters as completeness of enumeration and quality of the data on characteristics.

**Series PHC(R).
PROCEDURAL REPORTS**

This open series presents information on various administrative and methodological aspects of the 1970 census and will include a comprehensive procedural history of the 1970 census.

Computer Summary Tapes

The major portion of the results of the 1970 census are produced in a set of six tabulation counts. To help meet the needs of census users, these counts are designed to provide data with much greater subject and geographic detail than it is feasible or desirable to publish in printed reports. The data so tabulated are generally available—subject to suppression of certain detail where necessary to protect confidentiality—on magnetic computer tape, printouts, and microfilm, at the cost of preparing the copy.

First Count—source of the PC(1)-A reports; contains about 400 cells of data on the subjects covered in the PC(1)-B and HC(1)-A reports and tabulated for each of the approximately 250,000 enumeration districts and all areas in the PC(1)-A reports for the United States.

Second Count—source of the PC(1)-B, HC(1)-A, and part of the PHC(1) reports; contains about 3,500 cells of data covering the subjects in these reports and tabulated for the approximately 35,000 tracts, 3,000 counties, 35,000 county subdivisions, and 10,000 places of 1,000 or more in the United States.

Third Count—source of the HC(3) reports; contains about 250 cells of data on the subjects covered in the PC(1)-B and HC(1)-A reports and tabulated for approximately 1,500,000 blocks in the United States.

Fourth Count—source of the PC(1)-C, HC(1)-B, and part of the PHC(1) reports;

contains about 13,000 cells of data covering the subjects in these reports and tabulated for the approximately 35,000 tracts and 35,000 county subdivisions, and about 6,000 places of 2,500 or more in the United States; also contains about 30,000 cells of data for each county.

Fifth Count—contains approximately 800 cells of population and housing data for 5-digit ZIP code areas in SMSA's and 3-digit ZIP code areas outside SMSA's; the ZIP code data are available only on tape.

Sixth Count—source of the PC(1)-D and HC(2) reports; contains about 260,000 cells of data covering the subjects in these reports and tabulated for States, SMSA's, and large cities.

The tapes are generally organized on a State basis. To use the First Count and Third Count tapes, it is necessary to purchase the appropriate enumeration district and block maps.

The term "cells" used herein to indicate the scope of subject content of the several counts refers to each figure or statistic in the tabulation for a specific geographic area. For example, in the Third Count, there are six cells for a cross-classification of race by sex: three categories of race (white, Negro, other race) by two categories of sex (male, female).

In addition to the above-mentioned summary tapes, the Census Bureau makes available for purchase certain sample tape files containing population and housing characteristics as shown on individual census records. These files contain no names or addresses, and the geographic identification is sufficiently broad to protect confidentiality. There are six files, each containing a 1-percent national sample of persons and housing units. Three of the files are drawn from the population covered by the census 15-percent sample and three from the population in the census 5-percent sample. Each of these three files provides a different type of geographic information: One identifies individual large SMSA's and, for the rest of the country, groups of counties; the second identifies individual States and, where they are sufficiently large, provides urban-rural and metropolitan-nonmetropolitan detail; and the third identifies State groups and size of place, with each individual record showing selected characteristics of the person's neighborhood.