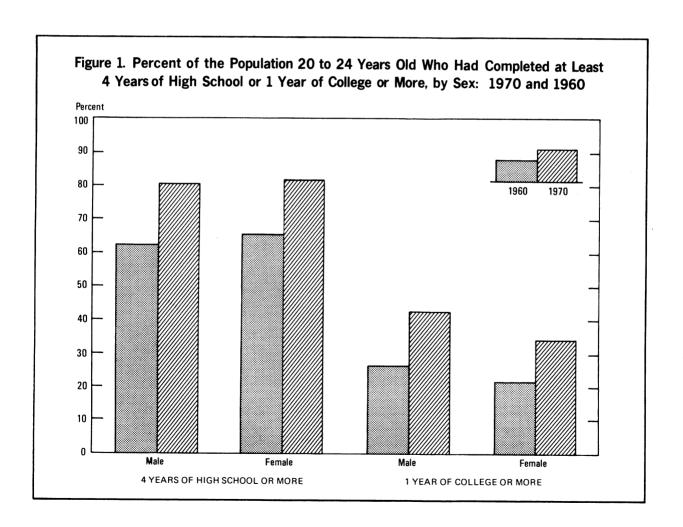




Population Characteristics

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EDUCATIONAL ATTAINMENT MARCH 1970



BUREAU OF THE CENSUS

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EDUCATIONAL ATTAINMENT: MARCH 1970

There were significant gains in the educational attainment of the population during the decade of the 1960's. Among the adult population in 1970 (persons 25 years old and over), 55 percent, were at least high school graduates as compared with 41 percent, The proportion of adults who had completed one or more years of college was 21 percent in 1970 as compared with 16 percent in 1960. Moreover, in 1970, the proportion of the adults who had completed 4 or more years of college was 11 percent as compared with only 8 percent in 1960 (table A). These 1970 findings are based on the March 1970 Current Population Survey conducted by the Bureau of the Census. The educational data presented in this report relate to the number of school years completed by the population and do not provide information on the quality of the education received

Among those who recently passed the age at which most persons finish high school (20 to 24 years old), 80 percent were at least high school graduates in 1970 as compared with 64 percent of the comparable age group in 1960. Furthermore, 38 percent of these younger persons in 1970 had completed one or more years of college as compared with only 24 percent of the 20- to 24-year-olds in 1960.

These educational gains during the 1960's occurred for both men and women. In 1960, men 25 years old and over were somewhat less likely than women of this age to have completed high school, 39 percent and 43 percent, respectively. But, in 1970, men and women were equal in the proportion

with this level of education--55 percent for each. The proportion of adult men who had completed 4 or more years of college was 14 percent in 1970 as compared with 10 percent in 1960. The proportion of adult women who had completed this much education was 8 percent in 1970 as compared with 6 percent in 1960.

Among persons 20 to 24 years old, the proportion of men with some college increased from one-infour in 1960 to four-in-ten in 1970. The proportion of young women with some college increased from one-in-five in 1960 to one-in-three in 1970 (table A and figure 1).

These educational gains during the 1960's occurred among both whites and Negroes. The percent of white persons 25 years old and over with at least a high school education increased from 43 percent in 1960 to 57 percent in 1970. The comparable gain for Negroes was from 20 percent to 34 percent. For white adults, the proportion who had completed 1 year or more of college increased from 17 percent in 1960 to 22 percent in 1970. The comparable gain for Negroes was from 7 percent to 10 percent.

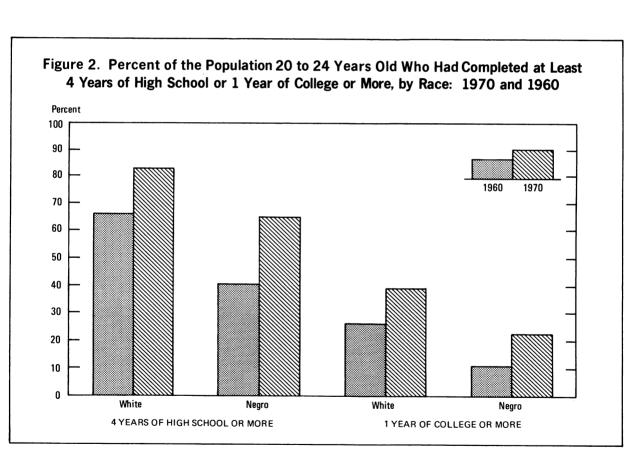
Among the younger age group, persons 20 to 24 years old, the proportion with at least a high school education increased for whites from 67 percent in 1960 to 83 percent in 1970. The comparable gain for Negroes was from 40 percent to 65 percent. The proportion of this younger age group with some college increased from 25 percent to 39 percent for whites and from 11 percent to 23 percent for Negroes (table B and figure 2).

Table A. PERCENT OF PERSONS 20 YEARS OLD AND OVER WHO HAD COMPLETED A GIVEN LEVEL OF SCHOOL, BY AGE
AND SEX, FOR THE UNITED STATES: 1970 AND 1960

Age and level completed		1970		1960			
Age and level completed	Total	Male	Female	Total	Male	Female	
20 TO 24 YEARS OLD Less than 4 years of high school 4 years of high school or more 1 year of college or more	19.5 80.5 37.5	19.8 80.1 42.0	19.2 80.8 33.7	36.4 63.6 23.7	38.0 62.0 26.2	34.8 65.2 21.3	
25 YEARS OLD AND OVER							
Less than 4 years of high school 4 years of high school or more 1 year of college or more 4 years of college or more	44.8 55.2 21.2 11.0	45.0 55.0 24.9 14.1	44.6 55.4 18.0 8.2	58.9 41.1 16.5 7.7	60.5 39.5 18.3 9.7	57.5 42.5 14.8 5.8	

Table B. PERCENT OF PERSONS 20 YEARS OLD AND OVER WHO HAD COMPLETED A GIVEN LEVEL OF SCHOOL, BY AGE AND RACE, FOR THE UNITED STATES: 1970 AND 1960

Age and level completed		1970		1960			
Age and level completed	All races	White	White Negro		White	Negro	
20 TO 24 YEARS OLD							
Less than 4 years of high school 4 years of high school or more 1 year of college or more	19.5 80.5 37.5	17.3 82.7 39.4	35.0 65.1 22.6	36.4 63.6 23.7	33.4 66.6 25.3	59.7 40.3 10.8	
25 YEARS OLD AND OVER							
Less than 4 years of high school 4 years of high school or more 1 year of college or more 4 years of college or more	44.8 55.2 21.2 11.0	42.6 57.4 22.3 11.6	66.3 33.7 10.3 4.5	58.9 41.1 16.5 7.7	56.8 43.2 17.4 8.1	79.9 20.1 7.2 3.1	



In 1970, among the adult population living in metropolitan areas, those who lived in central cities had a lower level of educational attainment than did those living outside the central cities. Only about half of the population in central cities were high school graduates as compared with 64 percent of persons living outside central cities. Among adults living in nonmetropolitan areas, those who lived on farms had a lower level of educational attainment than did those who were nonfarm residents. About 40 percent of the adult farm population had com-

pleted high school as compared with about half of the nonfarm population. Negroes trailed whites in the percent who had completed at least a high school education in all residence areas (table C and figure 3). And the adult Negroes living on farms had a particularly low level of educational attainment--only about 12 percent were high school graduates. However, only 3 percent of adult Negroes lived on farms. About 72 percent of adult Negroes resided in metropolitan areas and 39 percent of these metropolitan Negroes were high school graduates.

Table C. PERCENT OF PERSONS 25 YEARS OLD AND OVER WHO HAD COMPLETED A GIVEN LEVEL OF SCHOOL, BY TYPE OF RESIDENCE AND RACE, FOR THE UNITED STATES: MARCH 1970

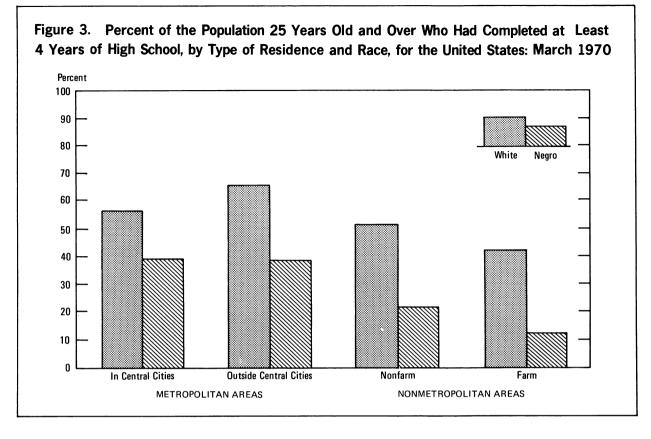
		Metrop	olitan	Nonmetr	opolitan
Race and level completed	Total	In central cities	Outside central cities	Nonfarm	Farm
ALL RACES					
Less than 4 years of high school	44.8 55.2 21.2 11.0	46.6 53.4 21.3 11.0	35.7 64.3 26.2 14.0	51.1 48.9 17.1 8.7	60.0 40.0 9.9 4.3
WHITE					
Less than 4 years of high school	42.6 57.4 22.3 11.6	43.6 56.4 23.0 12.1	34.7 65.3 26.8 14.3	48.8 51.2 18.0 9.1	58.0 42.0 10.4 4.5
NE GRO					
Less than 4 years of high school	66.3 33.7 10.4 4.5	61.1 38.9 12.4 5.0	61.6 38.5 11.5 4.7	78.3 21.6 5.9 3.5	87.7 11.9 3.8 2.5

RELATED REPORTS

Data on educational attainment for persons 14 years old and over in March 1959, March 1962, March 1964, March 1965 and 1966, March 1967, March 1968, and March 1969 were published in Current Population Reports, and Series P-20, Nos. 99, 121, 138, 158, 169, 182, 194, respectively. Further information on educational attainment is presented in "Educational Change in a Generation: March 1962," Series P-20, No. 132. Data on men who are college graduates are presented in the report "Characteristics of Men With College Degrees: 1967," Series P-20, No. 201. In addition, educational attainment as determined in the Current Population Survey is related to labor force characteristics in publications of the Bureau of Labor

Statistics, as in "Educational Attainment of Workers, March 1968," published in the February 1969 issue of Monthly Labor Review. Statistics on educational attainment are also available in several reports of the 1960 Census of Population, the most relevant of which is PC(2)-5B, Educational Attainment. Volume I, Characteristics of the Population, chapter C, "General Social and Economic Characteristics," and chapter D, "Detailed Characteristics," also include statistics on educational attainment. Report PC(2)-1C, Nonwhite Population by Race, includes educational data for selected races.

Apart from the different dates at which the statistics were collected, the education data from the March 1970 Current Population Survey may



differ from those from the 1960 census and from projections based on the census for the following reasons: (1) Members of the Armed Forces in the United States living off post or with their families on post are included in the survey, but all other members of the Armed Forces are excluded. All members of the Armed Forces in the United States are included in the census data. (2) Statistics from both the census and CPS are subject to sampling and response errors. There are differences in coverage, enumeration techniques (self-enumeration versus direct enumeration), and the methods of allocating nonresponses.

The Content Evaluation Study of the 1960 census is a major source of information about the accuracy of census data on educational attainment. A comparison by detailed categories of years of school reported for each level suggests a net overreporting on years of school completed for about 6 percent of the population 25 years old and over. A comparison of CPS with 1960 census

figures shows that the CPS figures include more persons with 12 years or more of school completed and fewer with less than 12 years. If the Content Evaluation Study is taken as a standard, the 1960 census figures on educational attainment show a slight upward bias. The CPS figures are still higher than the census figures and may, therefore, be more biased in the direction of high educational attainment.

Because of the differences mentioned above, care should be exercised in comparing the data for March 1970 with those from the 1960 census.

DEFINITIONS AND EXPLANATIONS

Population coverage. The figures in this report for March 1970 are sample survey data and relate to the population of the 50 States and the District of Columbia. Inmates of institutions are included in the sample. Members of the Armed Forces living off post or with their families on post are included, but all other members of the Armed Forces are excluded.

Age. The age classification is based on the age of the person at his last birthday.

¹Evaluation and Research Program of the U.S. Censuses of Population and Housing, 1960: Accuracy of Data on Population Characteristics as Measured by Reinterviews, Series ER 60, No. 4, table 12.

<u>Race.</u> The population is divided into three groups on the basis of race: white, Negro, and "other races." The last category includes Indians, Japanese, Chinese, and any other race except white and Negro.

Years of school completed. Data on years of school completed in this report were derived from the combination of answers to two questions: (a) "What is the highest grade of school he has ever attended?" and (b) "Did he finish this grade?"

The questions on educational attainment apply only to progress in "regular" schools. Such schools include graded public, private, and parochial elementary and high schools (both junior and senior high), colleges, universities, and professional schools, whether day schools or night schools. Thus, regular schooling is that which may advance a person toward an elementary school certificate or high school diploma, or a college, university, or professional school degree. Schooling in other than regular schools was counted only if the credits obtained were regarded as transferable to a school in the regular school system.

The median years of school completed is defined as the value which divides the population into two equal parts--one-half having completed more schooling and one-half having completed less schooling than the median. This median was computed after the statistics on years of school completed had been converted to a continuous series of numbers (e.g., completion of the first year of high school was treated as completion of the 9th year and the completion of the first year of college

as completion of the 13th year). The persons completing a given school year were assumed to be distributed evenly within the interval from .0 to .9 of the year (for example, persons completing the 12th year were assumed to be distributed evenly between 12.0 and 12.9). In fact, at the time of the March survey, most of the enrolled persons had completed about 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. Because of the inexact assumption as to the distribution within an interval, this median is more appropriately used for comparing groups and the same group at different dates than as an absolute measure of educational attainment.

Assignment of educational attainment for those not reporting. When information on either the highest grade attended or completion of the grade was not reported in the 1970 survey, entries for the items were assigned using an edit in the computer (table D). The general procedure was to assign an entry for a person that was consistent with entries for other persons with similar characteristics. The specific technique used in the March 1970 survey was as follows:

1. The computer stored reported data on highest grade attended by race (white and all other) and age, and on completion of the grade by age and highest grade attended, for persons 14 years old and over in the population.

Table D. NUMBER AND PERCENT OF ALLOCATIONS FOR NONRESPONSE ON HIGHEST YEAR OF SCHOOL COMPLETED BY PERSONS 14 YEARS OLD AND OVER, BY RACE, FOR THE UNITED STATES: MARCH 1970

(Numbers in thousands)

	All classes		White			Negro and other races						
Highest year of school	AII Classes					Total			Negro			
completed		Allocated			Allocated		Al		cated		Allocated	
		Num- ber	Per- cent	l	Num - ber	Per- cent	Total	Num- ber	Per- cent	Total	Num- ber	Per- cent
Total, 14 years old and over	147 , 472	871	0.6	131,125	714	0.5	16,348	157	1.0	14,828	152	1.0
No school years completed Elementary: 1 to 7 years 8 years High school: 1 to 3 years 4 years College: 1 to 3 years 4 years	1,618 17,238 19,339 32,010 47,256 16,573 8,539	21 142 134 183 244 82 39	1.3 0.8 0.7 0.6 0.5 0.5	13,583 17,351 27,538 43,461 15,351 8,049	16 90 113 152 209 73 37	1.4 0.7 0.7 0.6 0.5 0.5	446 3,655 1,988 4,473 3,796 1,222 490	5 52 21 31 35 9 2	1.0 1.4 1.1 0.7 0.9 0.7 0.5	372 3,467 1,817 4,189 3,457 1,013 351	21 27 35 9 2	1.2 0.6 1.0 0.9 0.7
5 years or more	4,899	25	0.5		23	0.5	279	2	0.7	162	2	1.2

- 2. Each stored value was retained in the computer only until a succeeding person having the same characteristics (e.g., same race and age, in the case of assignments for highest grade attended) and having the item reported, was processed through the computer. Then the reported data for the succeeding person were stored in place of the one previously stored.
- 3. When one or both of the education items for a person 14 years old and over was not reported, the entry assigned to this person was that stored for the last person who had the same characteristics.

Metropolitan-nonmetropolitan residence. The population residing in standard metropolitan statistical areas (SMSA's) constitutes the metropolitan population. Except in New England, an SMSA 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 essentially metropolitan in character and are socially and economically integrated with the central city. In New England, SMSA's consist of towns and cities, rather than counties. The metropolitan population in this report is based on SMSA's as defined in the 1960 census and does not include any subsequent additions or changes.

The population inside SMSA's is further classified as "in central cities" and "outside central cities." With a few exceptions, central cities are determined according to the following criteria:

- $1. \ \mbox{The largest city in an SMSA}$ is always a central city.
- 2. One or two additional cities may be secondary central cities on the basis and in the order of the following criteria:
 - a. The additional city or cities have at least 250,000 inhabitants.
 - b. The additional city or cities have a population of one-third or more of that of the largest city and a minimum population of 25,000.

<u>Farm-nonfarm residence.</u> The farm population refers to rural residents living on farms. The method of determining farm-nonfarm residence in the Current Population Surveys since March 1960 is the same as that used in the 1960 census but differs from that used in earlier censuses.

The nonfarm population, as the term is used here, comprises persons living in urban areas and rural persons not on farms.

According to the current definition, the farm population consists of all persons living in rural territory on places of less than 10 acres yielding agricultural products which sold for \$250 or more in the previous year, or on places of 10 acres or more yielding agricultural products which sold for \$50 or more in the previous year. Rural persons in institutions, motels, and tourist camps, and those living on rented places where no land is used for farming, are not classified as farm population.

<u>Geographic regions</u>. The four major regions of the United States, for which data are presented in this report, represent groups of States, as follows:

Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

North Central: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Mississippi, Maryland, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

West: Arizona, Colorado, California, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming, Alaska, and Hawaii.

Mobility status. The population of the United States has been classified according to mobility status on the basis of a comparison between the place of residence of each individual at the survey date and the place of residence one year earlier.

In the classification on mobility status, three main categories are distinguished:

- 1. Nonmovers. This group consists of persons who are living in the same house at the end of the period as at the beginning of the period.
- 2. <u>Movers</u>. This group consists of all persons who were living in a different house in the United States at the end of the period than at the beginning of the period.
- 3. <u>Persons abroad</u>. This group consists of persons, either citizens or aliens, whose place of residence was outside the United States at the beginning of the period, that is, in an outlying area under the jurisdiction of the United States or a foreign country.

Movers are subdivided in terms of type of mobility into the following two major groups-- (1) those living in the "same county" and (2) "migrants" or those living in a "different county" at the end than at the beginning of the period. Migrants are further classified as living in the same State as their previous residence or in a different State.

Employed. Employed persons comprise those civilians who, during the survey week, were either (1) "at work"—those who did any work for pay or profit, or worked without pay for 15 hours or more on a family farm or business; or (2) "with a job but not at work"—those who did not work and were not looking for work but had a job or business from which they were temporarily absent because of vacation, illness, industrial dispute, or bad weather, or because they were taking the week off for various other reasons.

Occupation. Data on occupation are shown for the employed and relate to the job held during the survey week. Persons employed at two or more jobs were reported in the job at which they worked the greatest number of hours during the week. The major groups used here are mainly the major groups used in the 1960 Census of Population. The composition of these groups is shown in 1960 Census of Population, Volume I, Characteristics of the Population, Part 1, United States Summary.

Data are shown for 4 broad occupational groups (white-collar workers, blue-collar workers, service workers, and farm workers), which represent combinations of the 10 major groups. All persons engaged directly in agricultural production are classified as farm workers in this report. This included farm proprietors, managers, foremen, and laborers. The nonagricultural group is subdivided into three groups. The white-collar group includes professional workers, proprietors, managers, and sales and clerical workers. The blue-collar group includes craftsmen, machine operatives, and laborers (other than farm); and the service category includes private household workers and other service workers.

Income. For each person in the sample 14 years old and over, questions were asked on the amount of money income received in 1969 from (1) money wages or salary, (2) net income from self-employment and (3) other income. Wage or salary income in 1969 is defined as the total money earnings received for work performed as an employee during the calendar year 1969. It includes wages, salary, Armed Forces pay, commissions, tips, piece-rate payments, and cash bonuses earned, before deductions were made for taxes, bonds, pensions, union dues, etc. Net income from self-employment is defined as net money income (gross receipts minus operating

expenses) from a business, partnership, professional enterprise, or farm in which the person was engaged in his own account. Other money income includes money income received from the following sources: (1) Social Security, veterans' payments, or other government or private pensions; (2) interest (on bonds or savings), dividends, and income from annuities, estates, or trust; (3) net income from boarders or lodgers, or from renting property to others; (4) all other sources such as unemployment benefits, public assistance, alimony, etc.

The amounts received represent income before deductions for personal taxes, Social Security, bonds, etc. It should be noted that although the income statistics refer to receipts during 1969, the characteristics of the person, such as age, labor force status, and occupation, and the characteristics and composition of the family refer to March 1970. Income of farm persons does not include income "in kind" such as the value of farm produce consumed at home, or rental value of the home they own. Furthermore, the cost of living is generally higher in urban areas, requiring higher incomes to maintain a similar level of living.

Rounding of estimates. Individual figures are rounded to the nearest thousand without being adjusted to group totals, which are independently rounded. Percentages are based on the unrounded absolute numbers.

SOURCE AND RELIABILITY OF THE ESTIMATES

Source of data for 1970. The estimates for 1970 are based on data obtained in March of 1970 in the Current Population Survey of the Bureau of the The sample is spread over 449 areas Census. comprising 863 counties and independent cities with coverage in each of the 50 States and the District of Columbia. Approximately 50,000 occupied housing units are designated for interview each month. Of this number, 2,250 occupied units, on the average, are visited but interviews are not obtained because the occupants are not found at home after repeated calls or are unavailable for some other reason. In addition to the 50,000, there are also about 8,500 sample units in an average month which are visited but are found to be vacant or otherwise not to be interviewed.

The estimating procedure used in this survey involved the inflation of the weighted sample results to independent estimates of the civilian noninstitutional population of the United States by age, race, and sex. These independent estimates were based on statistics from the 1960 Census of Population; statistics of births, deaths, immigration, and emigration; and statistics on the strength of the Armed Forces.

Source of data for 1960. The statistics for 1960 are based on results of the Census of Population for that year.

Reliability of the estimates. Since the estimates are based on a sample, they may differ somewhat from the figure that would have been obtained if a complete census had been taken using the same schedules, instructions, and enumerators. As in any survey work, the results are subject to errors of response and of reporting as well as being subject to sampling variability.

The standard error is primarily a measure of sampling variability, that is, of the variations that occur by chance because a sample rather than the whole of the population is surveyed. As calculated for this report, the standard error also partially measures the effect of response and enumeration errors but does not measure any systematic biases in the data. The chances are about 68 out of 100 that an estimate from the sample would differ from a complete census figure by less than the standard error. The chances are about 95 out of 100 that the difference would be less than twice the standard error.

The figures presented in tables E, F, G and H are approximations to the standard errors of various estimates shown in this report. In order to derive standard errors that would be applicable to a wide variety of items and could be prepared at a moderate cost, a number of approximations were required. As a result, the tables of standard errors provide an indication of the order of magnitude of the standard errors rather than the precise standard error for any specific item. Tables E and F contain the standard errors of estimated numbers.

Table E.--STANDARD ERRORS OF ESTIMATED NUMBERS, TOTAL OR WHITE POPULATION

(68 chances out of 100)

Size of estimate	Standard	Size of	Standard
	error	estimate	error
25,000 50,000 100,000 250,000 500,000 1,000,000	7,200 10,200 14,400 23,000 32,000 45,000	2,500,000 5,000,000 10,000,000 25,000,000 50,000,000	71,000 100,000 140,000 214,000 283,000

Table F.--STANDARD ERRORS OF ESTIMATED NUMBERS, NEGRO AND OTHER RACES

(68 chances out of 100)

Size of estimate	Standard	Size of	Standard
	error	estimate	error
10,000 25,000 35,000 50,000 75,000	5,300 8,300 9,900 11,800 14,400 16,600	1,000,000 2,500,000 5,000,000	26,000 37,000 51,000 75,000 92,000 77,000

The reliability of an estimated percentage, computed by using sample data for both numerator and denominator, depends upon both the size of the percentage and the size of the total upon which the percentage is based. Estimated percentages are relatively more reliable than the corresponding estimates of the numerators of the percentages, particularly if the percentages are 50 percent or more. Tables G and H contain the standard errors of estimated percentages.

Table G .-- STANDARD ERRORS OF ESTIMATED PERCENTAGES, TOTAL OR WHITE POPULATION

(68 chances out of 100)

Estimated		Base of percentage (thousands)								
percentage	100	250	500	1,000	2,500	5,000	10,000	25,000	50,000	100,000
2 or 98	2.0	1.3	0.9	0.6	0.4	0.3	0.2	0.1	0.1	0.1
5 or 95	3.1	2.0	1.4	1.0	0.6	0.4	0.3	0.2	0.1	
10 or 90	4.3	2.7	1.9	1.4	0.9	0.6	0.4	0.3	0.2	0.1
	6.2	3.9	2.8	2.0	1.2	0.9	0.6	0.4	0.3	0.2
	7.2	4.5	3.2	2.3	1.4	1.0	0.7	0.5	0.3	0.2

Illustration of the use of tables of standard errors. Table 1 of this report shows that 4,397,000 white persons 25 years old and over had completed 5 or more years of college. Table E shows the standard error on an estimate of this size to be approximately 93,000. The chances are 68 out of 100 that the estimate would have been a figure differing from a complete census by less than 93,000. The chances are 95 out of 100 that the estimate would have been a figure differing from a complete census by less than 186,000.

Of these 4,397,000 white persons, 3,124,000 or 71.0 percent are males. Table G shows the standard error of 71.0 percent on a base of 4,397,000 to be approximately 1.0 percent, consequently, chances are 68 out of 100 that the estimated 71.0 percent would be within 1.0 percentage point of a complete census figure, and chances are 95 out of 100 that the estimate would be within 2.0 percentage points of a census figure, i.e., this 95 percent confidence interval would be from 69.0 to 73.0 percent.

Table H.--STANDARD ERRORS OF ESTIMATED PERCENTAGES, NEGRO AND OTHER RACES

(68 chances out of 100)

	Base of percentage (thousands)									
Estimated percentage	50	100	250	500	1,000	2,500	5,000	10,000		
2 or 98	3.3 5.1 7.1 10.2 11.8	2.3 3.6 5.0 7.2 8.4	1.5 2.3 3.2 4.6 5.3	1.0 1.6 2.2 3.2 3.7	1.6 2.3	0.5 0.7 1.0 1.4 1.7	0.3 0.5 0.7 1.0 1.2	0.2 0.4 0.5 0.7 0.8		