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INSTITUTION

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Census [And] A Census Portrait of Maryland [And] Case
Study: The Location of a Playground [And] Case Study:
Migration Patterns of Southerners [And] Census Data
for Community Action [And] 1970 Census Geography:
Concepts, Products, and Programs. DAD number 33 [And]
Items Contained in the 1970 Census of Population and
Housing. DAD number 14 [And] Reports Related to the
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document

AVAILABLE FROM

Data Access and Use Staff/CSSP, Data User Services Division, Bureau of the Census, Washington, D.C. 20233 (free); Student's Workbook from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (\$0.55, paperbound)

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ABSTRACT

Nine pamphlets comprise this college-level curriculum support package about 1970 census data. "Teacher's Guide: Approaches to Census Data" describes unit objectives, discusses student materials and other publications the teacher may need, and suggests class exercises. A workbook for students gives an overview of 1970 census subject matter, geography, and data products; mentions related current data sources; provides guidance in finding particular data; and contains exercises to involve students in the use of census publications. Two case studies present a site-location problem in which students must refer to small-area data, and a problem of group migration requiring analysis of state and regional data. Focusing on social welfare applications of data, "Census Data for Community Action" studies concerns such as relocation projects and voter registration. As a sample of state summary reports, a profile of Maryland census data is provided. Three reports, called data access descriptions, provide references to census geographic products helpful in analysis of small-area data; discussion of individual items on the 1970 census questionnaire; and a bibliography of printed reports issued by the Bureau of the Census as a result of the 1970 census. All materials are available from the Bureau of the Census. (AV)

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#### UNITED STATES DEPARTMENT OF COMMERCE **Bureau of the Census**

Washington, D.C. 20233

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#### TEACHER'S GUIDE:

# Approaches to Census Data

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TEACHER'S GUIDE: APPROACHES TO CENSUS DATA\*

#### Section 1: Introduction

This <u>Teacher's Guide</u> is an introduction to the topic of teaching students about census data. It is part of a set of materials the Bureau of the Census is developing to acquaint college students with its massive statistical resources. In their present form these materials focus on data from the 1970 Census of Population and Housing with some material on related annual data series.

# Objectives for this Teaching Unit

Instructors in various disciplines teaching different levels of students and with diverse specializations of their own will obviously have varied ideas about what should be the objectives of a teaching unit on census data. Many instructors will want mainly to familiarize their students with the types of data available from the 1970 census, while others prefer to specialize in, for example, data collection methodology or detailed analytic techniques. These materials are more oriented toward the former, developing general familiarity with census data, with this important addition: that general familiarity should be supplemented by the development of skill in actually locating data of interest. We would phrase this objective as follows: that the student can specify and locate from the 1970 census desired data items for desired geographic areas with due attention to definitions and data limitations.

To amplify this objective, section 2 of this guide identifies several supporting goals and lists student performances or behaviors which can confirm that these objectives have been met. Thus, the instructional model used here is 'goal-referenced'--the objectives of instruction being specified in terms of learner behavior. You, as the instructor, can use this statement in planning points to emphasize in class and in judging student accomplishment. In addition, your students may find the statement of objectives useful in understanding what they need to master. (Copies of section 2 are available in quantity for distribution to students.) Obviously the amount of time available for this unit will affect the degree to which these objectives can be achieved, and many instructors will have additional objectives for advanced classes, for example, relating to the use of computerized data products.



<sup>\*</sup>This teacher's guide was prepared by Paul T. Zeisset, Chief of the Census Bureau's Data Access and Use Staff. Address correspondence (recommendations, requests for materials, etc.) to the CCSP Coordinator, Data Access and Use Staff, Data User Services Division, Bureau of the Census, Washington, D.C. 20233; phone (301) 763-7454.

# Student Materials

Three pamphlets have been designed especially for use by college students without prior familiarity with census data. They may be used separately or in combination, depending on the desired specialization and the amount of time available. Each incorporates exercises which actively involve the student in using census data.

- 1. Student's Workbook on the 1970 Census. This pamphlet provides a general overview of 1970 census subject matter, geography, and data products; mentions related current data sources; provides guidance in finding particular data; and includes several useful reference charts. Several exercises are included to involve the student in the use of census publications. Albeit briefly, the vorkbook touches on each of the objectives and performances stated in section 2 of this guide. The exercises involve use of several publications including a PHC(1) Census Tracts report and a PC(1)-C General Social and Economic Characteristics report.
- 2. Case Study: The Location of a Playground. This case study and the one listed below present a quite different approach to census data. They start with a problem and then lead the student through various steps in its solution with questions for the student to answer along the way. The playground case study presents a site-location problem which refers primarily to small area data from the census (tracts, enumeration districts, blocks). Data tables required for completion of the case study (from a Census Tracts report) are included in the pamphlet, a useful virtue when library copies of reports are too few to accommodate the class. Questions included require the student to compile and draw conclusions from the data.
- 3. Case Study: Migration Patterns of Southerners. This pamphlet provides an exercise in the use of data from a PC(1)-C General Social and Economic Characteristics report, primarily at the State level, and from detailed subject reports, at the regional level. Appropriate subject report data are included but the student should have access to a PC(1)-C report for a State. Several questions check the student's comprehension along the way, and answers for most are provided in the back. This case study is somewhat more complex than the playground case study, but it exposes the student to a variety of data reports and reference aids.

One other pamphlet is worth considering if class interests are especially high in social welfare applications of data. Census Data for Community Action includes introductory material very similar to parts of the student workbook, but also discusses data applications in relocation projects, establishing adult education programs, voter registration, and similar concerns. The pamphlet concentrates on the use of Census Tracts and Block Statistics reports, and contains table outlines for both. No exercises are included.



Students who have significant prior familiarity with census data may find some of these materials too basic for their interests. Nonetheless the reference charts in the student workbook should be handy for any user. Advanced students may want to concentrate their study on the items discussed later under "Reference Materials." Many of the references are available in sufficient quantity for distribution to students, as specifically noted below on pages 4 and 5.

# Teaching Methods

The above-mentioned student materials have been designed so that they could be used in independent study. Nonetheless classroom activity is also very important—in reinforcing the written materials, in amplifying them, in applying them to research problems in the field of study in which they are presented, and in fostering the likelihood of future use of census data. In pretesting these materials we found that students responded more positively to the idea of using census data when they had been in classes where the concepts and materials had been discussed, rather than only assigned the materials as homework.

The <u>Instructor's Reference Manual</u> has been prepared in outline form to facilitate the preparation of lectures. Material can be included or skipped as relevant to a particular class. Taken in its entirety the reference manual provides a comprehensive introduction to the field without being overbearing in length. The reference manual provides sufficient breadth to treat most student questions arising from home study of the student materials. The manual also makes frequent reference to other available sources for more depth.

There are also a number of alternatives to lecturing as a way of presenting census data in class. One is the "inquiry method," a problem-solving approach where students are challenged to discover answers through trial and error, but with the instructor's guidance. Several exercises embodying the inquiry approach are presented in section 3 of this manual. In this less structured learning process, students develop skills by asking their own questions and finding their own answers rather than being told what they ought to know. With the inquiry method, students are likely to work together and share ideas among each other. The instructor's work is as a facilitator and is to provide guidance and the materials the students will need to find the answers to their questions. One of the interesting inquiry—method applications involves showing the class a colored data display map in either the <u>Urban Atlas</u> series, GE-80, or the nationwide county map series, GE-50 and GE-70. Students visualize spatial relationships and can be led to form hypotheses and ask questions which lead them into the more detailed data in printed reports.

Two award-winning 16mm films produced by the Census Bureau are distributed by the Modern Talking Picture Service. 'We' is a popular sampling of the types of things we learn from the decennial census.



"Factfinder for the Nation" is an overview of the various types of data-gathering programs the Census Bureau is involved in. An order form for loan or purchase of these films is presented on page 23.

Another useful activity is familiarizing students with the census-related holdings of the school library. A list of publications with "call numbers" and a tour or map showing where census volumes are kept within the library could be quite useful to students.

Unless the students understand and appreciate the purposes for which they might use census data in the future, this unit may be little more than an academic exercise. Many of the exercises in various student materials attempt to encourage students to think in terms of data application. Unfortunately the same set of examples is called upon to serve classes in sociology, marketing, political science, library science, business administration, and all other disciplines. We strongly recommend that you spend time in class discussing both significant research applications of census data in your discipline and practical applications in vocational fields for which your students may be training. To assist you, we have compiled illustrative examples of 1970 census data uses in various types of professional fields in section 4.

#### Reference Materials

A substantial amount of reference materials are available from the Census Bureau. That material which is most useful in organizing this course of study is included in the Instructor's Reference Manual. The Index to Selected 1970 Census Reports, the Instructor's Reference Manual, and several other references or aids are provided to participating instructors. The manual also makes frequent reference to other reports, and thus serves to interrelate the many census guides and pamphlets.

Other reference materials fall into three categories:

- 1. Those generally useful to most students, of which multiple copies may be requested for classroom use.
- Those useful to advanced students or students with specialized interests, also available in quantity where appropriate.
- 3. Those for which quantities are limited or which can be obtained only from the Government Printing Office.

Category 1 includes three <u>Data Access Descriptions</u> (DAD's) and four popular brochures. (We will try to provide requested quantities without charge, though we may have difficulty with orders for more than 30 copies.)

Data Access Description #39 'Reports Related to the 1970 Census of Population and Housing' is the most comprehensive annotated list of 1970 census publications.



Data Access Description #33 "1970 Census Geography: Concepts,
Products, and Programs" provides definitions of geographic
areas reported in the 1970 census, gives sources of census
maps, and describes geographic coding schemes and geographic
base files.

Data Access Description #14 "Items Contained in the 1970 Census of Population and Housing" provides an illustration and explanation of each item on the census questionnaire. Written just before the 1970 census was taken, it highlights its relationship to the 1960 census questionnaire.

Four brochures designed for distribution to the general public may also be of interest to your students. "Census USA" highlights the decennial censuses, including technological innovations, from 1790 to 1970. "The Nation's Census Taker" briefly describes each of the major subject areas in which the Bureau conducts censuses or takes surveys. A new brochure on census confidentiality will shortly be available. "USA Statistics in Brief" presents a broad range of statistics at the national level and a few items for States.

Category 2 comprises a rather lengthy list of brochures, many of which are in the Data Access Description series. These items are listed by topic in section 5. They may be useful in covering special topics, such as public-use samples or geographic base files, which are not otherwise covered in student materials.

Category 3 includes all remaining reference tools. Those directly related to the 1970 census are listed in Data Access Description #39 on pages 7 through 11. Key references for other Census Bureau programs are cited in the Instructor's Reference Manual. Availability of these reports varies. Some references, such as the Index to 1970 Census Summary Tapes, are available without charge to instructors on a single-copy basis. Others, such as technical documentation for computer tapes, are available for purchase only. Still others are out of print and are available only through libraries. Inquiries as to the availability of specific reports may be addressed to the Data Access and Use Staff (address under "Ordering Information," below).

Finally, we refer you to two sources which will keep you up to date on census products. The Census Bureau's monthly Data User News describes new data series, reference materials, and services, and occasionally provides reports of innovative things users have done with census data. Selected new publications are listed each month. An order form for Data User News is on page 25. The Bureau of the Census Catalog provides a comprehensive list of all publications issued during a certain period of time. It is issued quarterly, cumulative to an annual issue, and contains abstracts of each report. Monthly supplements are also included in the catalog subscription, providing titles of all new reports on a timely basis. An order form is on page 24.



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#### Data Publications

Two types of data publications are essential for completion of exercises in the Student Workbook:

· Census Tracts, PHC(1), for one or more metropolitan areas.

· Characteristics of the Population, PC(1), for one or more States.

The latter was also published in four softbound chapters PC(1)-A, B; C, and D of which PC(1)-C, General Social and Economic Characteristics, would suffice for the exercises.

Many other data publications may be desirable, depending on special interests:

- Housing Characteristics for States, Cities, and Counties, HC(1), for one or more States (or chapters HC(1)-A and HC(1)-B published separately in softbound).
- Block Statistics, HC(3), for one or more urbanized areas.
- Urban Atlas, GE-80, one for each of the 65 largest SMSA's

· Population Profile of the U.S., 1975, P-20 No. 292.

- Statistical Abstract of the U.S., 1975 (available commercially as the 1976 U.S. Fact Book/American Almanac).
- · Selected subject reports and other reports listed in DAD #39.

These reports should be available from your school library or a local public library. Census reports are available for sale by the Government Printing Office (Washington, D.C. 20402). Unfortunately, orders to GPO frequently require several months to fill. We are also aware that GPO no longer stocks a number of tract and block reports. It may be possible to purchase some reports if they are in stock at GPO bookstores (in 23 cities) or Department of Commerce district offices (in 43 cities, see page 22 of the student workbook).

If a data report needed for classroom use is not available through other sources, or time constraints prevent mail-ordering through GPO, we will endeavor to provide a single copy from our internal supply. See ordering information below.

# Ordering Information

Requests for student materials, reference materials or data publications may be directed to the

Data Access and Use Staff/CCSP Data User Services Division U.S. Bureau of the Census Washington, D.C. 20233 Telephone: (301) 763-7454



#### Consultation for Instructors

The Census Bureau is eager to help you with any questions you may have on census data. Listed below are the Census Bureau's 12 regional offices. Data User Services Officers in each location and members of the Data Access and Use Staff at the Washington headquarters may be able to help you plan a presentation or answer a question beyond the scope of these materials.

#### Census Bureau Regional Offices:

Atlanta, GA Boston, MA	(404) 526 (617) 22		1365 Peachtree Street, NE, Room 619 (30309)
	•		441 Stuart Street, 10th Floor (02116)
Charlotte, NC*	(704) 37	2-/4/1	Addison Bldg., Room 510, 222 South Church St. (28202)
Chicago, ILL	(312) 35:	3-6251	55 E. Jackson Blvd., Suite 1304 (60604)
Dallas, TX	(214) 749	9-2814	1100 Commerce Street, Room 3054 (75202)
Denver, CO*	(303) 234	4-3924	11011 West 6th Avenue, Box 25207 (80225)
Detroit, MI*	(313) 220	6-7742	Washington Blvd. Bldg., Room 2100 (48226)
Kansas City, KN	(816) 374	4-4601	One Gateway Center, 4th & State Sts. (66101)
Los Angeles, CA	(213) 824	4-7291	11777 San Vicente Blvd., 8th Floor (90049)
New Yor , NY*	(212) 264	4 - 3860	Federal Office Bldg., Room 4102, 26 Federal Plaza (10007)
Philadelphia, PA*	(215) 597	7-4920	William J. Green, Jr., Federal Bldg., Room 9244, 600 Arch Street (19106)
Seattle, WA*	(206) 443	2-7800	Lake Union Bldg., 1700 Westlake Avenue North (98109)

\*These offices were scheduled to have a Data User Services Officer beginning fall 1976. All others have experienced officers.

A list of "Telephone Contacts for Data Users" is occasionally published including names of Census Bureau subject specialists to whom you may direct technical or specialized questions.

In addition to Census Bureau offices, there are 43 Department of Commerce district offices which may be of assistance (addresses on page 22 of the student workbook). The Census and Commerce offices generally have excellent libraries of census materials.

## Your Comments Are Invited

We are engaged in a continuing process of developing new materials and upgrading the present ones. We need your comments and suggestions for guidance. We are, after all, not actively using these materials in college classes—that is up to you, and we need your insights to make this program more relevant to the needs of students and to your needs as an instructor. Since some of the reference materials may be discontinued in the future, we would like your comments on which items are most valuable to you and your class.



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If you develop instructional exercises or other materials for your students, we would like to see them. If they are such that we would like to use them, we will ask your permission and cite you as the source if you wish.

Instructors on our College Curriculum Support Project mailing list will receive notices of new teaching materials as they become available.



# Section 2: Teaching Unit Objectives

#### Central Goal:

That the student can specify and locate from the 1970 census desired data items for desired geographic areas with due attention to definitions and data limitations.

## Supporting Goals:

#### The student

- understands the geographic concepts used by the Bureau of the Census
- is familiar with the subject items tabulated in the 1970 census
- is familiar with the publication program (data products) of the 1970 census
- can locate specific data in the 1970 census
- observes appropriate precautions when using the data
- is familiar with major census reference sources

So that the knowledge and skills to be attained are more explicit, we have prepared the following list of performances which can show the goal has been accomplished. The performances also provide a measure of achievement.

#### GOAL #1

The student understands the geographic concepts used by the Bureau of the Census.

# Performances To Show the Goal Has Been Accomplished:

- a) The student can list at least ten types of geographic areas for which 1970 census data were tabulated.
- b) The student can define census geographic areas listed on page 2 of the student workbook.
- c) The student can state the hierarchical relationships of geographic units as shown in figure 2 of the student workbook.
- d) The student can select an appropriate geographic area for a particular research problem.

Data User Services Division, Bureau of the Census, revised August 1976.

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#### GOAL #2

The student is familiar with the subject items tabulated in the 1970 census.

#### Performances To Show the Goal Has Been Accomplished:

- a) The student refers to figure 1 in the student workbook for a list of subject items.
- b) For definitions of the subject items, the student refers to the appendixes of the publications or the dictionary in the 1970 Census Users' Guide, Part I.
- c) The student uses the cross-reference guide of the Index to Selected 1970 Census Summary Tapes whenever unsure of the consus terminology for a particular variable.
- d) The student can select appropriate census subjects for a particular research problem.

#### GOAL #3

The student is familiar with the publication program (data products) of the 1970 census.

# rformances To Show the Goal Has Been Accomplished:

The student can name the types of media used for publication of 1970 census data (printed publications, computer tapes, microfiche, microfilm, and data maps) and can indicate some circumstances in which each is most appropriate.

- b) The student is familiar with figure 5 in the student workbook and can use it to describe publications in terms of the series designation, the geographic areas covered, the unit of issue (State, Nation, etc.) of the publication, and the type o data. Particular attention is paid to the following series: PC(1), HC(1), PHC(1), PC(2), HC(3), and GE-80.
- c) The student is familiar with figure 6 in the student workbook and uses it to find which publications and which summary tape counts have data for specified geographic areas.
- d) The student can identify which publications and which summary tapes were produced from complete count data and which were produced from sample data. (See also 5c.)



- e) Given the problem of finding whether particular data are available as needed from the summary tapes, the student refers to the Index to 1970 Census Summary Tapes and to the appropriate Data Access Description or summary tape documentation (Part II, 1970 Census Users' Guide for Counts 1-4).
- f) The student has used <u>Census Tracts</u> and <u>Block Statistics</u> reports and is familiar with the types of maps they contain.
- g) Given a need for current and/or annual data on population or housing characteristics, the student is aware of Census Bureau current surveys (primarily national level) and population estimates (down to county and city level).
- h) The student refers to --

Statistical Abstract for recent data (most at the national level) from a variety of sources;

Historical Statistics of the U.S., Colonial Times to 1970 for time series data at the national level;

- County and City Data Book: 1972 for convenience in comparing data among counties, cities, SMSA's, regions, divisions, and the Nation and for data for these areas from a variety of sources.
- i) The student is aware of the various places to obtain census publications: libraries (especially Government Depository Libraries), Census Bureau regional offices, and Department of Commerce district offices; with copies being available for purchase from the Government Printing Office and, in some cases, the Census Bureau.

#### GOAL #4

The student can locate specific data in the 1970 census.

# Performances To Show the Goal Has Been Accomplished:

- a) The student can successfully locate desired data by following the principles and using the references discussed in the student workbook, pages 3 and 4.
- b) If the data are not available as desired, the student considers altering the data requirements to fit what exists, or calls the Census Bureau to investigate the possibility of unpublished data or the feasibility of using public-use microdata samples.



#### GOAL #5

The student observes appropriate precautions when using the data.

# Performances To Show the Goal Has Been Accomplished:

- a) The student finds the definition of terms in the appendixes of the publications and reads them before using the data.
- b) The student looks for relevant correction notes in the publication before using the data.
- c) The student is aware that all data based on samples are estimates and subject to chance variation which can be relatively large in the case of small estimates. The student uses appendix material in sample data reports to compute standard errors and confidence intervals for data for census tracts or other small areas.

#### GOAL #6

The student is familiar with major census reference sources.

# Performances To Show the Goal Has Been Accomplished:

- a) The student refers to the lists of reference sources on pages 4 and 5 in the student workbook and in <u>Data Access Description</u> #39 for help in locating and interpreting desired data.
- b) The student refers to monthly issues of Data User News for announcements of new data and reference products and for updated information on existing products.
- c) The student refers to the <u>Statistical Abstract of the U.S.</u> to find data on subjects not in the 1970 census, using its index to locate tables in the <u>Abstract</u>, and using the bibliographic notes and guide to sources to find more detailed data.



#### Section 3: Exercises

(Six exercises which students can do on their own or in groups are incorporated in <u>A Student's Workbook on</u> the 1970 Census.)

Part A. Exercises using an "inquiry" approach as discussed on page 3.

- 1. Ask students to use a census volume to find information about their own individual house and family. They will quickly find that information is not given about individuals only groups of individuals. This is your opportunity to introduce the concepts of confidentiality and "summary" versus "individual" data. (See the Reference Manual.)
- 2. Obtain an <u>Urban Atlas</u> for your SMSA or an SMSA near you (available only for SMSA's over 500,000 population). Ask students to verbalize some of the spatial relationships which can be inferred from particular maps. Encourage them to form hypotheses based on individual maps or apparent similarities or dissimilarities between two maps (such as population density and median family income). Note questions or hypotheses which require data in more detailed form for confirmation. These data may be available in numeric form in a Census Tracts report.
- 3. Use a GE-50 or GE-70 series map (listed in <u>Data Access Description</u> No. 39, page 9) showing data by county across the Nation. Ask students to make generalizations and hypotheses as suggested in (2) above. Lock for major regional variations. Are regional variations more significant than differentials between metropolitan and nonmetropolitan areas?
- 4. If you live in an urbanized area, ask students to count the number of housing units in a specific block and compare their count to the HC(3)

  Block Statistics report. This exercise will—
  - involve students in using the detailed maps in the HC(3) report;
  - require students to learn the definition of a "housing unit" (refer to HC(3), Introduction);
  - teach students the difficulty of the seemingly simple task of counting; and
  - teach students about change in small areas over time.
- 5. Ask students to describe an area of interest to them. What is the geographic distribution of the population? Do many people live out of town and commute to work? What are the major occupations of the area? How well educated are the people (do census data really answer this)? What is the racial composition of the area? What is the age composition? What are the housing patterns and conditions? Do people move in and out of the area much? What are the implications of these characteristics?



# Part B. Exercises useable as simple test questions

6.	Check which items were included in the 1970 Census Housing.	of Population and
	nousing.	Answers
	Persons per room	X
	Employment status	X
	Place of work	X
	Housing vacancy	X
	Dilapidated housing	
	Air quality	
	Age, sex, race	X
	Religious affiliation	V
	Income	X
	Death rates	
	Smoking habits	
	Expected family size	x
	Unemployment '	X
	College graduates	

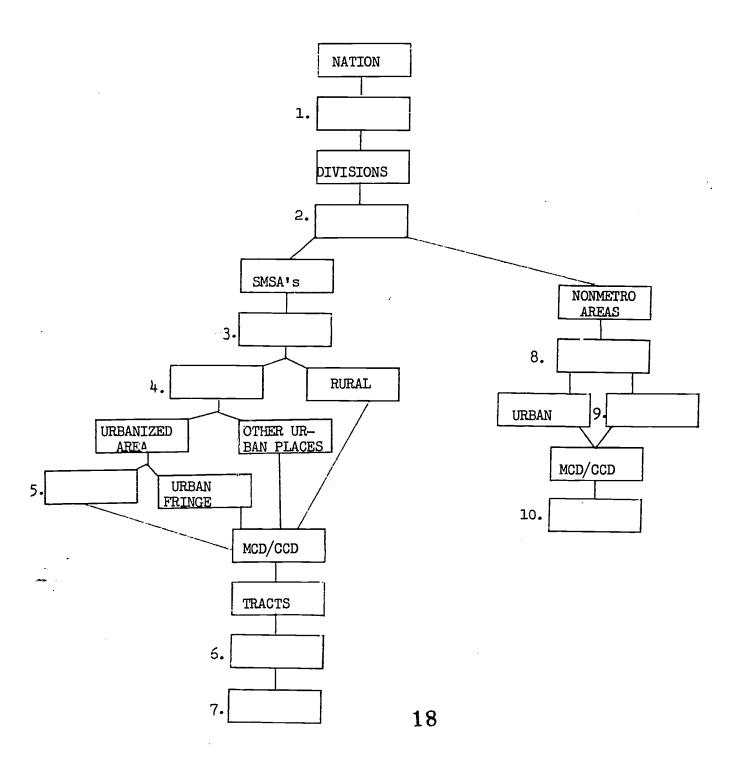
Answers can be determined using figure 1 in the Student Workbook. Unemployment is defined by "employment status" in the figure and college graduates are defined by "years of school completed."

Write in the correct the specific one you	t type of geographic area. (Optional: also name 1 live in, if applicable)
8	A statistically defined subdivision of a metropolitan area and commonly used by planners. Published for all SMSA's defined at the time of the 1970 census in report series PHC(1).
b	The smallest area for which 1970 census data are available (but only complete count population and housing items). Published in HC(3) report series for all urbanized areas and in places which contracted for publication of data at this level.
c	Subdivisions of census tracts and county subdivisions (MCD's/CCD's) assigned to enumerators for collecting questionnaires. These are the smallest geographic areas to be used as building blocks outside of urbanized areas. Not in printed reports.
d	A statistically defined area made up of a central city plus the surrounding closely settled urban fringe (sometimes called "suburbs").
e	West, South, Northeast, North Central (four major groupings of States).
f	Nine groups of contiguous States.

g•	A metropol	A metropolitan area.			
h		The complement of the urban population frequently subdivided into farm and nonfarm components.			
i		ons of counties (e.g., townships, towns, elected States).			
j	defined as	ration of population which is not legally a city. Shown in the reports only if at least 1,000 inhabitants.			
		Answers			
Type of A	rea	Specific Area (example: the White House) tract 57.02 (determined from an HC(3) or PHC(1) map)			
b. block		block 101 in tract 57.02 (determined from HC(3) map)			
c. enumeration di	strict	not applicable (determined from an HC(3) map or from unpublished maps outside urbanized areas)			
d. urbanized area	(UA)	Washington, D.CMdVa. urbanized area (PC(1)-A urbanized area maps)			
e. region		South (map in Migration Case Study or many data reports)			
f. division		South Atlantic (map in Migration Case			
g. standard metro statistical ar h. rural		Study or many data reports) Washington, D.CMdVa. SMSA (map in a PC(1) report, any chapter) not applicable (rural areas have no			
i. minor civil di	vision (MCD)	specific names) no MCD's are recognized in D.C.			
j. unincorporated	place	(PC(1)-A county dubdivision maps) not applicable (unincorporated places are identified by name in PC(1)-A; for maps refer to HC(3) maps or unpublished maps for outside urbanized areas			
Fill in the char	t on page 16				
Regions States Counties Urban Central city (s)		nswers 6. Block groups (BG's) or enumeration districts (ED's) 7. Blocks 8. Counties 9. Rural 10. Enumeration districts			

8.

8. Fill in the boxes with the correct geographic unit:





Section 4: Illustrative Uses of Data From the 1970 Census of Population and Housing

The following is a sampler of uses related to various professional or vocational fields. Some types of uses, such as site location, are related to many fields, but are listed only once to avoid redundancy. Therefore, the entire list is worth scanning for ideas.

Of course, the 1970 Census of Population and Housing is not the only data source relevant to these applications. In some of the examples data from censuses of business or industrial establishments would complement the 1970 census. In others there may be a local data source (such as tax-assessor records) which would also be relevant and likely more current than the 1970 census.

#### Business and Marketing

A businessman seeking to open a mod-fashion apparel store obtained favorable financing by showing how many prospective customers lived nearby his proposed location using census data on the age and income distribution of the area.

A downtown department store owner deciding whether to open a suburban branch considered trends in population distribution and in the relative affluence (income, cars, household appliances) of several alternative suburban areas.

A distributor of high-priced carpeting designated sales territories to include roughly equal numbers of high-value owner occupied homes.

A low-cost furniture store concentrated billboard and leaflet advertising in areas with a high turnover in population as shown by census figures on residence 5 years ago and year moved into unit.

See also Site Location; Publishing.

#### Community Organizations

A community organization's fund drive allocated contribution goals among their house-to-house convassers based on population and average income by census tract.

A scouting organization organized a recruiting campaign in an area in which the ratio of its members to the census count of children 8 to 15 years old was lower than its citywide average.

Alternative locations for a day-care center were evaluated with regard to census statistics on number of children under 5 and number of working mothers in the area.

#### Education

In assessing the need for a program of evening language classes, an educational planner considered data on country of origin of persons of foreign stock, recent immigrants, and persons whose mother tongue was not English.

A school board redrew school attendance zones so as to minimize the need for busing, using race data by block.



A teacher made a good impression on a prospective employer in a new town by having studied the town's socioeconomic characteristics in advance.

In evaluating a proposal for statewide vocational training, an administrator looked at differences in unemployment rates in 1970 between persons with and without vocational training.

#### Environment

Effects of a projected major drought were analyzed relative to the distribution of homes with private wells, multiple bathrooms, a dishwasher, and other indicators of water consumption.

Socioeconomic characteristics of residents of an area subject to frequent flooding were studied in an effort to promote a plan to relocate the homes and create a park.

Trends in population density, means of sewage disposal, car ownership, employment in polluting industries, and many other census variables relate to studies of human impact on the environment.

#### Equal Employment Opportunity Officers

In order to make sure that equal employment opportunities are available to minority group members, EEO officers compare employment figures by race and for women in a company or organizational unit with census figures on the minority makeup of the labor force in the SMSA or city; and may recommend a minority recruitment program oriented toward areas with high minority populations as shown by census data.

#### Finance and Banking

To meet requirements of the Mortgage Disclosure Act, bankers obtain extracts of the Bureau's computerized geographic base files to use as address coding guides in identifying what census tract each customer lives in.

See also Site Location - Service.

#### Geography

A geographer preparing a book on the changing distribution of high-income families within metropolitan areas used the median family income map in several <u>Urban Atlases</u> as a starting point. Since he was specifically interested in the distribution of families with incomes over \$25,000 in 1969, he then generated his own maps by computer using census summary tapes and tract boundary coordinate files available from the Census Bureau.

#### Health Services

An epidemiologist found in his own research and in the literature a high relationship between the incidence of tuberculosis and areas with high poverty rates and high levels of crowding (persons per room). Census tracts with high poverty and crowding were identified for location of temporary tuberculosis screening clinics.



To project capacity needs for a new hospital, an administrator compared areawide hospital use statistics with census data to identify expected usage rates by age and economic levels, then applied those figures to population data for the area to be served by the hospital.

A legislative researcher examined the socioeconomic characteristics of disabled persons in a detailed census subject report in planning a legislative proposal for aid for the handicapped.

#### Housing

Problem housing, as evidenced by census figures on lack of plumbing facilities, lack of direct access to the unit, persons per room (crowding), or inadequate heating equipment, relate to needs for many public programs.

Federal housing subsidy grant applications require that data on the housing stock be supplied to help the Department of Housing and Urban Development evaluate the application relative to applications from other communities.

#### Journalism

A newspaper reporter studied records at city hall on expenditures for city services in major sections of the city, and related them to the population distribution. Finding significant variations in per capita expenditures she correlated those figures with census statistics on race, age composition, income and overcrowding and other neighborhood characteristics as background for a feature article.

#### Law

A lawyer used census data in challenging the elimination of a local bus route, showing that low-income and elderly persons were disproportionately affected.

#### Politics - Political Science

In campaigning, a congressional candidate had briefing packages prepared on each town to be visited, including census data which high-lighted particular local problems to be addressed in campaign speeches.

Political scientists, developing an election night projection model for broadcasting networks, use population data correlated with voting history in each area.

Elected officials use census data as a source of information about the needs of their constituents.

#### Publishing

A publisher of highly technical books estimated his potential readership market using census data on the number of scientists and engineers by type.



A news magazine divided its mailing list geographically according to census data to identify high income or ethnic areas, then ran advertising most appropriate to each type of area.

## Site Location - Service

Whether it is for the location of a branch bank, health care facility, retail outlet, or other service, the decisionmaker generally considers the characteristics of the population to be served or attracted, then looks at census data to find concentrations of the desired populations.

#### Site Location - Undesirable

In locating a nuclear power plant, super highway, or even a drive-in theater, the population in the vicinity to be affected must be considered, to meet "environmental impact" requirements or to forestall adverse community feelings.

#### Sociology

A group of black historians used census data across several decades to document changes in the distribution and characteristics of southern blacks.

A sociologist studied redistribution of ethnic minorities among Boston neighborhoods from 1940 to 1970 using data on country of orgin of persons of foreign stock (includes second generation) in 1960 and 1970 census tract reports, and on country of birth of foreign born whites in 1940 and 1950 census tract reports. Fortunately census tract boundaries have remained relatively constant, facilitating decade to decade comparisons.

A commentator used data about the changing proportions of young and old people in the population in hypothesizing causes for the hippy trend in the late 60's and the current "grey panther" movement, and studied trends in female labor force participation in the context of "women's lib."

#### Survey Research

Survey researchers and pollsters use population distribution and characteristics to most efficiently design sampling frames for their surveys.

#### Transportation

In planning a new mass transit system, a city looked at place-of-work data to determine the most important commuter flows, and at car ownership figures to help project the likelihood of transit use.

In locating a new super highway the planners have to consider the number of people to be displaced by different alignments, and whether low-income residents are disproportionately affected.



## Section 5: Items Available for Students with Special Interests

These items may be obtained through the Data Access and Use Staff, Data User Services Division, Bureau of the Census, Washington, D.C. 20233. We suggest that you initially request single copies of those titles that interest you and examine them before requesting quantities for class use. Quantities of some items are limited. Items of more general interest are described in the section 1 under "Student Materials" and "Reference Materials."

### 1970 Census: Special Subjects

Factfinder for the Nation: Minority Statistics (CFF76 No. 1)
Data on Selected Racial Groups Available From the Bureau of the Census (DAD #40)\*

Data on Spanish Ancestry Population Available From the 1970 Census (DAD#41)

Contract Block Statistics Program (DAD #15)

Availability of Place-of-Work Data in the 1970 Census (DAD #20)

Delineation of Problem Housing Areas (DAD #28)

Low-Income Data From the 1970 Census (DAD #29)

1960 Census: Availability of Published and Unpublished Data (DAD #35)

# 1970 Census Summary Tapes:

General Information About Summary Tapes (DAD#18)
1970 Census User Conference Illustrations
First Count Summary Tapes From the 1970 Census (DAD #13)
Second Count Summary Tapes From the 1970 Census (DAD #26)
Third Count Summary Tapes From the 1970 Census (DAD #25)
Fourth Count Summary Tapes From the 1970 Census (DAD #22)
1970 Census Fifth Count for ZIP Codes, Counties and Smaller Areas (DAD #36)
Sixth Count Summary Tapes From the 1970 Census (DAD #30)

#### Public-Use Microdata Samples:

Public-Use Samples of Basic Records From the 1960 and 1970 Censuses (DAD #24)
Areas Identified on the 1970 County Group Public-Use Samples (BC-81)
Microdata From the Current Population Survey - The Annual Demographic
File (DAD #37)

#### Current Programs:

Current Survey Statistics Available From the Bureau of the Census (DAD #38) Census Surveys: Measuring America The Annual Housing Survey: A New Look in Evaluating Future Needs

DAD is an abbreviation for Data Access Description.



#### GBF/DIME:

GBF/DIME, Dollars, and Sense (best general brochure on computerized geographic base files and their uses)

ADMATCH Adventures

DIME Comix and Stories

Day Care Resource Allocation System

Census Bureau Products for Geocoding

#### Economic Programs:

Mini-Guide to the 1972 Economic Censuses
1972 Economic Censuses Conference Illustrations
Did You Know - 1972 Census of Retail Trade
Transportation Statistics Available From the Bureau of the Census (DAD #34)
Governmental Finances and Employment at a Glance
Agriculture USA 1840-1974

#### World Population:

World Population Statistics in Brief: 1975
Population and Economic Planning: A Macro-Analysis (ISP-PD-1)
World Population Growth Patterns, 1972 (ISP-WCG-72)

#### Miscellaneous:

Contents of the 1972 County and City Data Book
A Visual Aid for Quick Reference to Basic Census Bureau Publications
(poster with space for library call numbers)
Data User News, a sample copy
Telephone Contacts for Data Users

#### Order Forms:

We Have the Facts (puts you on the mailing list for all order forms)

Data User News order form

Order form for Index to Selected 1970 Census Reports and Index to 1970

Census Summary Tapes

Order form for "We the Americans" series of popular pamphlets oriented toward high school students

(Order forms for specific other publications or series may be requested)



- 1. "WE" is a film about all Americans. It visually presents key findings of the 1970 census—the enormous growth of our suburbs, the continued historic movement of the population from rural to urban areas, and towards the Nation's coasts. "We" puts the statistics about the progress and problems of America into human terms, concentrating on the people as they work, play, and relax. Creative photography, special effects, and an original musical score combine to give a sense of America's diversity—to show where it's been and where it seems to be going.
- 2. "FACT FINDER FOR THE NATION" is about the Census Bureau. The film shows not only now the massive census is taken every 10 years, but also the wide scope of work the Bureau does during the other 9 years work which provides most of the statistics about how the people and the economy of the Nation change on a weekly, monthly, quarterly, and annual basis.

Both 16MM films have a running time of 28 min. 30 secs., and both are available in 13 min. 30 sec. versions. The narrative of all the films is informative yet not overburdened with facts and figures and is written to blend carefully with the visual material. The four films are available on free loan or for purchase through Modern Talking Picture Service, 2323 New Hyde Park Road, New Hyde Park, N.Y. 11040.

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First ———————	Depertment
Available OR: 1st Choice Show Date Show Date	Organization
FILM 2 "FACT FINDER FOR THE NATION"	Address
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Prices include reel, can, and parcel post shipment. Please send me the film(s) checked:	Fill out completely and mail with your remittance to
copies of "WE"	2323 New Hyde Park Road New Hyde Park, N.Y. 11040
13½ min. version \$ 56.50 ea. \$	Name/Title
28½ min. version \$115.50 ea. \$	Department
	Organization
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# Looking for

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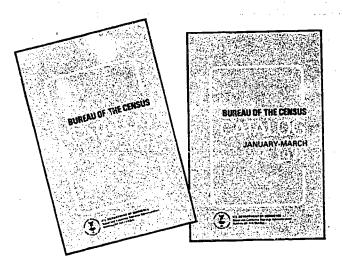
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Part II describes the data files and selected tabulations currently available, and provides information on how these materials may be obtained.



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- 1. Selected publications of other Federal agencies based on Census Bureau data,
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- 3. Technical papers by members of the Bureau's Staff.
- 4. Occasional consolidated listings of reports of formal census programs, related current reports, procedural histories, methodological studies, and special publications series.

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# acknowledgments

This pamphlet is a revision of A Student's Introduction to Accessing the 1970 Census prepared in 1975 by Cynthia Murray Taeuber. This project is under the general direction of Paul T. Zeisset, Chief, Data Access and Use Staff, Data User Services Division.

The purpose of this publication is to acquaint new users of the 1970 Census of Population and Housing with the basic information needed to successfully access and use this data base. The major topics covered include the publication program, census geographic concepts, subject data content, and reference sources. Exercises are provided to reinforce the learning of these basics and to involve the reader in the actual use of 1970 census publications. This publication is part of the Census Bureau's college curriculum support project. Comments and inquiries are encouraged. Write to the Data User Services Division, Bureau of the Census, Washington, D.C. 20233.

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# A student's workbook on the 1970 census

# reprinted september 1976

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# a student's workbook on the 1970 census

#### Can Census Data Help Me?

There is a good chance that the 1970 census has information you can use. Researchers use the data to study an area's age structure, migration patterns, occupational and industrial structure, or income distribution. Those interested in community action evaluate the impact of programs (highway location, urban renewal, etc.) or document the need for programs (playgrounds, day-care centers, equal employment opportunity, aid to the elderly, etc.) using census figures. Public officials are interested in population shifts, change in the average family size, concentrations of the very young or very old and other characteristics of their areas which affect requirements for public services. Business people also find a knowledge of such characteristics helpful in marketing their products.

In the 1970 census, information was collected on subjects such as age, race, education, income, ownership or rental of houses and apartments, number of rooms in houses and apartments, and many others (see fig. 1 on page 6). While you cannot obtain information from the Census Bureau about specific individuals or homes because this is forbidden by law, you can obtain summary information about geographic areas such as city blocks, groups of blocks, cities, counties, and States. By summary information we mean counts of persons or housing units in categories with particular characteristic, such as the number of men 25 to 34 years old, families headed by females, housing units renting for \$150 to \$200 per month, or persons residing in a certain city.

Consider a few examples of the use of summary data:

- A business person interested in locating a new specialty store will want to find an area with a high proportion of likely customers, such as families with moderate incomes, single young adults, or college graduates.
- A school administrator may want figures for different parts of his city on the number of children under 5 years old for use in planning adequate future facilities, or the number of adults who have not completed high school in order to choose neighborhoods for adult education classes.
- A neighborhood citizens' group, interested in improving services provided by the city, may want data on the number of children in various age groups to support requests for recreational facilities or on the number of working mothers with children under 6 years of age to indicate the need for child daycare centers.

So, if you need to know the characteristics of the people or housing units in a particular area or want to know where people or housing units with particular characteristics are located, more than likely mere are census data that can help. The uses of census data are so varied it is safe to say that census data are likely to be useful to you some day. Census Data for Community Action and Measuring Markets, cited on page 4, illustrate additional applications of census data.

## What Information Does the Census Provide?

The information available from the 1970 census is derived from either questions asked of the entire population or a sample of the population. The questions asked of everyone or about every housing unit are called 190 percent or complete count questions. They concem basic information on such subjects as age, sex, race, property value or rent, and number of rooms. This information is needed to count everyone accurately and to make possible the publication of some data for very small areas such as city blocks.

One household in every five throughout the country answered a longer questionnaire with sample questions in addition to the 100 percent questions answered by everyone. The exact questions which were asked depended on which one of two sample questionnaires the household received. One type of sample questionnaire went to 15 percent of all households; the other went to 5 percent of all households and in some cases the same question appeared on both sample questionnaires. Thus there were three samples for which responses were obtained: 20, 15, and 5 percent. The information requested concerned such subjects as income, number of school years completed, occupation, place of work, heating fuel used, and number of automobiles.

The subjects covered in the 1970 census are shown in figure 1 (p. 6) which indicates whether they were asked on a complete-count or sample basis. There was little difference in questionnaire content between the 1960 census and the 1970 census, because of the importance of having comparable data for assessing changes in population and housing characteristics which occurred during the decade.

Tabulations of data from the sample questions are done primarily for areas with populations of at least two or three thousand. A population base of this size or larger helps to improve the reliability of the statistics, which are naturally subject to some chance variation since they are estimates based on a sample. Tables in the back of data reports help you estimate how large is the sampling variability. On the other hand, tabulations of data from the 100 percent questions are prepared for areas as small as city blocks, averaging 100 or so in population, since complete-count data are not subject to sampling variability.

#### For What Areas Are Census Data Reported?

Data are presented for the entire country in printed reports and computer tapes. But, the Census Bureau cannot tabulate data for all the blocks, streets, or other small areas in the exact combinations which might be desired. Data for school districts or police precincts, for example, are not prepared in regular Census Bureau operations.

Through its regular tabulation program, the Bureau prepares data summaries (presented in printed reports, computer tapes, and/or microform products) for the following areas as they were defined for the 1970 census. Figures 2 and 3 on pages 7 and 8 illustrate some of the relationships among these areas.



1

Governmental Units of the Nation, including States, congressional districts, counties, minor civil divisions (e.g., towns, precincts, and townships)\*, incorporated places (e.g., cities and villages), and wards in some cities. Both 100 percent and sample data summaries are prepared for these areas, except for wards (population counts only).

Statistical Areas (both 100 percent and sample data unless otherwise indicated):

- Regions/ Divisions. There are four consus regions (west, south, northeast, and north central) defined for the United States, each composed of two or more divisions. Divisions are areas composed of groupings of contiguous States.
- •Standard Metropolitan Statistical Areas (SMSA's). In 1970 an SMSA comprised a county containing a central city (or twin cities) of 50,000 or more plus contiguous counties which were socially and economically integrated with the central county. All counties in SMSA's are termed "metropolitan," and all others "nonmetropolitan."
- Urbanized Areas (UA's). UA's comprise a central city of an SMSA plus the surrounding closely settled urban fringe ("suburbs").
- •Urban/Rural. The urban population comprises all persons living in urbanized areas and in places of 2,500 or more outside urbanized areas. Everyone else is considered rural.
- Unincorporated Places. A concentration of population which is not legally incorporated. Suitable boundaries are defined for statistical purposes by the Census Bureau with local assistance. Unincorporated places of less than 1,000 inhabitants are disregarded.
- Census Tracts. Subdivisions of SMSA's averaging 4,000 population, covering all SMSA's for 1970.
   Tract's are defined by local committees and are frequently used to approximate neighborhoods.
- Enumeration Districts (ED's). Administrative divisions set up by the Census Bureau to take the census in areas where enumerators were used, averaging 800 population. Outside of urbanized areas, this is the smallest geographic unit of analysis, and all other areas (tracts, places, MCD's, etc.) can be defined as a collection of ED's. Not in printed reports.
- Block Groups (BG's). Groups of city blocks, averaging 1,000 population, which take the place of enumeration districts in 145 large urbanized areas where the census was taken by mail in 1970. Not in printed reports.

Blocks. City blocks are areas generally bounded by four streets or some other physical boundary, defined in urbanized areas and in additional cities which contracted with the Bureau for collection of block statistics. Only 100 percent data.

#### How Are Census Data Released?

#### Printed Reports

Printed reports have long been the most common means of releasing census data. If you do not require information in great detail for a large number of areas, the printed reports will probably be the most convenient and readily available source for you. The data presented in 1970 census reports are similar in kind and quantity to the data contained in reports resulting from the 1960 census.

The census data contained in printed reports are arranged in tables. Population and housing characteristics for specified geographic areas are reported, such as the number of rented housing units in a block, the number of families below specified income levels in a census tract, or the number of persons who have had vocational training in a city or county. An example of a table such as you will find in 1970 census printed reports is shown in figure 4, page 9.

The Census Bureau releases reports in a number of different series. In many series there is one report for each State plus a U.S. summary; in others one report for each SMSA or urbanized area; in still others, reports are issued by topic rather than by area. All of the series related to the 1970 census are listed in figure 5 on pages 10 and 11 with an indication of the unit of issue as well as a general description of subject matter and the geographic areas covered. Figure 6 on page 12 provides a more direct key to what types of geographic areas are covered in certain major series. To find specific subjects in these reports the best aid is the *Index to Selected 1970 Census Reports*. Its use is discussed below in the section titled How Do 1 Find Particular Data.

Your local library may have the reports you need, or you may purchase copies by writing Subscriber Services Section (Publications), Bureau of the Census, Washington, D.C. 20233 or U.S. Department of Commerce District Offices (See p. 22.)

#### Microfiche

Microfiche copy of any printed report can be obtained from the Bureau of the Census Library, Washington, D.C. 20233. The microfiche (4" x 6" cards of film containing 97 micro-images of report pages) dramatically reduces the amount of storage space needed. This source is especially important as certain 1970 census reports eventually go out of print. It should always be possible to get a reproduction of a microfiche.

#### Data Maps

The spatial distribution of the population and its characteristics are easily visualized in two types of wall-size maps using colors to represent values: National maps showing data by county (GE-50 and GE-70 series) and SMSA maps showing data by census tract (*Urban Atlases*, GE-80, for 65 SMSA's).



<sup>\*</sup>In 21 States minor civil divisions (MCD's) are not adequately defined for reporting census statistics. To take their place, census and local officials have designed census county divisions (CCD's), and census statistics are reported for these CCD's.

Request order forms from the Census Bureau's Subscriber Services Section.

#### Summary Data on Computer Tapes

Many census data users will be able to find the information they need in the Bureau's printed reports. But if frequent and extensive use is planned, census summary data on computer tapes (summary tapes) may be the most reasonable approach because of the speed and relative convenience of computer processing. Also, the tapes contain many crossclassifications of variables, greater detail, and more geographic areas than it was feasible to publish, and thus some users may find the tapes essential to meet their data requirements. The summary tapes have the same kind of data as found in printed reports—there is just more of it.

There are six major series of summary tapes, called counts, involving about 2,000 reels of computer tape if all files were obtained. The types of geographic areas summarized on the six counts are shown in figure 6. Unlike printed reports, summary tapes do not contain verbal area names and subject description—these are identified by numeric codes on the tape and supplementary printed documentation defining the locations of all data items. The *Index to 1970 Census Summary Tapes* will help you quickly locate specific data by subject in all six counts

Census summary tapes may be purchased from the Bureau at \$80 per reel. In considering the use of computer tapes it is also important to keep in mind that there will be expenses for programming and computer operation. As an alternative, users may wish to purchase data services from other organizations which already have the tapes. Information on these summary tape processing centers may be obtained by writing the Data User Services Division, Bureau of the Census, Washington, D.C. 20233.

#### Microfilm

Microfilm of some of the computer summary tape data (all first count tabulations and fifth count data for counties and MCD's/CCD's) are also available from the Data User Services Division. These tabulations are an especially useful source of data for nonmetropolitan county subdivision.

#### Can I Get Data To Update 1970 Figures?

The Census Bureau has a number of current programs to meet needs for more recent or more frequent data than a decennial census provides. First are population estimates in several series based on birth, death, and other administrative records: one which provides population estimates for counties every year, another provides both population and per capita income estimates about once every 2 years for counties, incorporated places; and most minor civil divisions. Annual estimates of the population by age are prepared only at the State level, and estimates by age, sex, and race appear only at the U.S. level.

The Bureau also conducts a number of sample surveys to provide current information on characteristics of the population and its housing. The most prominent is the Current Population Survey from which many reports are published each year, including reports on topics such as mobility, mantal

status and living arrangements, income, and characteristics of students, poor people, young people, and the farm population. Highlights of the data from the various reports are provided in an annual *Population Profile of the United States*. These survey data appear primarily at the national level—the sample is not large enough to produce estimates for States or smaller areas.

The Annual Housing Survey, begun in 1973, collects housing data similar to that in the 1970 census, but also gathers information on how well household facilities work, dependability of services such as sewage disposal and garbage collection, household problems such as leaky roofs and basements, and even respondent perception of neighborhood characteristics such as heavy traffic, crime, or run-down housing and public services such as mass transportation, schools, police and fire protection. A national sample provides these data annually for the United States and four regions, and special SMSA samples produce data for 60 SMSA's every third year.

These and other current programs are described in *Data* Access Description #38, "Current Survey Statistics Available from the Bureau of the Census". It deserves restating that these programs produce only estimates, and none approaches the nichness of small area detail afforded by the 1970 census.

The Bureau of the Census conducts many other censuses and surveys—about business or industrial establishments, governments, farms, and other units of analysis. Information is provided in the general references "for other programs/ products," cited on page 4.

#### How Do I Find Particular Data?

The first step in finding particular data is to define v American you need. The "who, where, when" approach defines data requirements in terms of 1) subject matter or variables, 2) geographic area(s), and 3) time reference. The time reference frequently is reduced to whether or not 1970 is an acceptable reference year since so much data are available for 1970 which do not exist for more recent years. You should now know what types of geographic areas census data are provided for, but you may need to obtain appropriate maps from the Census Bureau for definitions of specific urbanized areas, tracts, enumeration districts or blocks. Figure 5 shows what geographic areas are included in which reports or tape series. That chart, in combination with figure 1 to indicate which items are only in sample data reports, is frequently enough to direct you to the right source. Reports in the PC(1) and HC(1) series (see fig. 6) contain simple table finding guides in the front.

The most systematic and definitive tools for locating data on particular subjects are the *Index to Selected 1970 Census Reports* and the *Index to 1970 Census Summary Tapes*. Both contain cross-reference guides which help you find the right census terminology. They would tell you, for instance, to look up data on apartments under units in structure, or help you realize that there are several variables related to education: years of school completed, school enrollment, school level and type, and vocational training. The Indexes contain computergenerated lists of table descriptions, alphabetically arranged by variables and pairs of cross-tabulated variables. While the most common reports are covered in the *Index to Selected 1970 Census Reports*, you may also want to check *Data Access Description #39* for references to the supplementary reports and to the highly detailed subject reports.



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Part of finding the right data is making sure the data mean what you think they mean. How does the Census Bureau define a family? is a question a sociologist should ask. When is a person considered not in the labor force rather than unemployed? is another example. Complete concept definitions are contained in textual material in the back of most data reports (usually app. B).

Data for years since 1970 can be approached in a different manner. If the requirement is for total population figures more recent than 1970 for States, cities, or counties, write to the Census Bureau for the latest P-25 and P-26 reports for your State. Otherwise, check the Statistical Abstract of the United States (citation on p. 5). The Abstract contains a broad cross-section of all statistics produced by the federal government, and is fully indexed. Most of the data appear only at the national level, but source citations carried with each table frequently direct you to reports with data for smaller areas or more detailed presentations. Many Abstract tables are cross-referenced to Historical Statistics, Colonial Times to 1970 for time series data. The American Statistics Index, published by the Congressional Information Service, is also useful and is available in many libraries.

#### Reference Sources

#### For 1970 Census and Related Data:

Index to Selected 1970 Census Reports. <sup>+</sup> This is an exhaustive index to data tables in the following report series: PC(1), HC(1), HC(2), HC(3), PHC(1), and PHC(2) [note that the subject reports are not included in the Index]. The Index consists of a cross-reference guide to census terminology and computer-generated index entries listed alphabetically by subject. Each entry lists the report and table number, geographic areas, and specific subject items. The Index is indispensible in finding cross-tabluations of two or more variables. (388 pp. at \$3.70).

Index to 1970 Census Summary Tapes. This is an exhaustive index to data tables in the summary tapes, First through Sixth Counts. It has features corresponding to the Index to Selected 1970 Census Reports. (216 pp. at \$2.60).

1970 Census Users' Guide.° This guide is a principal resource for information about the 1970 census and is organized into two parts:

Part I describes census concepts and procedures and has a Consus Users' Dictionary (162 pp. at \$2.35);

Part II includes the technical documentation for the first through fourth count summary tapes (376 pages at \$4.40). Note: Documentation for all tapes, including the fifth and sixth count tapes are available from Data User Services Division of the Bureau of the Census, Washington, D.C. 20233.

Data Access Description (DAD). DAD's give detailed explanations relevant to the use of and access to data from various census products. DAD's of special interest include:

- DAD 14: Items Contained in the 1970 Census of Population and Housing
- DAD 33: 1970 Census Geography: Concepts, Products, and Programs
- DAD 38: Current Survey Statistics Available From the Bureau of the Census
- DAD 39: Reports Related to the 1970 Census of Population and Housing

DAD's are available by writing the Data User Services Division of the Bureau of the Census, Washington, D.C. 20233. A complete list of DAD's is available on request.

#### For Other Programs/Products of the Census Bureau:

Census Catalog.\* This is a complete listing of all publications issued during a given time period; it is published quarterly and is cumulated annually. It covers both publications and unpublished data in print and on computer tape. (Subscription price: \$14.40; single copies vary in price.)

Guide to Programs and Publications: Subjects and Areas, 1973.\* This is an annotated listing of the programs and reports issued by the Census Bureau during the 1960's and early 1970's. It includes the subjects, areas, frequency, and scope of the Census Bureau's programs and publications in agriculture, the economic censuses and surveys, geographic reports and maps, governments, population, housing, statistical abstract and supplements, and studies of foreign countries. (227 pp. at \$2.45).

Data User News. <sup>+</sup> This is a monthly publication designed to inform census users about new activities and the use of products and services of the Census Bureau. (Subscription price—\$4.00). Sample copies available on request.

#### For Ideas on Uses of Census Data:

Census Data for Community Action. HIllustrates the use of census data in neighborhoods of metropolitan areas using census reports. (19 pp. at \$0.50).

Measuring Markets.\* This publication describes the usefulness of government data in market research. It is divided into four parts:

- describes some of the measureable characteristics of markets;
- (2) examines various types of available Federal and State statistics;
- (3) presents case studies of uses of data in market measurement; and
- (4) provides a bibliography of major Federal and State sources of statistics. (71 pp. at \$1.35).



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<sup>-</sup>Available from the Subscriber Services Section (Publications), Bureau of the Census, Washington, D.C. 20233.

<sup>&</sup>lt;sup>o</sup>No longer in print. Check major libraries for a loan copy or order on microfiche or reproduction from the Bureau of the Census Library. Washington, D.C. 20233.

<sup>\*</sup>Available from Superintendent of Documents, U.S. Covernment Printing Office, Washington, D.C. 20402.

#### Statistical Compendia

The following reference sources serve a dual function: they present data from the Census Bureau and a wide variety of other sources, and, through citations and bibliographic notes, they direct the user to more extensive data.

Statistical Abstract of the United States.\* Provides recent data, mostly at the national level. Issued annually. Includes a guide to sources (1975 edition S8 paperback from the Government Printing Office. Also available commercially under the title 1976 U.S. Fact Book. American Almanac, S3.95, published by Grosset and Dunlap, New York).

County and City Data Book. 1972.\* Provides broad selection of data items for States, SMSA's, counties, cities of 25,000 or more inhabitants and urbanized areas. Issued about every 5 years (1020 pp. at \$18.65).

Historical Statistics of the U.S.. Colonial Times to 1970.\* Provides time series, mostly at the national level (two vols. issued as a set, 1298 pp. at \$26).

# Inquiry Service for Data Users

Through its Data User Services Division in Washington, D.C.. and through its regional offices in 12 major cities, users can ask questions about Census Bureau products and services. See listing on page 21.



<sup>\*</sup>Available from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402

# Figure 1. Subject Items Included in the 1970 Census

#### COMPLETE COUNT DATA ITEMS

-Shown for all census areas including city blocks

#### Population Items

100 percent . . . . . . . . . . . . . . . . . . Relationship to head of household Number of units at this address

Color or race

Age Sex

Marital status

Telephone

Housing Items

Private entrance to living quarters

Complete kitchen facilities

Rooms Water supply Flush toilet Bathtub or shower

Basement

Tenure (owner/renter) Commercial establishment on property

Value Contract rent Vacancy status Months vacant

#### SAMPLE DATA ITEMS

(These variables

not in Census

Tracts reports)

-Not shown in some reports, e.g., Block Statistics -Summaries are subject to sampling variability

#### Population Items

#### Housing Items

State or country of birth Years of school completed Number of children ever born Employment status Hours worked last week Weeks worked in 1969

Last year in which worked Occupation, industry, and class of worker Activity 5 years ago

Income in 1969 by type Country of birth of parents Mother tongue

Year moved into this house Place of residence 5 years ago School or college enrollment

(public or private) Veteran status Place of work

Means of transportation to work Mexican or Spanish origin or descent

Citizenship

Year of immigration When married

Vocational training completed Presence and duration of disability Occupation-industry 5 years ago

Components of gross rent

Heating equipment Year structure built

Number of units in structure and

whether a trailer Farm residence

Source of water Sewage disposal Bathrooms Air conditioning **Automobiles** 

Stories, elevator in structure

Fuel-heating, cooking, water heating

**Bedrooms** 

Clothes washing machine

Clothes dryer Dishwasher Home food freezer Television Radio Second home

#### **DERIVED VARIABLES (illustrative examples)**

#### Population Items

Families Family type and size Poverty status Spanish surname Spanish heritage Population density Size of place Foreign stock

#### Housing !tems

Persons per room ("crowding") Household size

Plumbing facilities

Institutions and other group quarters

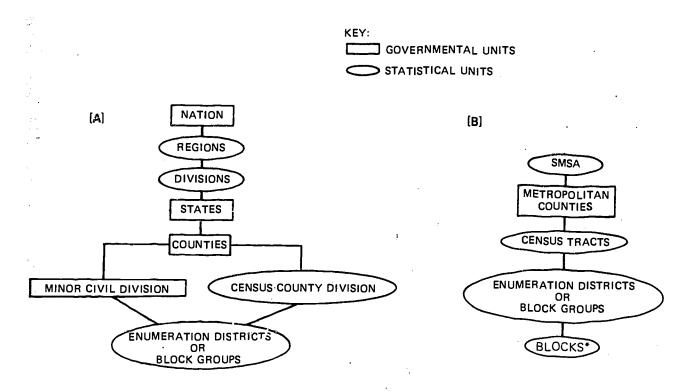
Gross rent

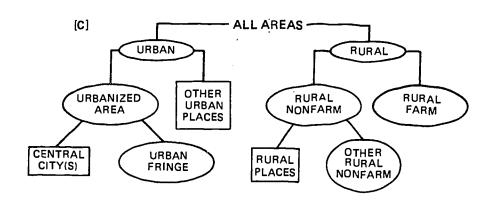


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# Figure 2. Census Bureau Geographic Units— Their Hierarchical Relationships

These figures illustrate hierarchical or "nesting" relationships among census geographic areas. Note that the hierarchies overlap, e.g., counties are subdivided into MCD's or CCD's (figure A), into urban and rural components (figure C), and, inside SMSA's, into census tracts (figure B). Note also the relationships among governmental and statistical units as data summary areas.

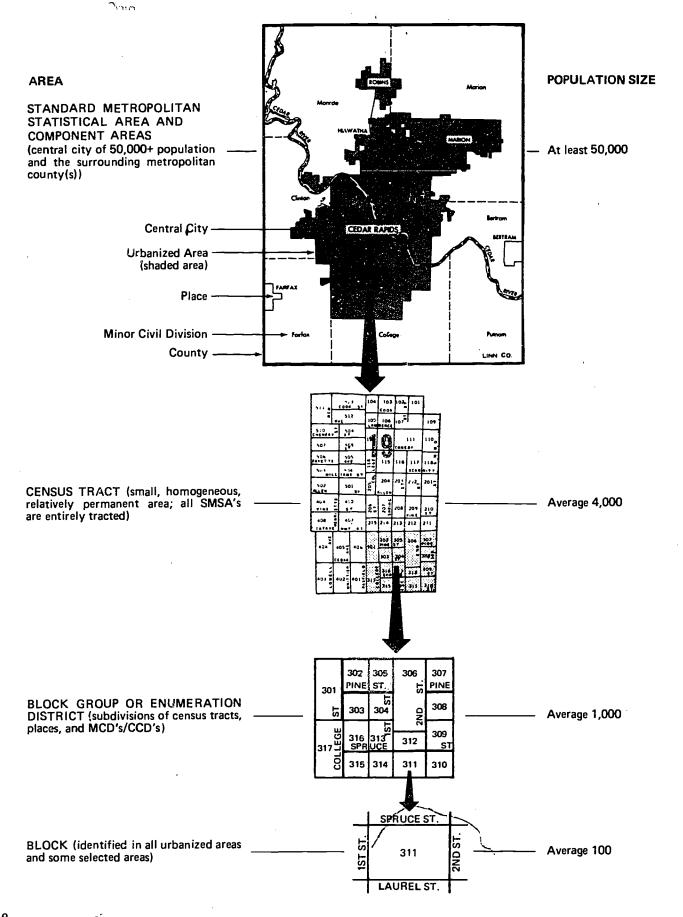






<sup>\*</sup>Blocks do not cover the entire SMSA, only the urbanized part.

Figure 3. Geographic Subdivisions of an SMSA





# Figure 4. Sample Table From "General Social and Economic Characteristics" for the State of Maryland (PC(1)-C22)

Social and Labor Force Characteristics for places of 2,500 to 10,000: 1970

P. 1										
Places	Calvertan (U)	Capital Heights	Carmody Hilts-Pepper Mill Village (U)	Chapel Oaks-Cedar Heights (U)	Chester- town	Cheverly	Colesville (U)	Calumbia (U)	Caral Hills (U)	Cristield
PLACE OF BIRTH Total population.	6 535 346	2 713 62	<b>6 29</b> 5	<b>6 020</b>	3 476 34	6 645	7 438	8 701	7 252	3 075
Foreign born	6 189	2 451	6 280	6 011	3 440	307 6 358	408 9 030	250 8 451	7 109	3 075
Barn in State at residence	2 220 3 777	816 1 545	1 908 3 494	1 ?80 2 ?88	2 147 1 099	1 990	2 615 6 069	2 963 5 106	2 024	2 579
Northeast	1 021	135	184	184	575	4 035 1 051	1 892	. 2 200	4 159 455	385
North Central	483   2 147	90 1 309	51 3 165	138 2 440	104	497 2 381	957 2 893	995 1 704	215 3 421	8 242
West	126	11	94	26	29	106	327	207	3 421	14
State at birth not reported	51 141	18 272	40 838	1 414	184 10	65 268	113 233	144 238	58 868	10
RESIDENCE IN 1965	1					ı				
Tatel population, 5 years old and over	5 682	2 499	5 471	5 412	3 272	6 196	8 572	7 462	6 408	2 904
Same house	1 777 3 675	1 287 960	1 012 2 940	3 131 1 623	1 499 1 583	3 932 1 866	2 990 4 900	6 077	2 177 2 958	1 543 1 234
Same caunty Different county	1 440 2 235	372 588	676 2 264	376 1 247	528 1 055	1 107 759	1 930 2 970	287 5 790	561 2 397	993 241
Same State	1 296	12	131	39	439	128	2 970 932	2 658	119	176
Different State	939 219	576 10	2 133 64	1 208 i 87	616 309	631 - 126	2 038	3 132 1 283	2 278	65
North Central	49		- 04	64	86	47	205	721	57	
South	589 82	566	2 022	957 100	152 69	374 84	1 041	974 154	2 071	55
Abroad	108	94	129	14	7	113	280	271	11	13
Mayed, 1965 residence not reported	122	158	1 390	644	183	285	402	467	1 262	114
SCHOOL ENROLLMENT								i		İ
Percent enrolled, 3 to 34 years old	61.5 35.0	61.5	\$1. <b>9</b> 17.5	48.2 13.5	61.0	60.5 17.9	73.0 48.7	53.7 39.4	50.1 16.6	69.4
5 and 6 years old	93 0	68 2	78.5	79.8		97.2	99 9	87.8	71 3	84 8
7 to 13 years old	99.1 96.8	99 9 99.9	93.7 86.4	93.7 95.0	96.0	99.4 89.2	97.3   96.8	99.9 98.8	96 6 84 0	99 9 82 9
16 and 17 years aid	99.9	***	93 7	94.0		91.8	96.4	99 9	93 8	99 9
18 and 19 years ald	87 5 63 0		78.5 29.7	48.9 6.6	90.1 69.7	68.6	71.51 87.7	79 0 38 8	60 5 1 26 7	
22 to 24 years old	172	•••	3.1	1.0	33.9	13.5	28.7	195	11.1	
25 to 34 years old	12 1	2 6	5 3	5.4	4.8	8.9	10 3	89	8.2	-1
YEARS OF SCHOOL COMPLETED			•				4			
Total persons, 25 years old and over No school years completed	3 274	1 357 16	2 658 18	3 106   38	1 746	3 618	4 685 58	4 269	2 437 37	1 884 35
Elementary 1 to 4 years	ič	67	54	166	92	39	31 112	40	89 363	157 486
5 to 7 years	59 58	212 164	206   170	409 244	262 120	141 173	iii	73	335	181
High school 1 to 3 years	341	382	699	820	442 304	523 1 337	328 1 297	236 912	957   1 200	642 216
Callege 1 to 3 years	1 287 542 967	425 51 40	852 299 366	955 218 256	257 261	664 741	946	838 2 170	372 284	110
4 years ar mare	12.9	10.7	122	11.5	11.7	12 7	143	16 0	120	9.4
EMPLOYMENT STATUS					ŀ		-		1	l
Male, 16 years old and avor	1 912	767	1 596	1 946	1 275	2 253	2 737 2 369	2 515 2 327	2 187 1 853	9 <b>60</b> 731
Labor force	1 647 86 1	654 83 i	1 380 86 5	1 553 79 8	868 68.1	82 3	86.6	92 5	84 7	76 1
Civilian labor force	1 643	639	1 318 1 318	1 525 1 467	854 i 828 i	1 840 1 810	2 339	2 283 1 2 257 I	1 779	720 627
Emplayed	1 640	626 13	1 318	58	26	30 1	62	26	29	93
Percent at Civilian labor tarce	0.2	20	,l	3.8	3 0 407	1 6 ! 398 i	2 7 368	1 1 1 188	1 6 334	12 9
Nat in labor farce	265 239	133	216 199	290	300	283	289	138	216	46
AS years and over	26	57	17	103	107	;10	79	50	118	133



# Figure 5. Summary of Major 1970 Census Reports

Type of	output	Title	Description	Geographic area	Unit of issue	
Advance :	Sarios					
POPULATION:	PC(AT)	Final Population Counta	Official population counts,	States, counties, subdivisions, all incorporated places, unincorporated places of 1,000+.	United States: each State: District of Columbia.	
	PC(V2)	General Population Characteristics	Data on age, sex, race, relationship to household head,	States, SMSA's, counties, places of 10,000+ population.	United States; each State; District of Columbia.	
HOUSING:	HC(V1)	General Housing Characteristics	Selected data on 100-percent housing subjects.	States, SMA's, counties, places of 10,000+ population.	United States, each State; District of Columbia,	
Final Se	ries					
POPULATION:	PC 1	Volume I, Characteristics of the Population	This volume consists of separate reports described in Series PC(1)-A through PC(1)-D below.	(See Series PC(1)-A through PC(1)-D below.)	United States; each State;	
	PC(1)-A	Number of Inhabitants	Final official population counts.	States, counties (by urban-rural residence), SMSA's, urbanized areas, county subdivisions, all incorporated places, unincorporated places of 1,000+ population.	District of Columbia; Puerto Rico; Guam; Virgin Islands; American Samoa; Canal Zone; Trust Territory of the Pacific Islands.	
	PC(1)-B	General Population Characteristics	Data on age, sex, race, marital atatus, and relationship to head of howsehold (100% population subjects).	States, counties (ss above), SMSA's, urbanized areas, county subdivisions, places of 1,000+ population.	)	
	PC(1)-C	General Social and Economic Characteristics	Dats on population subjects collected on a sample basis.	States (by urban, rural-nonfarm, and rural- farm residence), countles, SMSA's, urbanized areas, places of 2,500+ population.	United States; each State;	
	PC(1)-D	Detailed Characteristics	Data on most population subjects collected on a sample basia, presented in detail and cross-classified by age, race, and other characteristics.		District of Columbia; and Puerto Rico.	
	PC(2)	Volume II, Subject Reports	Detailed information and cross- relationships for selected pop- uistion characteristics.	United States; regions; for a few reports, States and SMSA's,	Selected subjects.	
	PC(S1)	Supplementary Reports	Open series presenting miscellaneous types of population data such as special compilations and selected tables,	United States; some by State and SMSA's, counties, and places of 2,500, population.	Selected aubjects,	
OUSING:	HC'1	Volume I, Housing Characteriatics for States, Cities, and Counties,	This volume consists of the separate reports described in Series HC(1)-A and HC(1)-B below.	(See Series HC(1)-A and HC(1)-B below.)	United States; each State; District of Columbia; Puerto Rico; Guam; Virgin Islands;	
	HC(1)-A	General Housing Characteristics	Data on the housing subjects collected on a 1001 basis.	States, counties, SMSA's(by urban-rural parts), urbanized areas, places of 1,000 population.	American Samoa; Canal Zone; Trust Territory of the Pacific Islands.	
	HC(1)-B	Detailed Housing Characteristics.,	Data on the housing subjects collected on a scaple basis.	States, counties (by urban, rural-nonfarm, and rural-farm parts), SMSA's, urbanized areas, places of '00' population.	United States; each State; District of Columbia; and Puerto Rico.	
	HC(4	Volume II, Metropolitan Housing Characteristics	Data covering most of the 1970 censua housing subjects in considerable detail and cross-classification.	SMSA's and their component large cities.	United States; each SMSA,	
			Selected data, 1001 population and housing subjects,	Blocks.	Each urbanized area; contract block statistics areas by Sta	
	HC(4)	Luange	Data on components of change based on a sample survey conducted in late 1970 and early 1971.	Fifteen SMSA's, separately for central city and balance of SMSA	United States and regions; each of 15 SMSA's	

	BC(5)	Volume V, Residential Finance	Data on financing characteristics of homeowner properties and rental and vacant properties. Based on a sample survey conducted in early 1971.	Timted States, regions, presented by size of place and by type of ares.	One report,
	HC(6)	Volume VI, Plumbing Facilities and Estimates of Dilapidated Housing.	Data on plumbing facilities reported in the census and estimates of dilapidation.	United States, regions, divisions, States, SMSA's, central cities and other cities of 50,000+ population, and constituent counties.	One report.
	HC(7)	Volume VII, Subject Reports	Detailed information and cross- classifications for selected housing characteristics.	United States, regions; for some reports, States and SMSA's.	Selected subjects.
	HC(S1)	Supplementary Reports	Open series presenting miscellaneous types of housing data such as special compilations and selected tables.	United States, regions, divisions, States, urbanized areas, Congressional districts, SMSA's, urbanized areas, counties, places of 2,500+ population, tracts.	Selected subjects.
JOINT POPULATION HOUSING:		Consus Tract Reports	Data for most 1970 census population and housing subjects.	SMSA's by census tract.	Each SMSA.
	PHC(2)	General Demographic Trends for Metropolitan Areas, 1960 to 1970.	Comparative 1960 and 1970 data on population counts and selected 100% population and housing subjects.	State, counties (population counts only), SMSA's and their central cities and con- stituent counties.	United States; each State; District of Columbia.
	PHC(3)	Employment Profiles of Selected Low-Income Areas	Data on social and economic characteristics of residents of low-income areas based on sample surveys conducted during late 1970 and early 1971.	Selected poverty neighborhoods in cities.	Sixty reports for 51 cities; 1 report each for 7 Jural areas
METHODOLOGICAL REPORTS:	PHC(E)	Evaluation Reports	Open series presenting results of the 1970 census evaluation program.	United States	
	PHC(R)	Procedural Reports	Open series presenting information on administrative and methodological aspects of the 1970 census, including a comprehensive procedural history.		
		Other assorted titles	Includes technical papers, working papers, and coding manuals.		
OTHER REPORTS:	GE40	Census Tract Papers	Open series; papers on small-area research.		
	G260	Computerized Geographic Coding	Open series.		
	GE50	United States Maps	Open series.	United States; counties.	Selected subjects.
	GE70	United States Maps	Open series.	United States; counties.	Selected subjects.
	GE80	Urban Atlases	12 maps showing population and housing characteristics.	Census tracts within 65 SMSA's	Each of 55 SMSA's
		Index to 1970 Census Summary Tapes	Subject index to 1-6th summary tape counts		
		Index to Selected 1970 Census Reports	Subject index to PC(1), HC(1,2,3), and PHC(1,2).	•	
		1970 Census Users' Guide	Description of census concepts and procedures with census users' dictionary.		
		Assorted titles	Documentation to computerized files.		
		Data Access Descriptions	Papers on Specific 1970 census data products.		

Figure 6. Geographic Areas Summarized in 1970 Census Data Products

				Complet	te Count	(100%)	Data On	ly		<u>_</u>			Com	plete Co	unt and	Semple	Data		
,		First	count			Secon	id count		Third	Count		Fourt	h count		Т	: count	T	Sixth coun	
Geographic area	Summary tape	Micolilm	PC(1)-A1	HC(VI)1	Summery tape	PC(1)-81	HC(T)-A <sup>1</sup>	PHC(1)*	Summery tape	HC(3)1	Summary tape <sup>2</sup>	PC(1)-C'	HC(1)-81	PHC(1)	Summery	Microfilm	Summery tage <sup>3</sup>	PC(1)-D	HC(2)
Blocks,	_						<del>                                     </del>		x	×	<del> </del>	_		(part)			Lape -		<del>                                     </del>
Enumeration districts or blockgroups	44	x							•	•					c				
Consus tracts					1/4			,	(3)		4,				C				
Minor civil divisions or census county divisions.	В	x x	, x		B						В.			X	·				
All places	B	x	×								P				³c	X			
Places > 1,000 onlys					В	x	,								( <sup>8</sup> )				
Pinces > 2,500 only*											С	_							
Places > 10,000 only* .,				x								<b>X</b>	x						}
Coum:1es,	8	x	x	,	В	x	x				c						_		İ
Urban/rural parts of counties			x		Ð	x					c	×	x			x	¹x		
Standard metropolitan statistical areas	В	1		x	В	x	,	x			c	x _							
Urbanized aress of SMSA's	В	x	x		В	x :	,	•			c	X	*				x	x	×
Components of SMSA's					В		-	x	j			X	*						
Congressional districts	В	,						•	Ì	İ	c				(5)		'x	X	x
itate.,	В	x	x	x	8	x	,					_		ĺ	()	ĺ			
ZIP codes				}								x	*	ļ	A,B	ĺ	x	X.	



Titles of these reports are given on fig. 5 and described in <u>Data Access Description No. 39</u>
On the fourth and sixth counts, population and housing data appear on separate files.
MC D/CCD summaries are given only incounties with no census tracts.
The first, second, fourth, and fifth counts have files designated A and B or A, B, and C.
Tract totals appear for only that part of the tract which is covered by block summaries.
Places include all incorporated places and unincorporated places of 5,000 or more in urbanized areas or of 1,000 or more elsewhere,
Sixth count tapes provide data for metropolitan counties, central cities, and other cities over 50,000 population. Sixth count housing files also present data for nonmetropolitan counties of 50,000+.
Data for small places can be created by aggregating summaries of component enumeration districts.
The congressional district profile tape contains fifth count information and a few additional items.

### exercises

(Answers to exercises 1 to 6 are on pp. 19-20.)

#### Exercise 1. LEARNING TO READ TABLES

Turn to figure 4 (p. 9). This shows part of a table from a State PC(1)-C report, General Social and Economic Characteristics.

- (a) The type of geographic area shown in the table is:
- (b) Census data can be used in a community to pinpoint a need for action and to evaluate the effect of particular social programs. The questions below are examples. Assume you are the city planner for Columbia, Maryland and answer the questions as well as you can using the information provided in figure 4, page 9.
  - (1) Does Columbia have a significant proportion of its total population from States other than Maryland? From what region of the country are most of these out-of-Staters?
  - (2) Would you say Columbia has a large high school dropout problem?
  - (3) If Columbia instituted a special program for adults who have not earned a high school diploma, what proportion of the population might attend?
  - (4) Was unemployment of males a statistically large problem in Columbia in 1970? What proportion of the unemployed are men over age 65?
- (c) Compare this pattern with that of another town.

#### Exercise 2. DEFINING DATA REQUIREMENTS

Suppose that you owned a hardware and lumber store in a small SMSA and wanted to increase your business. A large number of your current customers are homeowning do-it-yourselfers, replacing worn out fixtures, finishing their basements, and so forth. You decide to put on a weekend promotional home show at which distributors of various products you sell would display the latest in screendoors, awnings, shop tools, appliances, and so forth. There are several available locations for the show, and you want to choose the one in the vicinity of the most prospective customers. Your local librarian suggests you look at census data.

#### Question 1

What three or four subject variables reported in the 1970 census would be especially relevant to finding what areas have the most prospective customers for you?

#### **Question 2**

What geographic areas summarized in the census would be most useful? Why?

#### Question 3

What specific report would you use? Locate the appropriate report for your area. Are all the subjects you want available?

#### Exercise 3. USING DATA FINDING GUIDES

Publications needed for this exercise:

Volume I, Characteristics of the Population PC(1), chapters C and D, a State volume (or PC(1)-C and PC(1)-D for a State).

Index to Selected 1970 Census Reports

Index to 1970 Census Summary Tapes\*

Volume I, Housing Characteristics\*

<sup>\*</sup>Optional, but provides a more complete answer to the question.



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#### Exercise 3—Continued

You are an aide to a State representative who is interested in the problems of senior citizens. The representative wants to draw up some legislation providing extra benefits for the senior citizens in rural areas but first needs to know what problems these people have as indicated by the 1970 Census of Population and Housing.

#### Question 1

First state the research problem according to geographic levels which might be used and then according to any five variables that might be important. (State the desired variables before looking to see if they are in the census.) Be sure to include some cross-classifications of two or more subjects.

#### Question 2

No census tables include "senior citizens" in the title. What term(s) would you look for instead? How did you find it (them)?

#### Question 3

Of the variables you listed in question 1 of this exercise, which cannot be found in the 1970 census publications, microfilm, or 1970 census; if they can be found, list the publication and table number or summary tape count and table number, along with the geographic area you would use.

#### Question 4

Of the variables you listed in question 1 of this exercise, which cannot be found in the Census Bureau publications, microfilm, or tapes? What other sources you would consult to find the data? Would the Census have the data you want if you altered your requirements slightly (i.e., use a different geographic definition—rural rather than nonmetropolitan for example—or change the age categories, etc.)?

#### **Ouestion 5**

Now that you are more familiar with the census data provided on senior citizens, are there other tables that might provide interesting information for the State representative?

#### Exercise 4. USING EXPLANATORY MATERIAL IN REPORTS

Publications needed: PC(1)-C report, any State

Use the appendices of the report to answer the following questions.

- (a) If a census were conducted today, would you be counted at your college address or at your permanent (or parents') address?
- (b) What is the meaning of "(U)" with some of the place names in figure 4 of this workbook?
- (c) What occupational groups does the Census Bureau define as white collar?
- (d) If you had earned \$2,000 in 1969, would you have been considered above or below the poverty level?
- (e) What would be the estimated standard error of 250 as the reported number of working mothers with preschool children in a town of 10,000 people? Determine a "95-percent confidence interval" by taking the reported number plus or minus two standard errors. How would that affect your planning of a daycare center for every 50 working mothers?



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## Exercise 5. COMPARING A COUNTY TO ITS STATE AND THE NATION

Publication needed: PC(1)-C, General Social and Economic Characteristics for your State.

Compare the Nation, the State, and a county by completing the following table and answer the question at the end.

Subject	U.S.	State	County
RESIDENCE	•		
Total Population	203,210,158		
Percent Rural	26.5	***	
Percent of the native population residing in State of birth	68		
EDUCATION			
Median School Years Completed by persons 25 years old and over	12.1		
Percent High School Graduates of persons 25 years and over	52.3		
INCOME			
Median Family Income	\$9,590		
Percent Families w/Income Less than Poverty Level	10.7		
EMPLOYMENT		•	
Percent in Labor Force of persons 16 years old and over	58		
Percent Workers in County of Residence	74.8		
Percent Workers in White Collar Occupations	48.2		·
Percent Workers Employed by Government	16.1		

#### Question:

Write a paragraph describing how your county compares to State and national patterns. To what kind of public policies and programs might these data relate? Do any of the data merit further exploration?



#### Exercise 6. COMPARING NEIGHBORHOODS IN A METROPOLITAN AREA

Publication needed: A PHC(1) Census Tracts report for an SMSA of choice.

Census data are often used to compare the characteristics of different population groups. For this exercise, use a census tract report for an SMSA you live in or in which you are interested. Pick two tracts to compare, basing your selection on characteristics of interest to you. Consider possibilities such as one you have lived in, one with a large minority population, one which is outside the central city limits, one with a high median family income, one with a large proportion in group quarters, or one with a relatively large elderly or young population. Fill in the table with the appropriate summary statistics for each tract and the SMSA as a whole. Answer the questions on page 17.

## Census Statistics For Selected Tracts [Data From PHC(1) Reports]

Report Table No.	Subject	SMSA	Tract No	Tract No
P-1	Total population		·	
P-1	Percent Negro	·		
P-1	Number of persons other than white or Negro			
P-1	Number of persons age 65 and over			
P-1	Percent of all persons who are age 65 and over			
P-1	Average number of persons per household			
P-1	Percent of children under 18 years who are not in husband-wife families			
P-2	Percent of persons 16-21 years old, not high school graduates and not enrolled in school (dropouts)			
P-2	Median years school completed for persons 25 and over			
P-2	Number of persons who went to work by private auto		<del></del>	<del></del>
P-2	Number of persons who went to work by public transportation			
P-3	Number of working mothers of children under age 6 with husband present in household			



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## Census Statistics for Selected Tracts [Data From PHC(1) Reports] - Continued

Report Table No.	Subject	SMSA	Tract No	Tract No
P-3	List the two industries employing the most persons			
P-4	Median family income			
P-4	Percent of families below poverty level			
H-1	One-person households			
H-1	Number of housing units with more than one person per room			
H-1	Median monthly rent of renter occupied units			
H-2	Number of single-family houses			
H-2	Number of families who had lived there more than 20 years			
H-2	Number of households without an automobile			-

#### Question 1

Write a short description comparing the two census tracts and the SMSA. (Look for interrelationships in the data-don't just catalog the numbers.)

#### Question 2

If you worked for a bus company which is looking for likely new routes, what types of decisions might you make based on the information about the two tracts?

#### Question 3

If you were a city planner charged with locating a public health facility, what decisions would you make about the suitability of the two tracts for these facilities? What other service facilities might be indicated by the tract characteristics?

#### Question 4

Compute the standard error for any two sample data variables. (See app. C, pp. 17-19 in the Census Tracts report.)



### answers to exercises

#### Exercise 1.

- (a) Places 2,500 to 10,000 for the State of Maryland in 1970
- (b) (1) This question can be answered from the information under "place of birth" (or "lifetime migration") and "residence in 1965" (or "recent migration"), depending on how you choose to interpret the question. Place of birth shows that 34 percent (2963/8701) of the population was born in the State of Maryland and also lived there in 1970 ("born in State of residence"). Almost six out of ten (5106/8701) Columbia 1970 residents were born in a State outside of Maryland but had moved to Columbia, Maryland, by 1970. (Note: Some were also foreign-born, did not report their State of birth, or were born abroad, at sea, etc.). Most were born in the Northeast or the South:

Northeast	(220/8701)	25%
North Central	(995/8701)	11
South	(1704/8701)	20
West	(207/8701)	2

From "residence in 1965," we learn that less than 9 percent (647/7462) lived in the same house in Columbia in 1965 and 1970. About 36 percent (2658/7462) lived someplace in Maryland in 1965 and moved to Columbia by 1970 while 42 percent moved to Columbia from a State outside Maryland between 1965 and 1970. The recent inmigrants from other States were primarily from the Northeast and the South:

Northeast	(1283/7462)	· 17%
North Central	(721/7462)	10
South	(974/7462)	13
West	(154/7462)	2

By either the lifetime or recent migration measure, most Columbians are from out-of-State, and the planner would probably want to study further the characteristics of those migrants.

(2) The high school dropout problem can be approximated by the percent of those aged 14-17 not enrolled in school ("school enrollment"):

Age	Percent Enrolled	Percent not enrolled (dropout approximation)
14-15	98.8	1.2
16-17	99.9	0.1

(3) "Years of school completed" for persons over age 25 indicates that 349 people have less than a high school diploma in Columbia—only 8 percent of the population over 25 years of age. In fact, half the population has at least 4 years of college.

(4) In 1970, 26 males (1.1 percent) over age 16 were unemployed while 2,257 were employed. The second part of the question is a trick—it cannot be answered from the information given. Some may think that "unemployed" has the same meaning as "not in the labor force," but this is not the case. The Census Bureau consistently uses the same phrases and terms for particular meanings. Users should always read the definitions of the terms they are interested in, and these definitions can be found in appendices A and B of the 1970 census reports.

#### Exercise 2.

Question 1 - Variables (examples only -many choices possible)

Tenure — identifies homeowners versus renters

Income in 1969 — middle income residents may be the most likely customers assuming that low income people do not have enough purchasing power to buy your wares and high income people would have home improvements done professionally. Value of home could also be used.

Year structure built — assuming that new homes do not need much work.

Age of homeowner — younger homeowners probably are more likely to be do-it-yourselfers than older homeowners.

#### Question 2 - Areas

Census tracts — convenient sized units of analysis; both complete count and sample data (e.g., income and year structure built) are available.

Cities — probably too large a unit of analysis

Enumeration districts or block groups — data are not available in printed reports, only on computer tape. Computer use may or may not be practical depending on the resources of your firm.

Blocks —sample data items are not available.

#### Question 3 - Report

If the PHC(1) Census Tracts report is selected, you will find that the age of homeowner or age of household head for owner-occupied units is not available.

#### Exercise 3.

#### Question 1 - Statement of the Research Problem

- (a) Geographic levels possible choices
  - Rural Areas

Advantages—Data are published for this level.

Disadvantages—Rural areas are in both metropolitan and nonmetropolitan places, so it is difficult to control for central city influence.



#### Exercise 3.-Continued

Nonmetropolitan Areas

Advantages—Data are published at this level. Excludes population which is economically and socially integrated with a central city.

Disadvantages—Includes urban population (although the urban population is not dense enough or large enough to meet SMSA criteria).

• Counties in which 50 percent (or some other specified degree) of the population is classified rural.

Advantages—Allows for the study of characteristics on a continuum (those in 100 percent rural counties may be different from those with considerable "urban influence.") Also, considerable data are available for counties.

Disadvantages—The data are not tabulated this way and have to be specially tabulated, although use of the computer eases this task to manageable proportions.

- Places 1,000-2,500 Inhabitants
   Advantages—Some data tabulated for this category.
   Disadvantages-Excludes those people in places under a population of 1,000.
- (b) Subject Variables—possible choices
  - 65 years old and over, by residence in a nursing home
  - 65 years old and over, by poverty status
  - 65 years old and over, by lacking some or all plumbing facilities by wood fuel used
  - 65 years old and over, by median weeks worked
  - 65 years old and over, by contract rent over \$100 by presence of children under 18
  - 65 years old and over, by owner occupied homes valued less than \$15,000

#### Question 2 — Terminology

Senior citizens could be defined in terms of age. You could choose the category of "persons 60 years old and over," though age 65 as a cutoff has the advantage that it is more frequently reported in census tables. The introductory material and cross-reference guide in the *Index to Selected 1970 Census Reports* helps you systematically find the appropriate census terminology. It would also be acceptable, though more time consuming, to browse through data reports until you found appropriate categories.

#### Question 3 — Sources

- (a) Table Finding Guide (in the front of a PC(1) or HC(1) report)
- (b) Index to Selected 1970 Census Reports
- (c) Index to 1970 Census Summary Tapes
- (d) 1970 Census Users' Guide, Part Il
- (e) For other reports not listed in either index (from b or c above), DAD #39, "Reports Related to the 1970 Census of Population and Housing" is a good source. It

describes the subject reports [PC(2) and HC(7)], for example. Students might wish to se if the particular subject reports, PC(2)-4E ("Persons in Institutions and Other Group Quarters") and HC(7)-2 ("Housing of Senior Citizens") have anything that would be helpful to them. Students should also check figure 1 (contents of the 1970 census) and/or the questionnaire to be sure the variables of interest were asked in the census.

#### Question 4 - Other Sources

Check the appendix of the Statistical Abstract, which lists other government data sources. Also check the American Statistics Index.

#### Exercise 4.

- (a) You would be counted at your "usual place of residence." Even if you spend weekends at your parents' home, but normally live in a dormitory 4 or more days of the week, you would be counted at the dorm. (Reference PC(1)-C, p. app. 1.)
- (b) Unincorporated place. (Reference PC(1)-C, p. app.3.)
- (c) Professional, technical, and kindred workers; managers and administrators, except farm; sales workers; and clerical and kindred workers. (Reference PC(1)-C, p. app. 21.)
- (d) The answer depends on whether you were living with people who were related to you, i.e., in a family. If you were living alone or with others not related to you, you would have been above the poverty level. If you were part of a family, the total family income is used. If the family income was \$2,000, then you would have been below the threshold for the poverty level in 1969 (exception: If the family was on a farm and had either a female head or a head aged 65 or over). The thresholds for more recent years have been adjusted to account for inflation. (Reference PC(1)-C, p. app. 30.)
- (e) Sampling variability is discussed on pages app. 44 to app. 47. Table C on page app. 46 gives an approximate standard error for 250 (row) in a population of 10,000 (column) of 30. This must be adjusted by the factor in table E for labor force status. (Factors may vary from State to State.) If the factor is 0.8, the estimated standard error is 30 x 0.8 = 24. The 95 percent confidence interval would be 250 plus or minus 48, or 202 to 298. Plans for a daycare center for each 50 working mothers would have to be flexible enough to allow for either one more or one less daycare center or have flexibility in the capacity of each center.

#### Exercise 5 and 6

No answers are provided for these exercises.



# for further information

## To Obtain Information About Census Products and Services:

Data Access and Use Staff, Data User Services Division, Bureau of the Census, Washington, D.C. 20233 Telephone: (301) 763-7454

#### Census Bureau Regional Offices:

Atlanta, GA Boston, MA Charlotte, NC Chicago, IL Dallas TX Denver, CO Detroit, MI	(404) 526-2271 (617) 223-2327 (704) 372-7471 (312) 353-6251 (214) 749-2814 (303) 234-3924	1365 Peachtree St., NE, Room 619 30309 44! Stuart St., 10th Floor 02116 Addison Bldg., Room 510, 222 South Church St. 28202 55 E. Jackson Blvd., Suite 1304 60604 1100 Commerce St., Room 3054 75202 11011 West 6th Ave., Box 25207 80225
Kansas City, KN Los Angeles, CA New York, NY Philadelphia, PA Seattle, WA	(313) 226-7742 (816) 374-4601 (213) 824-7291 (212) 264-3860 (215) 597-4920 (206) 442-7800	Washington Blvd., Bldg. Room 2100 48226 One Gateway Center, 4th & State Sts. 66101 11777 San Vicente Blvd., 8th Floor 90049 Federal Office Bldg., Room 4102, 26 Federal Plaza 10007 William J. Green, Jr. Federal Bldg., Room 9244, 600 Arch St. 19106 Lake Union Bldg., 1700 Westlake Ave., North 98109

#### To Obtain or Order:

Computer Tape Products	Customer Services Branch
Census Maps	Data User Services Division
• Special Tabulations	Bureau of the Census
<ul> <li>Microfilm (First Count and Fifth Count—</li> </ul>	Washington, D.C. 20233
County and MCD/CCD Tabulations)	Phone: (301) 763-5266
Microfiche of Final Printed Reports	Bureau of the Census Library Washington, D.C. 20233
• Data User News	Subscriber Services Section (Publications) Bureau of the Census

## To Obtain Orders Forms for Reports or To Order Reports From the 1970 Census:

Subscriber Services Section (Publications), Bureau of the Census, Washington D.C. 20233.

Printed reports from the 1970 census may also be reviewed at the U.S. Department of Commerce district offices listed on page 22.



Washington, D.C. 20233

# u.s. department of commerce district offices

- **ALBUQUERQUE**, N.M., 87101, Suite 1015, 505 Marquette (505) 766-2386.
- ANCHORAGE, 99501, 632 Sixth Ave., Hill Bldg., Suite 412 (907) 265-5307.
- ATLANTA, 30309, Suite 600, 1365 Peachtree St., N.E. (404) 526-6000.
- **BALTIMORE**, 21202, 415 U.S. Customhouse, Gay and Lombard Sts. (301) 962-3560.
- BIRMINGHAM, ALA., 35205, Suite 200-201, 908 S. 20th St. (205) 254-1331.
- BOSTON, 02116, 10th Floor, 441 Stuart St., (617) 223-2312.
- BUFFALO, N.Y., 14202, Room 1312, Federal Bldg., 111 W. Huron St. (716) 842-3208
- CHARLESTON, W.VA., 25301, 3000 New Federal Office Bldg., 500 Quarrier St. (304) 343-6181, Ext. 375.
- CHEYENNE, WYO., 82001, 6022 O'Mahoney Federal Center, 2120 Capitol Ave. (307) 778-2151.
- CHICAGO, 60603, Suite 1304, 55 E. Jackson Blvd. (312) 353-4450.
- CINCINNATI, 45202, 8028 Federal Office Bldg., 550 Main St. (513) 684-2944.
- CLEVELAND, 44114, Room 600, 666 Euclid Av. (216) 522-4750.
- **COLUMBIA**, S.C., 29204, Forest Center, 2611 Forest Dr. (803) 765-5345.
- DALLAS, 75202, Room 3E7, 1100 Commerce St. (214) 749-1515.
- **DENVER**, 80202 Room 161, New Custom House, 19th and Stout Sts. (303) 837-3246.
- DES MOINES, IOWA, 50309, 609 Federal Bldg., 210 Wainut St. (515) 284-4222.
- DETROIT, 48226, 445 Federal Bldg. (313) 226-3650.
   GREENSBORO, N.C., 27402, 203 Federal Bldg., W. Miarket St., P.O. Box 1950. (919) 275-9111, Ext. 345.
- HARTFORD, CONN. 06103, Room 610-B, Federal Office Bldg., 450 Main St. (203) 244-3530.
- **HONOLULU**, 96813, 286 Alexander Young Bldg., 1015 Bishop St. (808) 546 ·8694.
- HOUSTON, 77002, 1017 Federal Office Bldg. 201 Fannin St. (713) 226-4231.
- INDIANAPOLIS, 46204, 357 Federal Office Bldg., 46 E. Ohio St. (317) 269-6214.

- LOS ANGELES, 90024, 11777 San Vicente Blvd. (213) 824-7591.
- MEMPHIS, 38103, Room 710, 147 Jefferson Ave. (901) 534-3213.
- MIAMI, 33130, Rm. 821, City National Bank Bldg., 25 W. Flagler St. (305) 350-5267.
- MILWAUKEE, 53203, 517 East Wisconsin Ave. (414) 224-3473.
- MINNEAPOLIS, 55401, 306 Federal Bldg., 110 S. Fourth St. (612) 725-2133.
- NEW ORLEANS, 70130, Room 432, International Trade Mart, 2 Canal St. (504) 589-6546.
- NEW YORK, 10007, 41st Floor, Federal Office Bldg., 26 Federal Plaza, Foley Sq. (212) 264-0634.
- NEW ARK, NJ., 07102, 4th floor, Gateway Bldg. (201) 645-6214.
- OMAHA, NEBR., 68102, Suite 703A, 1815 Capitol Av. (402) 221-3665.
- PHÌLADELPHIA, 19106, 9448 Federal Bldg., 600 Arch St. (215) 597-2850.
- PHOENIX, ARIZ., 85004, 508 Greater Arizona Savings Bldg., 112 N. Central Ave. (602) 261-3285.
- PITTSBURGH, 15222, 431 Federal Bldg., 1000 Liberty Ave. (412) 644-2850.
- **PORTLAND, ORE.**, 97205, Room 618, 1220 S.W. Third Ave. (503) 221-3001.
- RENO, NEV., 89502, 2028 Federal Bldg. 300 Booth St. (702) 784-5203.
- RICHMOND, V.A., 23240, 8010 Federal Bldg., 400 N. 8th St. (804) 78 2-2246.
- ST. LOUIS, 63105, Chromalloy Bldg., 120 S. Central Ave. (314) 425-3302.
- SALT LAKE CITY, 84138, 1203 Federal Bldg., 125 S. State St. (801) 524-5116.
- SAN FRANCISCO, 94102, Federal Bldg., Box 36013, 450 Golden Gate Ave., (415) 556-5860.
- SAN JUAN, P.R., 00902, Room 100, Post Office Bldg. (809) 723-4640.
- SAVANNAH, 3/1402, 235 U.S. Courthouse and Post Office Bldg., 125-29 Bull St. (912) 232-4204.
- **SEATTLE**, 98109, 706 Lake Union Bldg., 1700 Westlake Ave., North (206) 442-5615.



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# CASE STUDY THE LOCATION OF A PLAYGROUND \*

#### - Using Census Data for Small Areas -

Situation: A city Parks and Recreation Director was recently appointed in a metropolitan area of about 100,000 people; the central city, Middletown, has about 65,000. The immediate task of the park director is to present a plan to the city manager for locating a new city playground in a neighborhood with a large number of children from low-income families where there is currently a lack of play areas. The playgrounds are used most regularly by children aged 5-14. The plan must be presented to the city council with documentation for the recommendation.

#### What does the park director need to know?

- Where in the city are the playground users?
- Where are the existing playgrounds?
- Where is land available for a playground?
- Where are the neighborhoods with a large number of children from low-income families?

#### Where should the park director go to get her information?

- Some is available from her own office (e.g., location of existing playgrounds). She has a large map of the city and draws in the boundaries of the existing parks.
- To determine where land is available, the park director goes to the city planning office and discusses the problem with the director who shows her a map of all existing vacant land sites. The two identify several possible locations which they map onto a cellophane sheet to overlay on the map of other park locations. (See page 5.)
- The park director still needs to know the location of low-income families with children. The city planner suggests she consult 1970 Census data to obtain the information. Age and income data are available for neighborhood-like areas in SMSA's called "census



<sup>\*</sup> This case study was prepared by Cynthia Murray Taeuber, Data User Services Division, Bureau of the Census, Washington, D.C. 20233, (301/763-7019), as part of a curriculum support project for college classes. The contents of these materials are preliminary and comments are invited.

tracts." The planner explains that SMSA stands for "standard metropolitan statistical area," which in 1970, comprised a county with a central city (or twin cities) of 50,000 or more persons plus contiguous counties which were socially and economically integrated with the central county. Census tracts are subdivisions of SMSA's. For a more complete definition, they refer to the 1970 Census Users' Guide, "1970 Census Geography: Concepts, Products, and Programs" (Data Access Description #33), and the statistical publications themselves. The planner explains that Middletown is part of an SMSA so there is a printed publication with the needed data which is referred to as a Census Tract Report. The top left corner of the report has the code "PHC(1)" which is another way to refer to this series of Census reports. The P and H together in the code indicate that the report has data from both the population and housing censuses.

They open the PHC(1) report and look at Table P-1 (reproduced on pages 7-9 of this case study) which gives age data for both males and females (referred to as "age by sex") for the entire county, the city, and the remainder of the county ("balance"), and for the individual census tracts. Studying the table further, they see the lines are marked "Male, 5 to 9 years" and "Male, 10 to 14 years" and the equivalent lines for females. If she uses these data, she can add the columns on the office adding machine to obtain the total number of children aged 5-14.

They then turn to the back of the report where there is a map showing the boundaries of the census tracts and the tract numbers corresponding to the numbers in the table (shown on the map on page 13). From the table of contents they identify Table P-4 titled "Income Characteristics of the Population: 1970" (reproduced on pages 10-12 of this case study). This table shows the income distribution and data for "income below the poverty level." The poverty index provides a range of low-income cutoffs adjusted by factors such as family size, sex of the family head, number of children under age 18, and farm and nonfarm residence. (See Appendix B.)

There are a number of choices among the types of data which might be used to describe the income characteristics of each tract:

(1) an income distribution;(2) the mean or median income;



Mall-area data are also available outside SMSA's. See Appendix A for a discussion of small-area data availability.

<sup>2/1970</sup> Census Users' Guide, Part I, is available for \$2.35 from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Copies of Data Access Description #33 are available by writing to the Data User Services Division, Bureau of the Census, Washington, D.C. 20233.

(3) the number of families whose incomes are from public assistance or public welfare;

(4) percent of families with a given ratio of family income to the poverty level less than 1.0 (the standard definition of poverty used in 1970);

(5) the number of families with incomes below the poverty level; or
(6) the number of families with incomes below the poverty level with related children under 18 years.

Similar data are available for the black and Spanish-language population in Tables P-5 through P-8 for tracts with at least 400 members of the specified group. (These tables are not reproduced in this report.)

The park director studies each possibility in light of her particular needs. She must first decide on a definition of low-income. She can use the 1970 census poverty index or her own operational definition using the income data in options 1 or 2. Even doing that, however, with options 1-5, she can find areas with a concentration of low-income families but she won't know if children were present (a recommendation to place a playground in a predominantly low-income elderly neighborhood would not win the park director a promotion!). Option 6 is a count of families with children under 18 and whose family income is below the poverty level. She cannot directly determine the number of 5-14 year olds from this summary. Thus she has the following choices:

- (1) Use counts of low-income families with children under 18 (Table P-4) and the counts of children aged 5-14 (Table P-1) from all families.
- Approximate the number of 5-14 year olds in low-income families. An approximation can be made by using Table P-4 to compute the number of related children under age 18 in low-income families (multiply the mean number of such children by the number of low-income families with children). Then, using the age data for the total population from Table P-1, compute the proportion of the under age 18 population which is 5-14 years old and apply that to the number of children in low-income families. Appendix C of this case study illustrates the method of approximating. Note that the mean number of children in the families varies considerably and it is not sufficient to make a decision based solely on the number of families.
- (3) Ge the data in the exact form desired by a "special tabulation" from the Census Bureau. The park director called the Census Bureau for a rough estimate and found that a special tabulation would cost about \$3,000.

She decided that in this particular case it was not worth the expense of a special tabulation. With the aid of a calculator, she filled in the computation sheet shown in Figure 2 (page 6) to estimate the number of children aged 5-14 in low-income families. While developing the computation sheet, she noticed that tracts 6, 7, 8, 11, 12, 14, 16, and 17 have data listed in three places: under "Middletown", the "balance of county", and "totals for split tracts." These split tracts, as shown on the tract maps,



cross the city boundaries (broken line), and thus separate data are given for the part of the tract in the city of Middletown, the part outside the city (balance columns), and the total for the entire tract. For this study she used only the data for the Middletown section of the tracts.

The city planner discussed some aspects of the data the user should be aware of:

- The census was taken April 1, 1970. After several years, the characteristics of the population change, especially for small geographic areas, as people age and move in and out of the area. Lacking a source of more recent data, the park director can only assume that the relationship among the tracts are relatively the same as they were in 1970.
- Census data can never be viewed as exact. In any mass statistical operation such as a decennial census, human and mechanical errors occur although efforts are made to keep these non-sampling errors at an acceptably low level. Also, some data are based on a sample and thus subject to sampling variability. (See Appendix D for a more complete discussion.)
- Sometimes data are omitted and replaced by "..." in the data tables. This occurs when (1) the number of people in a certain category is so small that it might be possible to identify them if the information were released and thus the data are withheld to maintain confidentiality; or (2) when the base of a derived figure (such as median or percentage) is too small to provide reliable data, the statistics are not computed to maintain data quality.

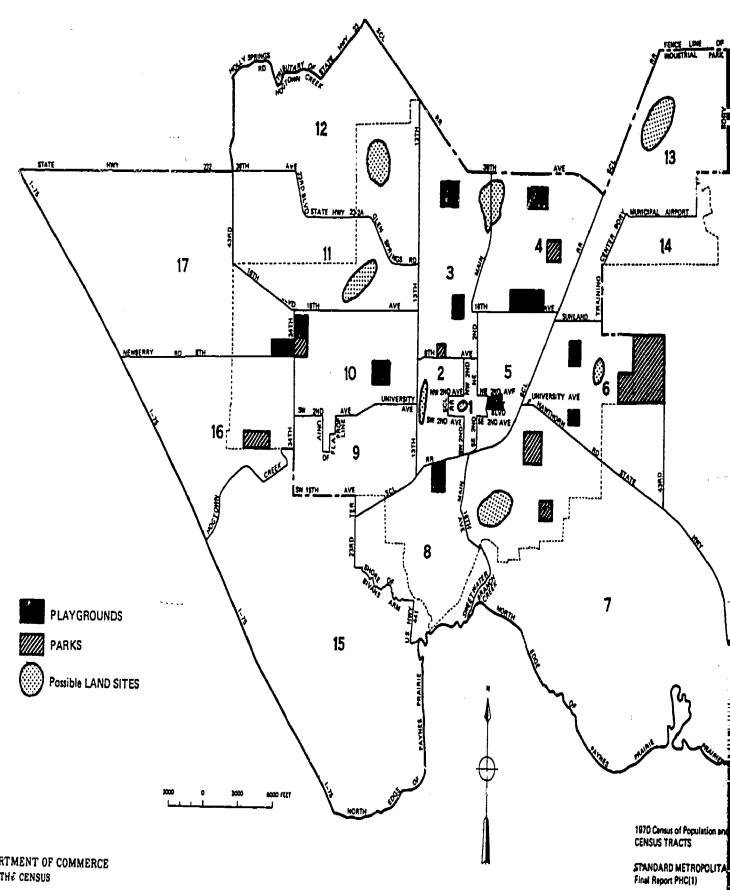
The park director reviewed the data with others in the community who worked in the tracts she picked as possible location sites and then she wrote her report for the city council.

#### EXERCISES

- (1) Compute an approximation of the number of children aged 5-14 in low-income families in Middletown (Use Figure 2. A: illustration of the computation is in Appendix C of this case study.).
- (2) Enter onto the map on page 13 the figures for the approximate number of related children aged 5-14 in low-income families in the census tracts of Middletown.
- (3) Make a second map showing the number of all children aged 5-14 in the census tracts of Middletown.
- (4) Write a report for the city council recommending a location site for the playground in a tract with a relatively large number of children from low-income families with limited playground facilities. Consider in your recommendation the supplementary in ormation on the total number of children aged 5-14 in the tracts as this will impact on the total demand for play space and equipment.



# FIGURE 1 EXISTING PLAYGROUNDS, PARKS, AND POSSIBLE LAND SITES: 1971 Census Tracts in Middletown and Vicinity



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U. S. DEPARTMENT OF COMMERCE BUPEAU OF THE CENSUS

FIGURE 1
ING PLAYGROUNDS, PARKS, AND POSSIBLE LAND SITES: 1971
Census Tracts in Middletown and Vicinity

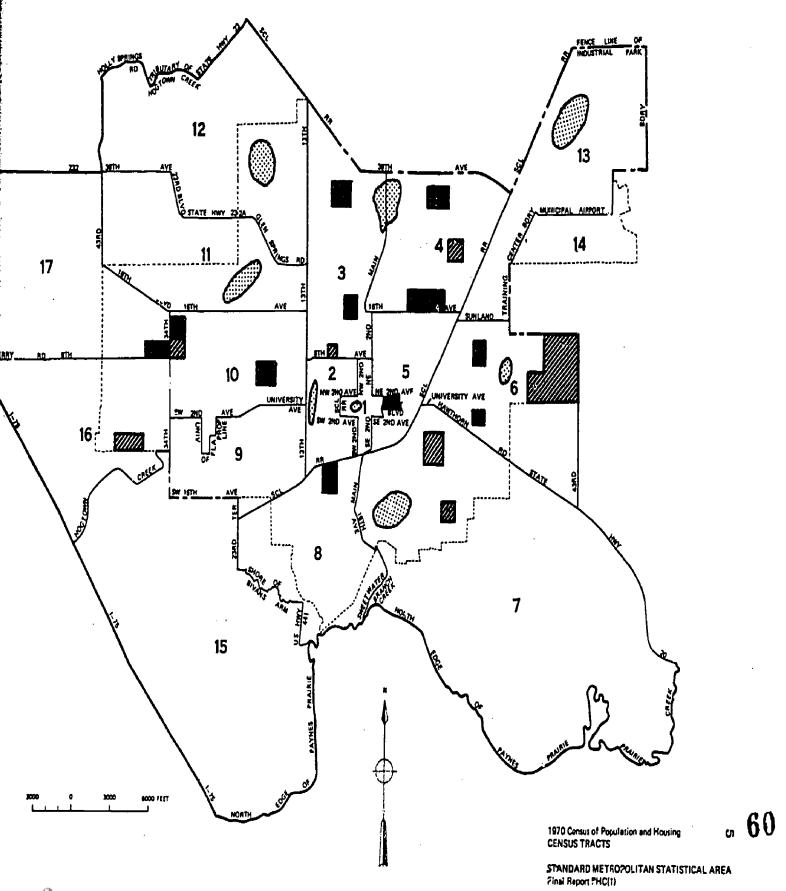




FIGURE 2

Computation of an Approximation of the Number of Children Aged 5-14 in Low-Income Families in Middletown: 1970

	(1)	(2)	. (3)	(4)	(5
Tract No.	Number of children under 18 in low-1/income families	Total No. of 5-14 yr. olds	Total No. un- der 18 yrs.	Pop. aged 5-14 Pop. under 18	Estimated No.
Total SMSA Middletown	7 <u>137</u> <u>2</u> / 3699	18861 10098	32923 17922	0.57 0.56	4068 2071
0001 0002 0003 0004 0005 0006 0007 0008 0009 0010 0011 0012 0013 0014 0016 0017					

 $<sup>\</sup>frac{1}{2}$  These do not add to 3699 because of suppression in tracts 0001 and 0017.



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<sup>2/</sup> Middletown plus the balance do not add to 7137 because of rounding.

FIGURE 2

Computation of an Approximation of the Number of Children Aged 5-14 in Low-Income Families in Middletown: 1970

(1) '	(2)	(3)	(4)	(5)
f children in low-1/ amilies	Total No. of 5-14 yr. olds	Total No. un- der 18 yrs.	Pop. aged 5-14 Pop. under 18	Estimated No. of children aged 5-14 in low-income families
37 <sup>2/</sup> 99	18861 10098	32923 17922	0•57 0•56	4068 2071
			·	
	·			

not add to 3699 because of suppression in tracts 0001 and 0017.

wn plus the balance do not add to 7137 because of rounding.



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Table P-1. General Characteristics of the Population: 1970

		County		n (percont, m	, <del></del> 9		⊷ зупк <b>⁄ок</b> , і		ETOWN				
Census Tracts	Tetal	Middle-	Balance	Treat 0001	Trect 0002	Trect 0003	Trect 0004	Trect 0005	Trect 0006	Trect 0007	Trect 0008	Trect 0009	Trect 0010
MACE		_town											
Aŭ parsons	184 744	44 510	40 254	593	6 136	5 951	§ 540	4 940	4 816	5 997	4 453	B 525	5 309
Walle	82 665 21 563	44 518 52 048 12 041 18.7	30 617 9 522 23.7	410 178	6 136 3 274 2 807 45.7	5 700 210	5 507 36	4 827 94	906 3 105 77.3	1 093 4 900	4 537 42	8 324 94	5 809 5 718 36 0.6
Percent Negro	20.6	18.7	23.7	30.0	45.7	3.5	0.6	1,9	77.3	81.7	ü.9	1.1	0.6
	52 217	39 179	19 845	247	2 895	2 822	2 741	2 371	1 250	2 847		4 744	
	4 518 1 732 4 809	32 372 2 569 969 2 643	1 949 763 2 166	12	172	224	337 126	167 69	233	356 155	2 506 69 20	314 66	3 684 1425 1921 472 452 452 513 525 603 1207 424 274 274 274 274 274 274 274 274 27
3 and 4 years	4 809 878		2 166 390	17	163 39	82 206 37	373 61	186 37	280	428 82	20 38 5	90	192
6 years 10 to 14 years 14 years	957	2 534 2 529 488 4 659 494	423 2 262 426	13	25 134	40 174	87	33 170	233 103 280 48 54 272 51 170	80	13	90 33 21 27	3
	4 791 914 6 546 939	488 4 659	1 567 (	29	25 343	40 174 33 214 30 42	52 212	40 206	51 170	395 59 306 78 51	48 11 146 10 7	2 067	202
15 years	939 866	494 446 509	445 420 375	8 1	31 34	30 42	ଣ 43	33	26 41	78 51	10	1 2	51 36
18 years	866 884 1 807	509 1 485	375 322	5	40 56	46 ·	38 39	42 40	45 29	69 60	17	21 1 011	52 58
19 years 20 to 24 years	2 050 9 159	1 485 1 725 7 261	322 325 1 898	.7 68	84 163 39 25 134 25 343 34 40 56 182 212 212 245 399	46 - 48 - 496 - 85 - 120 - 520 - 246 - 274 - 117	29 155	40 206 33 38 42 40 53 423 71	45 29 29 160 26 38 212	69 60 48 228 62 47 327 245 238 83 99 109	20 96 1 479	1 032 1 691	95 803
20 years	2 171 2 264 7 640	1 820 1 867	351	11 14 33	212 245	120	27 20	111 111	26 36	62 47	329 475	671 437 508 42 4	184 207
21 years	4 628	1 867 4 803 2 556 2 371	2 837 2 072	33	165	320 246	490 395	357 210	212 152	327 245	449 83	508 42	430 246
55 to 59 years	4 178 1 718 1 492	865 771	1 807 853 721	8 36 16	165 197 07 110	117 109	71	210 244 117	134 50	238 83	71 31	1	294 139
65 to 74 years 75 years and over	1 853 885	931 414	922 471	8 17 10	139	159 63	329 3212 43 43 38 39 155 20 496 362 71 38 50 11	86 136 67	133 138 138 138 138 138 138 138 138 138	109 33	38 35 19	ī	120 49
and a man		32 138	29 407	326	3 241	3 129	2 619	2 549 157	2 166	3 159 358	2 122	3 791	2 751
Under 5 views	\$2 \$47 4 267 1 659	2 361 893	1 906 766	16	148 56	215 70	288 121 226 60 63 53 255 53 60 62 49 207	157 .45	240	358 148 386	92 27	230 63 94 25 21	138 54 177
5 years	4 588 871	2 420 467 497	2 168	3	161 40 31	197 39	326 60	163 31	263 45	386 84	54 12	94 25	177
10 to 14 years	925 4 673	2 505	428 2 167	29 29	ាស្ព័	20	332	30 184	238	84 88 393	34 5	20	29 37 221 43 247
15 to 19 years	940 6 074 856	493 4 285	1 789 1 789 375	34	163 40 408 31	246	255	212	216	35	173	1 587	247
15 years	284	481 471 473	415 333	7	36 27 71	ä	80 43	28 28	34 34	62	ý 14	1 17	48
18 vent	846 1 632 1 854	1 316	316 330	9 14	71 243	43 220 50 246 42 42 46 46 70 497	49 29	39	35	53	39	816 750	47
19 years	8 519	1 316 1 524 6 492 1 812	2 027 1	57	243 1 022 364 324	497 79	207 40	360 75	227	279 54	1 195. 307	1 464 622 355	462
25 to 34 years	2 168 2 087 7 135	1 645 4 338	356 439 2 797	13 14 22 21 34 14		79 120 453 368 339 157	40 29 526 404 258 73 53 66 51	252 212 212 212 212 212 212 213 214 340 757 309 245 265	87 263 245 53 238 552 216 51 54 40 227 46 20 288 216 184 67 91	80 333 72 62 78 53 68 279 54 53 420 312 215 112	104. 1 195. 307 384. 279 79 75 32 39 29	355 359	47 48 47 47 62 442 85 106 313 276 355 167
35 to 44 years	5 041 4 711	2 845 2 680 1 067	2 196 2 031 860	21 34	186 230 128	368 339	404 258	245 285	216 184	312 295	79 75	359 20 8	276 355
45 to 54 years	1 744	1 016	750 !	16	141	168	73 53	140 149		112 86 121	32 39	7	167 146
65 to 74 years 75 years and ever	2 348 1 498	1 311 817	1 037 681	38 37	216 164	211 118	<u>66</u> 51	228 137	86 50	121 53	29 41	1	146 179 90
RELATIONSHIP TO HEAD OF HOUSEHOLD													
in households	184 764 95 176	44 518 55 219 18 777 13 571	40 254 39 957	592 580	6 136 5 364 2 188 1 034	5 951 5 933	5 548 5 554	4 940 4 877 1 832	4 816 4 003	5 997 5 899	4 <b>628</b> 4 513	8 535 2 650	5 847 5 537
in household	31 115 23 729	18 777 13 571	12 338 10 158 2 180	580 268 119	2 188 1 034	5 931 5 933 2 284 1 661	5 546 5 554 1 544 1 430	1 832 1 314	1 146	5 899 1 563 1 318	1 747 400	2 650 958 931	5 847 5 537 2 056 1 408
Wife of heed	7 386 20 147	5 206 11 384 20 897	2 180 8 763 18 194	149 87	1 154 659	623 1 436 1 955 258	1 283	518 1 121	205 640 2 144	245 868	1 048 629	27 914	648 1 276 1 770
Wile of head  Other relative of head  In related to head  In group queriers	4 823	4 161	18 194 662 297	166 59 13	1 608	1 955 258	2 671 56	1 660 264 63	2 144 73 13	245 868 3 331 !37 96	488 1 649	773	1 770 435 272
in group quarters Persons per household	9 588 3.06	9 291 2,94	3.24	13 2.16	772 2.45	18 2.60	6 3.60	63 2.66	13 3,49	96 3.77	115 2.58	5 885 2.77	272
TYPE OF FAMILY AND NUMBER OF OWN							0.00		•	••••	1	2.77	
11 (-S-	23 729	13 571 7 416	18 152	119	1 634	1 661	1 430	1 214	941	1 318	499	921	أسير
With own children under 18 years	13 252 29 137	7 416 15 694	5 836 13 441	31 85	431 926	1 441 756 1 377	1 436 1 034 2 225	1 314 567 1 166	941 577 1 513	862 2 326	218 368	931 535 767	1 466 645 1 334
Michael-wife featies	20 147 11 318	11 384 6 205	8 743 5 113	87 22	429 272	1 434	1 283 941	1 121	646 377	848 552	429 195	914 519	1 276
With own children under 18 years	24 632 74.8	12 917 72.1	11 715 78.1	63 51.2	272 663 69.4	649 1 193 80.3	2 023 88.5	489 1 003 79.2	954 53.6	1 470 53.9	324 82.0	746 91.0	596 1 257 91.8
Families with other melo bond	394 218	299 95	295 123		45	22	<b>34</b>	31 12	27	44	26	2 2	24
**************************************	470	179	291	ź	19	6	18	24	18	27 64	2 4	2	5
Punille: with funds heat	2 968 1 716	1 <b>300</b> 1 116	1 100	27 8	318 150	193 101	123 82	142 66 139	274 191	404 263 772	50 21 40	15 14 19	100 45 72
Percent of total under 18 years	4 035 12.3	2 598 14.5	1 437 9.6	20 16.3	344 30.2	178 12.0	184 8.0	139 11.0	.541 30.4	792 29.1	40 10.1	19 2.3	72 53
Persons under 18 years	32 923	17 922	15 001	123	1 140	1 466	. 2 286	1 267	1 779	2 726	395	820	1 370
MARITAL STATUS				•			. =						
Male, 16 years ald and over	39 913 15 742 21 600	25 119 12 004 12 170	13 894 3 738	229 96	2 451 1 406	2 251 622	1 754 385	1 886 606	1 116 336	1 727 562	2 342 1 600	4 335	2 544 1 152
Separated Widowald	21 800 634 763	336	9 430 298	105 6 10	857 112 101	1 510 33 50	1 312 4 20	1 164 15	706 39	1 027 80	674 19	939 1	i 333
Diverced	908	401 544	362 364	16	101 <b>87</b>	69	20 37	38 78	30 44	77 61	16 64	ã	25 36
Female, 14 years ald ead over	39 939 12 312	25 344 9 452 12 530	14 615 2 860	278 69	2 809 1 368	2 547 522	1 948 388	2 102 444	1 477 397 803	2 <b>093</b> 551	1 947 1 158	3 449 2 494	2 250 613
340.440 -*	22 052 962	12 530 651 2 209	9 522	111 17	870 146	1 537 48 335	1 349 27	1 187 32 322	126	551 1 180 208 243	1 158 667 10	<b>635</b>	613 1 333 10
Diversed	3 892 1 703	2 209 1 153	1 683 550	<b>8</b> 1 17	419 152	335 151	111 100	322 149	172 105	243 119	53 69	10 13	226 86
eneS		_											

**CENSUS TRACTS** 

MIDDLETOWN SMSA P-1

Table P-1. General Characteristics of the Population: 1970—Continued

(For minimum base for derived figures (percent median, etc.) and meaning of symbols, see text)

			ETOWN			., 5				lance of	Count	у		<del></del>
Census Tracts	Tract 0011	Troc1 0012	Tract 0013	Troct 0014	Tract 0016	Tract 0017	Tract 0006	Tract 0007	froct 0008	Troct 0011	Tract 0012	Troct 0014	Troct 0015	Tract 0016
EACE					-							7.		
All persons	2 027 2 016 2	2 313 2 303	2 095 1 604 486	\$8 21 37	3 515 3 485	2 337 2 323	125 125	2 407 2 381	1 <b>6</b> 16	1 475 1 459	1 034 1 018 10	2 358 1 927	3 988 3 754 213	334 257 74
Percent Hegro	0.1	0.3	23.2	63.8	5 0.1	-	Ξ	22 0.9	-	0.3	1.0	430 18.2	5.3	22.2
AGE BY SEX														
Mole, ell ages	993 92	1 130 127	1 167 15	54	1 783 157	1 144 132	58 7	1 185 140	i	727 68	509 .57	1 184 123 59	2 096 173	155 12
3 and 4 years	92 38 109	37 109	103	-	65 184	163	3 5	49 137	i	40 103 15	25 73	149	53 130	22 4
5 years 6 years	14 22	27 23 92	10 12	-	31 35	31	2	21 31	ī	26	13 14	30 27	28 23	4
10 to 14 years	72 133 33 706 30 31 20	92 20 71	211 55	2	190 33 133	136	4	137 21	-	79 21 76	37 10	27 137 28 95	114 22	18 2 13 3 2
15 to 19 years	106	71 19	258 48	Ė	133	104 27	8	98 23	1	76 19	33 5	95 31	151	13
16 years	<u>ຼີ</u>	11	51	2	39 25	31	ż	21	ī	16	8 7	13	25 27	2
17 years	15	12 14	52 58	Ξ	27 16	22 18	3	19 22	-	19 14	5	15 18	26 30	3
19 years 20 to 24 years	10 54	15 210	49 222	15	26 28-4	48	2	13 141	-	8 21	8 29	18 88	43 663	3
20 years	15	30 42	47	2	33 48	15	1	26 29	Ξ	5 2	6	14 11	117 163	6 2 18 22 19 10 6
25 to 34 years	126	239	208 78	16	302	179	13	211	ī	123 133	145	205	408	18
35 to 44 years	166 137	95 96	42 17	13	233 170	179 177	8 5	142 77	3	69	57 39	139 105	125 145	19
55 to 59 years	29 28	26 18	- 11	ī	54 29	33 14	2	34 26	ī	13 13	15	45 37	43 35	10
65 to 74 years 75 years and over	9	28 19	2	-	2ú 21	21	2	28 14	1	8 2	3	43 18	35 60 49	6
Formula, all ages	1 034	1 183	928	4	1 732	1 193	67	1 022	7	748	527	1 174	3 892	179
Under 5 years	76 33	162 58	6	-	130 55	125	7	135 51	1	79 43	66 18	138 56	138	5
5 to 9 years	112	115	64	_	169	131	12	:28	i	169	74	144	94	35
5 years	16 28	21 27	13		26 25 165	27 25	2	27 28	-	:9 24	!8 16	34 27	J8 23	33 9 25 2 16 3
10 to 14 years	124 24 108	81 12	1 <i>7</i> 2 38	2 2	28	128 20	6	145 31	-	74 15	47 13	137 27	110 27	25
15 to 19 years	108	10	168 39	-	128 27	106	5	132 27	-	59 15	25 11	96 19	154 13	16
16 years	30 29	13	26	-	32	22	ī	20	-	15	į	29	23	3
17 years	24 17	11 16	33 33		24 28	25 19	3	26 23	_	14 9	2	17 19	27 31	5
19 years	8 59	14 220	38 144	-	17 <b>260</b>	19	1 6	28 151	ī	19	5 39	12 85	60 528	اة
20 years	10 B	41	25 32	-	38 40	13	6 2 i	21 29	-	4	6	15 15	84 121	2
25 to 34 years	143 182	229 97	195 79	1	295	232 183	12	202	-	154	1.7	197	321	20
35 to 44 years	143	97	53	-	237 187	(3/)	ŝ	132 97	2	131 85	58 39	144 98	135	20 25 21
55 to 59 years	27 26	30 30	26 13	ī	52 37	35	1 -	23 35	2	11	14 3	45 50	55 40	5
65 to 74 years 75 years and over	24 10	46 12	7	-	40 32	21	5 2	29 13	-	7 8	5	49 11	78 74	5
		•	•	-	31	- 1	•		-	·	•	• • •	,,	"
RELATIONSHIP TO HEAD OF HOUSEHOLD														
All persens in hauseholds	2 027 2 027	2 313 2 302	2 095 137	58	3 515 3 513	2 337	125	2 407	16 16	1 475	1 036	2 358 2 281	3 988 3 R37	334 334 87
Head of household	565 523	779 642	51 36	2 2	1 149 905	645 608	40 33	710 616	5	396 379	305 287	647 570	1 562 1 084	87 t 80 ;
Primury individual	42	137	15	2	244	37 555	7 30	94	1	17 353	18 276	77	478	75
Other relative of head	483 955	881	30 55	-	1 332	1 108	55	1 104	7	718	442	510 1 100	960 1 083	70
Not related to *****d In group quarter	24	65 11	1 958	54	268 2	18		35	-	8	10 3	24 77	232 151	-
Persons per housed	3 59	2 96	2 69		3 06	3 61	3 13	3 39	3 20	3 72	3 39	3 53	2.46	٩
TYPE OF FAMILY AND NUMBER OF OWN CHILDREN														
All families	523 365	642 374	36 27	2	905 513	608	33 22	414	4 2	379 286	287	570 374	1 084 466	19.
Number of children	777	722	48		1 103	935	22 41	215	3	619	393	689	846	122
With own Children under 18 years	4 <b>83</b> 336	577 330	30 22	2	824 497	555 408	30 21	538 376	4 2	353 766	276 184	510 . 339	960 400	75
Number of children	720 88 7	651 85 4	41 50	-	98.3	977	37 62 2	842 87 2	60.0	577 91.4	376 93.5	818 85 9	719	115
Percent of total under 18 years	3	8.	-		70.3	3	2	9	-	1	73.3	12	35	83 :
With own children under 18 years	1 2	5 7	-		4	2		3	-	1	2	6 13	11 15	-
femilies with torrole head	37	57	6	_	72	50	1	49	_	25	í	48	89	5
With own children under 18 years	28 57	34 64	5		52 85	31 56	1	35 6 <b>8</b>	-	17 39	7 ' 12	29 58	55 112	3
Persent of total under 18 years	1 G	8 4	6.5	-	73	5 8	6 5	70		6	30	6.1	12.1	5.î
Persons under 18 years	810	762	820	٥	1 169	963	45	966	5	630	402	952	900	138
MARITAL STATUS														İ
Mole, 14 years old and ever	692	822	893	53	1 285	737	43	792	7	478	342	803	1 701	105
Single	191 488	207 594	855 35	34 18	402 845	563	33	174 576	2 5	343	57 283	205 564	615 1 004	21 80
Separated	7	3	2	-	10 14	1	?	5 15		1 2	2	12	16 34	3
Divarced	ó	15	i	1	24	2	2	27		î	2	25	48	1
Female, 14 years old and over	746	837	724 671	4 2	1 296 297	829 173	42 3	845 159	5	501 74	353	782	1 577	114
Single	183 495	666 666	6/1 36	2	851	569	31	158 585	5	368	50 281	141 540	311 1 024	25 70
SeparatedWidowed	43	11 59	10	~	7 82	43	4	3 54		3 28	12	10 68	22 166	9
Divorced	25	50	7	:	66	44	4	48		11	10	33	76	1

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SMSA

CENSUS TRACTS

Table P-1. General Characteristics of the Population: 1970-Continued

					, 1110001, .	MCJ (MO M	soning of sy	MPUNE, See	16x1)					
Census Tracts		. Solon	ce of	County -	Con.					Totals for	split tructs			
46:200   10015	Tract 0017	Tract 0018	Tract 0019	Tract 0020	Tract 0021	Troct 0222	Troct 0003	Tract 0007	Tract 0008	Tract 0011	Tract 0012	Troct 0014	Tract 0016	Troct 0017
BACE											_			
White	2 297 2 200 168	9 879 5 736 3 338	3 814 2 697	3 428 2 441	1 971 1 346	7 434 5 260 2 354	4 143 1 031	8 464 3 474	4 553	3 503 3 475	3 349 3 321 18	2 418 1 948	3 849	4 794 4 523
Percent Negro	168 7.0	3 338 36.8	1 111 29.1	1 180 32.5	618 31.4	2 354 30.9	3 105 75.0	4 922 58.6	42	0.2	18 0.5	467 19.3	3 742 79 2.1	4 734 4 523 169 3.6
AĞE BY SEX														
Under Syeris	3 190 111	4 3% 438	1 918 196	1 797 165	940 74	3 489 354	1 900 240	4 <b>627</b> 496	2 51 5 70 21	1 729 180 78	1 <b>439</b> 194	? 236 123 59	1 <b>938</b> 169	2 334 243
3 ond 4 years	156 34 33 180 37 113	177 501	76 204	69 196 36	30 78 20	134 411	106 285	204 565 103 120 532 80 404 101	39	212	194 62 182	59 149	68 206 35 39 208 35 146 42 27 30 18 29	2 334 243 101 319 65 66 316 61 217 57 72 39 32
5 years	33	68 94 567 99 423	204 43 31 246 39 194 35 46 44 33 36 124 24 25 196	36 43	20 24	78 70	283 48 56 276	103 120	5 12	29 48	40 37	149 30 27 139 29	35	45
10 to 14 years	180	567 99	246 39	43 236 49 192	24 95 22 10: 25 44 22 14 16	412 75	276	532	48 11	48 212 54 182	129 30 104 24 19	139	208	316
15 to 19 years	113 30	423	194	192	10?	389 103 79 77	52 178 27	404	147	182	104	97	146	217
16 yeurs	41	87 99	46	58 41 35 27 31	24	79	40	72	10 8 13	49 47	24 19	31 15	42 27	57 72
18 years	17 14 11	91 64	33	35 27	22 14	77	45	72 88 82 61	13 20	39	19 19	15 18	30	39
19 years	11 52	62 289	36	31 96	16	56 74	45 32 31 32 38 225 169 159 52	61	20 96 1 479	47 39 29 18 75	23	18	29	17
20 yeors	11	68	24	19 18	59 13	325 45 66 501 360 360 191 152	27	369 88	1 479 329	75 20	23 239 36 46 384 152 135	103 16	290 15	100
25 to 34 years	12 195	68 56 508	25 198	18 202	109	56	38	88 76 538 387	329 475 450 83 74 31	20 10	46	12		30
35 to 44 years	175 120	411	207 153	170	94 122	360	160	387	83	249 298 206 42	152	221 152 110	32 255 189	3/4 354
55 to 59 years	45	221 199	, eg	88	63 41	191	52	315 117	31	206 42	135 41	110 45	189 64	247 78
60 to 64 years	14 20	199 249	83 102 141	202 170 156 88 88 137	41 69	152 154	54 81	125 137	39 36	41 17	41 25 32 22	45 33 43 18	64 35	100 26 20 374 354 247 78 28 41
75 years and over	9	126	62	49	35	80	81 35	47	19	6		18	32 24	17
Under 5 years	1 207 128	4 643 440 171	1 904 155 76	1 831 148	3 03 1 79 26	3 937 383 157	2 233 247 91	4 372 493	2 129 93	3 782 155	1 710 228 76	1 178 138 56	1 911 139	2 460 253 103 286 555 48 266 47 192 39 49 43 311 32 26 30 450 371 255
3 and 4 years	155	487	76 208	61 193	95	157 435	91 275	199 . 514	93 28 55 12	76 221	76 189	56		103
5 years	28	90	208 30 41	37 33 206 50 149 33 43 33 37	12 22	435 82 77 404 89 387	275 51 55	, 514 111	12	35 52	39	144 34 27 139 29 96 19	60 202 29 34 190 30 144 30 37 27	155
10 to 14 years	160 27	103 527	206	206	120	404	244	116 538	8 34 5	198	43 126 25 89 21 16	139	190	43 266
14 years	27 86	106 450	47 142	149	120 13 88 18	387	244 52 221	111 465	5 173	198 39 167	25 80	29 04	30	47
15 years	18 27	118 95	142 23 24 35 27 33 149 30 36 222	33	18	77	51	99 90	7	45	21	19	30	39
17 years	18	82 87	33	33	23 8	99 76	36	104	14	44 38 26	15	29 17	37 27	43
19 years	12 11	AR	33	23 17	16	59 76 409 68 93 489	51 55 36 38 41	76 96	39 104	26 14	18 19	19 12	33	31
20 to 24 years	<i>7</i> 3 13	354 69 75	149	126	13 78 15	409	233 48	430	1 196 307	78 14	259 47 47	85	269	132
21 years 25 to 34 years	18	75	36	126 27 23 187	21 112	93	51 300	430 75 82 627	384 279	11	47	15 15	40 41	30
35 to 44 years	218 188	524 482	201 191	172	103	416	300 222	622 444	279 81	297 313	378 1 <b>5</b> 5	188 144	315 262	450
45 to 54 years	128 29	504 216 217	191 112	219 103	137 67	372 177	222 189 68	444 392 135	75 32	229	136	RA	208	255
6U 10 64 Years	13	217	133	85	43	153	91	123 150	41	38 37	136 44 33 51	45 51	208 59 42	30
65 to 74 years	24 5	292 190	92	147 96	67 42	196 116	91 52	150 66	29 41	31 18	\$1 20	49 11	45 36	64 30 43 26
RELATIONSHIP TO HEAD OF HOUSEHOLD						ľ								-
All persons	2 297 2 397	9 079 9 074	3 814	3 428	1 971	7 424	4 141	8 404	4 644	7 502	3 349	2 414 2 285	3 849	4 734
Head of household	637	2 668	3 807 1 191	3 802 1 103	1 971 633 515	7 598 2 354	4 128 1 186	8 306 2 273	4 529 1 752	3 502 961 902	3 335 1 084	2 285 649	3 847	4 723 1 282
Head of family. Primary individual	607 30	2 197 471	974 217	888 215	515 118	1 924	974 212	1 934 339	703 1 049	902 59	929	649 572 77	1 236 985 251	1 215 [
Wife of head	566 1 169	1 794	828	715 1 719	456	1 636 3 523	670	1 426	633 495	836	155 853	512	700	1 121
Not related to need.	25	104	1 743 45 7	65	456 855 27	53 (	2 199 73	4 435 172	1 649	1 673 32	853 1 323 75	1 100 24	1 502 210	2 277
in group quarters	-	5		26	-	28	13	98	115	-	14	131	2	47
Persons per household	3.76	3.40	3.20	3.27	3.11	3.23	3.48	3.65	2.59	3.64	3.08	3.52	3.11	3.68
TYPE OF FAMILY AND NUMBER OF OWN						1								
All families With own children under 18 years	407	2 197	974	134	515	1 724	974	1 934	703	907	929	572	965	1 215
Number of children	1 011	1 262 3 056	526 1 253	454 1 156	260 600	2 339	599 1 554	1 276 3 241	220 371	451 1 398	567 1 115	374 889	605 1 245	882 1 946
Heabard-wife families	544	1 796	828	715	456	1 436	870	1 426	433	816	853	512	277	1 121
With own children under 18 years	416 954	1 068 2 551	448 1 070	374 930	237 530	931 2 174	378 791	928 2 312	197 <b>32</b> 7	604 1 296	514 1 027	339 818	546 1 147	1 831
The state of the s	91.6	72.2	75.2	67.1	79.0	75.4	54.3	62.6	81.8	90.0	88.2	85.4	87.8	91.4
Vith own children under 18 years	5	90 36	34 13	26	13	45 32	2 <del>9</del>	55 30	20 2	4 2	13	12	•	
Number of children	7	97	31	31	14	69	18	49	4	á	12	13	4	91
Vith own children under 18 years	36 21	211 158	112 45	147 71	44 20	273	275	453	50	42	45	48	77	84
Number of children Percent of total under 18 years	50	408	152	195	56	118 276	192 545	318 660	21 40	45 96	46 76	29 58	55 92	106
ersons under 18 years	4.8 1 041	11.6 3 532	10.7 1 422	14.1 1 387	8.3 67.1	9.5 2 910	29.9 1 824	23.3 3 692	10.0 400	6.7 1 440	6.5	6.1	7.0	5.3
AARIYAL STATUS			1 422	1 307	07.1	1 7110	1 024	J 672	400	1 440	1 164	958	1 307	2 004
Male, 14 years and and aver	780	2 769	1 303 . 334	1 249	715	2 587	1 159	2 519	2 369	1 170	1 164	854	1 290	1 517
ingle	189 579	812 1 985	682	365 802	186 479	658 1 795	344 739	736 1 603	1 610 679	303 851	264 877	239 582	423 925	356
Separated	3	109	19	52 43	13 25	81	41	65	19	1	5	12	13	1 142
Norced	å	83	49 38	39	25	67 67	30 46	92 88	16 64	7	17 17	9 26	17 25	11 8
Femals, 14 years ald end over	791	3 335	1 382	1 334	750	2 804	1 519	2 738	1 952	1 247	1 190	784	1 410	1 420
	159	688	233	259	145	594	400	709	1 158	277	172	143	322	332
lorried	592	2 024	901	800	502	1 790 1	834	1 745	A72	RA1	827	549	DOA.	1 141
ingle		2 024 110 508	233 901 27 195 53	259 800 38 220	502 30 81	1 790 77 316	834 126 176	1 765 211 297	672 10 53	863 7 71	887 12 71	542 10 68	930 9 91	1 161 10 65

CENSUS TRACTS

SMSA P-3



Table P-4. Income Characteristics of the Population: 1970

[Dato based on sample, see text. For minimum base for derived figures (percent, median, etc.) and meaning of symbols, see text]

Census Tracts		County						MIDE	LETOW	N.			
	Tota	Middle town	Balance	Tre-1	Troci 0002	Tract 0003		Traci		Tract 0007	Yract 0006	Troct 0009	Troct 0010
INCOME IN 1939 OF FAMILIES AND UNRELATED INDIVIDUALS								-					
All families  Less than \$1,000 o \$1,000 to \$1,999 \$2,000 to \$2,999 \$3,000 to \$3,999 \$3,000 to \$1,999 \$3,000 to \$1,999 \$3,000 to \$2,999 \$3,000 to more Median income  Fomilies and unrelated individuals Median income	788 1 136 - 1 257 - 1 584 - 1 538 - 1 684 - 1 538 - 1 690 - 1 486 - 2 436 - 2 734 - 3 112 934 - 1 555 - 88 329 \$10 155	422 3 572 6 987 878 987 987 987 983 882 787 1 426 1 622 1 954 6 955 80 80 80 80 81 82 93 1 426 1 426 1 426 1 954 1 426 1 954 1 426 1 954 1 426 1 954 1 426 1 955 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	10 1a2 360 566 555 709 749 762 703 736 725 699 1 010 1 112 1 158 269 69 87 933 89 768	122 7 10 6 10 20 20 7 7 11 11 5 5 - 17 44 \$7 977	72 123 111 97 94 90 89		5 6 28 36 29	23 35 56 134 77 100 73	924 699 828 88 117 104 81 87 76 60 37 40 017  \$5 373 \$1 73 \$1 498 \$1 98	1 209 88 106 135 154 170 70 76 75 92 91 119 75 92 119 75 93 106 135 154 157 157 157 157 157 157 157 157 157 157	705 24 14 20 29 48 20 49 48 57 89 89 89 89 89 19 \$17 19 \$13 856	952 47 44 44 106 129 176 160 91 73 42 28 34 31 75 5 5 5 5 150 6 845 3923 31 485 5 150	1 445 20 45 23 65 53 48 52 50 36 42 115 222 345 275 24 \$119 939 \$16 826
Unrelated individuals  Median income  Mean income	19 007 \$1 243 \$2 184	16 211 \$1 131	2 796 \$1 839	132 \$1 941	2 804 \$1 320	881 \$2 599	160 12 167 \$4 195	732 \$2 399	305 \$1 946	352 \$1 667	2 745 \$1 318	5 893 \$868	1 345 \$1 848
TYPE OF !NCOME IN 1969 OF FAMILIES	\$2 704	\$2 069	\$2 855	\$3 106	\$2 012	¥3 502	\$4 195	\$3 145	\$2 718	\$2 444	\$2 218	\$873	\$3 218
All femilles With wage or solary income Mean wage or solary income Mean wage or solary income With nonform self-employment income Mean nonform self-employment income With farm self-employment income Mean form self-employment income With Social Security income Mean Social Security income With gobic ossistance or public welfare income Atean public assistance or public welfare income With ather income Mean other income Ratio Of Famility INCOME TO POVERTY LEVEL	23 871 21 426 \$9 021 2 584 \$5 594 858 \$7 738 3 629 \$1 417 1 432 \$785 8 990 \$2 410	13 488 12 453 \$9 209 1 550 \$5 627 136 3394 1 863 \$1 430 \$1 430 6 109 \$2 654	10 182 8 973 \$8 760 1 034 \$5 543 732 \$9 102 1 766 \$1 403 677 \$752 2 881 \$1 893	122 104 \$7 745 11  25 \$660 27 5585 39 \$3 578	1 004 864 \$6 047 96 \$5 227 10 205 \$1 214 186 3863 277 \$2 028	1 457 1 469 \$8 250 172 \$4 346 13 312 \$1 724 59 \$525 648 \$1 827	f 417 1 369 \$9 983 158 \$6 676 20 112 \$1 510 39 \$522 587 \$1 546	1 497 1 273 \$8 937 159 \$5 950 14 277 \$1 602 31 \$595 674 \$2 402	924 831 \$5 476 74 \$3 211 6  \$1 452 \$1 452 \$3 991 156 \$1 168	1 309 1 155 36 203 63 \$3 309 4 211 \$1 261 171 \$978 222 \$1 087	705 662 \$11 202 56 \$2 294 	952 894 \$4 408 41 \$724  31 \$255 10  \$75 \$1 569	1 445 1 335 \$13 435 326 \$7 120 23 183 \$1 393 39 \$783 964 \$3 875
Percent of Jamiles with incomes: Less than 50 of poverty level .50 to .74	5 B 4 4 5.1 5 1 5 4 12 2 20 5 41.6	5 6 3.9 4.5 4.3 4.8 11.8 20.5 44.5	6 2 5 2 5 8 6 0 6.1 12.7 20.4 37 6	5.7 8.2 9.0 8.2 3.3 17.7 4.9	11.8 11.6 11.4 5.4 7.8 12.0 14.9 25.3	2.5 2.3 2.7 4.5 4.4 13.0 30.4 40.4	0.7 0.4 1.8 4.7 3.0 11.6 25.1 52.8	2.3 1.5 5.2 2.2 6.3 13 6 20 6 48 2	15.9 6.7 8.6 9.4 8.2 18.0 19.7 13.5	74.4 9.8 12.4 9.0 6.3 13.9 21.1	4.7 1.3 0.7 2.8 2.1 8.8 18.3 61.3	7.2 7.5 6.2 7.5 9.9 24.9 23.6 13.2	3.3 1.5 0.8 2.0 1.7 5.9 13.9 70.8
INCOME BELOW POVERTY LEVEL													
Percent of all families  Moon family income  Moon mome deligation  Percent receiving public assistance income  Moon mome deligation  Percent receiving public assistance income  Moon state of family  With related children under 18 years  Moon number of related children under 18 years  With related children under 6 years  Moon number of related children under 6 years  With related children under 18 years  With related children under 18 years  Moon number of related children under 18 years  With related children under 6 years  Percent in labor force  Mean number of related children under 6 years	3 660 15 3 \$1 982 \$1 507 20 3 3 90 2 478 2 88 1 513 1.55 1 164 970 2 94 546 63 0 1 60	1 977 14 0 \$1 942 \$1 549 20 6 3 77 1 365 2.71 876 1 50 761 640 2 89 3 63 64 2 1 59	1 743 17 1 \$2 025 \$1 460 20 1 4 04 1 113 3 08 637 1 63 403 3 30 3 03 1 83 60 7 1 62	28 23.0 \$1 675 \$1 056 60.7 2.54 10  5 	348 347 \$1 991 \$1 411 33 0 3.59 221 2.65 118 1.62 161 117 2.68 59 49 2 1.80	123 7 4 \$1 888 \$1 282 17.9 3 20 70 2.49 19  47 34 1.97 8	4) 2.9 \$2 363 \$1 067 14.6 3 68 35 2 17 16  14 14	130 9.0 \$1 985 \$1 130 11.5 3.05 77 2.12 61 1.15 32 1.94 22	289 31.2 \$2 091 \$1 803 33.9 4.41 231 3.46 137 1.53 169 153 3.24 89 59.6 1.60	478 36.5 52 314 \$1 664 22.2 4.43 391 3 21 245 1,71 260 231 3.25 152 73.7 1.66	47 6.7 \$1 022 \$1 983 - 2.94 33 1.82 23  21 16	199 20.9 \$1 771 \$1 444 ——————————————————————————————————	82   5.7   \$1 556   \$1 454   7.3   2.93   39   1.85   23
Family beeds Percent 65 years and over Cruikan male heads under 65 years Percent in labor tarce	3 660 19.6 1 955 66 9	1 917 13 8 986 60 6	1 743 25.9 969 73.3	28 17.9 13	34a 23.9 125 69.6	123 4 1 71 70.4	41 14 6 21	130 8.5 93 60.2	289 18.3 90 72.2	478 15.3 184 69.6	47  26 34.6	199 195 54.4	82 7.3 62 45 8
Percent of all unrelated individuals Mean income Mean income deferi Percent receiving public assistance income Percent receiving public assistance income Percent of years and over	6 911 54.1 \$772 \$1 115 8 0 15 4	5 482 54 9 \$758 \$1 143 5 3 9 8	1 429 51.1 5828 \$1 009 18 2 36 9	47.7 \$798 \$1 015 38 1 46 0	7 323 60 0 \$843 \$1 045 7.0 14.1	332 37.7 \$845 \$1 038 10 2 23.2	35.6 \$765 \$1 089 26.3	297 40.6 \$685 \$1.204 6.7 16.5	345 47 5 \$946 \$872 36.6 40 7	203 57.7 \$926 \$912 24.6 39.9	56.2 \$760 \$1 162 0.3 0.5	368 79.3 \$309 \$1 616	\$83 49.4 \$747 \$1 179 1.9 3.1
Persens Percent of all persons Percent receiving Social Security income Percent of years and over Percent receiving Social Security income Related children under 18 years Percent Irving with both parents	21 179 22.1 11 0 10 6 63 8 7 114 48.9	12 706 22 7 8 8 7 6 68 5 3 683 44 8	6 473 21.2 14.1 15.2 60.3 3 431 53 4	134 31 0 29.1 29 1 100.0 23	2 574 46.9 11.4 12.2 67.5 616 40.4	725 12.2 14.8 13.0 71.3 169 62.1	208 3.7 16.3 13.5 71.4 77 54.5	694 13.7 11.2 10.5 52.1 146 51.4	1 420 35.6 9.3 9.8 61.9 768 31.1	2 321 39 3 9.8 7.8 71.4 1 259 33.8	1 934 42.6 5.8 0.5  59 42.4	1 021 33.5 1.7 	823 14.6 3.5 3.5 79.3 70 62.9
Hersebolds Percent of all households Owner occupied Mean value of unit Renter occupied Mean grass renr Percent lacking same or all plumbing facilities	\$ 999 22.4 2 107 \$9 000 3 892 \$108 17 9	22.3 947	7 965 22.7 1 160 7 500 805 \$70 39 0	65 35.5 12 .,. 53 382 9.2	1 003 47 6 239 \$8 200 764 \$108 8 8	286 13 8 103	72 4.8 52	254 14 5 66	371 34.8 146	\$76 38.5 210 \$9 500 360 \$63 16.7	417 35.7 	214 21.7	309 1,9 48 22 100 261 \$111 8.4

Excludes inmotes of institutions, members of the Armed Forces living in barracks, college students in dormitories, and unrelated individuals under 14 years.

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SMSA

**CENSUS TRACTS** 



Table P-4. Income Characteristics of the Population: 1970—Continued

[Data based on sample, see text. for minimum base for derived figures (percent, median, etc.) and meaning of symbols, see text]

			LETOWN	_						lance of	Count			•
Census Tracts	Troc! 0011	Troct 0912	Tract 0013	Tract 0014	Tract 0016	Tract 0017	Tract 0006	Tract 0007	Troc! 0008	Troct 00+1	Tract 0012	Tract CO14	Troct 0015	Tract 0016
INCOME IN 1969 OF FAMILIES AND UNRELATED INDIVIDUALS						•								
All feather	500	643 22	38	-	913 12	399 5	37	408		371	382	· 545	1 148 39	79
Lass than \$1,000 \$1,000 to \$1,999 \$2,000 to \$3,999 \$1,000 to \$3,999	-	35 33	-	-	26 24	-	-	26 32		5	ō	15 18	53 49	7
\$2,000 to \$2,999	Ξ	52		=	7	-	-	39		10	Š	33 25	98 98	
	4	23 44	4	-	24 24 17	6	5	30 52		5	9	44	94	4
\$5,000 to \$5,999 \$6,000 to \$6,999 \$7,000 to \$7,999	5 17	58 64	- :		17 44	11 26	-	51 63		- 5	5 10	44 33 70	109 100	-
\$8 000 to \$8 999	6 22	64 67 53	ā	-	61 49	· 36	3	49 62		5 20	35 20	53 42	47 67	-
\$9,000 to \$9,999 \$10,000 to \$11,999	24 86	82	17	-	124	122	9	72		48	54 91	82	129 146	6
	227	75 55	5	-	160 245	73 231	_	81 47		116 137	33	102 44	92	21 22
\$15,000 to \$24,999 \$25,000 to \$49,999 \$50,000 or more	98 11	_		-	80 16	32 5	_		•••	11	5	-	16 11	6
Medign income	\$18 789 \$19 757	\$8 007 \$8 274	\$11 059 \$11 096	-	\$12 834 \$14 :177	\$13 705 \$15 108	\$10 444 \$10 392	\$8 224 \$8 82 ;		\$14 263 \$15 519	\$11 556 \$11 305	\$8 764 \$5 897	\$7 340 \$8 941	\$14 071 \$16 341
Mean income	\$19 /3/ SA3	\$8 274 864	\$11 090	-	1 338	697	310 372	697		394	314	705	1 824	79
Fomilies and Unrelated individuals	\$17 267 \$17 683	\$7 257 \$7 404	\$9 192 \$7 450	=	\$9 802 \$11 215	\$12 244 \$13 960	\$10 444 \$10 392	\$7 638 \$8 328	•••	\$13 966 \$14 801	\$11 148 \$10 587	\$7 921 \$7 773	\$5 343 \$6 785	\$14 071 \$16 341
Unrelated individuals	83 \$1 464 \$5 186	201 \$2 931 \$4 537	55 \$4 219 \$5 269	=	425 \$2 337 \$4 206	98 \$6 667 \$6 939	=	89 \$5 227 \$4 941		23 :::	32 \$1 000 \$4 259	140 \$2 556 \$3 240	676 \$1 862 \$3 123	-
TYPE OF INCOME IN 1969 OF PAMILIES														
All feather With wage or salary income	500 455	463 613	38 38	-	913 837	599 554	32 32	608 560		371 366	283 266	545 516	1 148 1 074	79 68
Mean wage or salary income	\$15 451 89	\$8 012 60	\$11 096	-	\$12 635 138	\$13 707 107	\$9 716	\$8 332 47		\$12 B14	\$10 670 30	\$8 713 42	\$7 780 106	\$18 019
With nonform self-employment income	\$12 362	\$2 597	-	-	\$6 030	\$3 837	_ =	\$3 971	• • •	\$6 528	\$5 553	\$3 43g	\$7 501	-
With form self-employment income		23	-	-	- 13		-	16					15	.=
With Social Security income	32 \$1 750	87 \$1 054	-	-	75 \$1 435	87 \$1 199	9	57 \$1 573	• • •	25 \$1 180	11	72 \$1 824	127 \$1 329	;
With public assistance or public welfare income	5. 75	22	-	-	13	-	9	10			:	38 \$553	37 \$853	7
Mean public assistance or public welfare income	302 \$5 613	298 \$992	=	-	\$3 105	327 \$2 869	···;	114 \$1 306	•••	183 \$3 295	136 \$1 011	169 \$1 362	527 \$1 694	18 
RAYIN OF FAMILY INCOME TO POVERTY LEVEL!														
Percent of femilier with incomes: Less than .50 at poverty level .50 to .74 .75 to .99 .100 to 1 24 .25 to 1 49 .150 to 1.99	1.2 1.0	5.9 4.4 3.3 3.3 6.6 13.0	- - - 10.5	:	3.2 2.2 0.9 0.9 1.4 5.7	0.8 - - 1.8 4.0 17.4	- - - 15.6 25.0	1.0 3.6 5.1 4.3 8.7 17.3 26.6		1.3 4.0 1.3 14.6	3.2 2.1 3.5 6.7 18.1	2.7 3.7 3.7 4.1 4.6 17.5 26.2	4.8 3.2 3.9 5.6 7.2 11.2 20.4	8.9 10.1
2.00 to 2.99	8.8 89.0	26.B 36.7	73.7	-	68.9	76.0	59 4	33.4		78 7	66.3	37.5	43.6	75.9
INCOME BELOW POVERTY LEVEL!	-	10	-	_	57	s	_	59		5	•	37	137	,
Percent of all families	-	13.6 \$1 559	-	-	6.2 \$1 167	0.8	=	9.7 \$2 562		1.3	3.2	10.1 \$2 483	11.9 \$1 738	8.9
Mean income deficit	_	\$1 657 6.7	-	-	\$2 055 5.3			\$795 6.6		•••	•••	\$1 870 22.8	\$1 217	
Percent receiving public assistance income	=	3.60	-	-	3.39 43	···.	-	3.44 30		··· <u>·</u>	···ġ	5.49 43	2.88 49	•••
Mean number of related children under 18 years	-	51 2.76	Ξ		2.00		_	2.57			• • •	4.33	2.27	-
With related children under å years Mean number of related children under å years	=	45 1 36		-	24 16		-	20			4	22	1.56	-
Families with female head	-	12 7		-	16	=	=	5	•••	Ξ	-	12 12	18	-
Mean number of related children under 18 years. With related children under 6 years	-	,	-	-	··· ;	- [	_			-	=	``.;		-
Percent in labor force	-		-	-			-			-	=	• • •	-	
Mean number of related children under å years	_	•••	-	_				59		5	•	57	137	,
Femily boods Percent 65 years and aver Civilian male heads under 65 years Percent in labor force	=	90 25 6 60 48.3	=	=	57 41 56.1		=	39 0 31 83.9		š 	· 5	21.1 36 72.2	24.1 90 53.3	·· <u>:</u>
	49	62	5	_	194	s	~	14		13	16	40	347	_
Percent of all unrelated individuals	59.0 \$807	30.8 \$973	9.1	-	45.6 \$592	5.1	-	18.0			50.0	42.9 \$918	51.3 \$919	-1
Mean income	\$1 047	\$925		-	\$1 314	:::	-	:::		• • •		\$876 30.0	\$1 024 2.6	- [-]
Percent receiving public assistance income Percent 65 years and over	Ξ	24.2	=	-	-	-	Ξ			=	-	65.0	2.0	-
Portions	49	384	5		397	35	-	219		30	43	373	741	14
Percent of all persons	2 5 12 2	16.1	3.0	:	10.9 1.0	1.1	-	9.5 24.2		26	4.1	15.6 26.8	19.2 7.4	4.3
Percent 65 years and over  Percent exerving Social Security income  Percent receiving Social Security income	'* -	14.0	=	-	1.0	-	=	20.1 88 6		-	-	16.4	7.2 94.3	
Related children under 18 years	-	68.5 128	-	:	. 9i	12	Ξ	73 74 0	• • •	16	8	186 76 3	104 56.7	
Percent living with both parents	-	90 6	-	-	73 6		-		•••		•••			-
Norsebolds	13 2.4	137 16 B	-	-	126 11.1	S 0 B	:	43 11.6		5 1.4	14 4 B	90 15.2	304 20.3	8 9
Percent of all households	-	43	-	-	23	5	-	41 \$11 000		5	14	35 \$8 300	30 \$19 800	
Regter accupied	13	84	Ξ	Ξ	101	:	= =	22	• • •	•••	•••	55 \$82	174 \$125	15
Mean grass rent	•••	\$128	-		\$200	-	=	9.5		-	:	21.1	3.9	
· · · · · ·														

Excludes inmotes of institutions, members of the Armed Forces living in borrocks, callege students in domittones, and unrelated individuals under 14 years.

CENSUS TRACTS

SMSA P-11

Toble P-4. Income Characteristics of the Population: 1970—Continued

[Data based on sample, see text. For minimum base for derived figures (percent, median, etc.) and meaning of symbols, see text]

_		Salar	Ce of	County -	Con.					Totals for s	plit tracts			
Census Tracts	Tract 0017	Sroct 0018	Tract 0019	Tract 0020	Trost 0021	Tract 0022	Tract 0006	Tract 0007	Tract 0008	Tract 0011	Tros. 0012	Troct 0014	Tract 0016	Troct 0017
INCOME IN 1969 OF FAMILIES AND UNRELATED INDIVIDUALS														
UNRELATED INDIVIOUALS  All femilies Less than 3,1000 31,000 to 31,999 32,000 to 32,999 33,000 to 32,999 34,000 to 34,999 35,000 to 34,999 35,000 to 36,999 35,000 to 38,999 35,000 to 38,999 35,000 to 38,999 310,000 to 311,999 310,000 to 311,999 310,000 to 311,999 312,000 to 324,999 325,000 to 349,999 330,000 or more Medien income Medien income Medien income Medien income Medien income Medien income Medien income Medien income Medien income Medien income Medien income Medien income Medien income Medien income Medien income Medien income Medien income Medien income Medien income	384 	2 203 91 160 144 161 163 211 153 180 189 149 181 214 207 36 310 445 207 36 310 45 57 58 57 58 57 58 57	942 600 601 976 643 776 677 879 975 600 973 355 365 88 87 122 1 125 35 526 36 170	871 711 52 86 500 73 87 45 75 53 86 66 62 33 36 72 26 54 36 36 75 50 75 87 87 87 87 87 87 87 87 87 87 87 87 87	\$44 155 55 46 100 62 144 55 25 27 38 49 27 25 31 68 37 31 66 55 55 55 55 55 55 55 55 55 55 55 55	1 951 80 136 102 196 178 136 143 107 171 131 163 173 175 2 49 2 480 35 702 37 423 37 423	954 969 982 88 86 65 107 1109 66 46 469 17 77 77 77 76 66 46 47 17 12 13 15 15 15 15 15 15 15 15 15 15 15 15 15	1 917 88 132 167 193 200 148 121 139 124 154 159 155 45 55 27 56 241 41 31 995	705 24 14 20 20 48 20 54 64 49 48 85 77 89 85 719 \$13 85 31 768 84 59 20 31 32 31 31 32 31 32 31 31 31 31 31 31 31 31 31 31 31 31 31	671 	945 422 235 427 277 279 33 63 74 100 73 136 166 188 5 5 7 179 1 178 88 305 88 325 88 3	\$65 44 15 18 13 33 25 44 4 33 700 53 42 42 42 82 102 44 58 767 705 \$7 921 \$7 773	997 12 33 24 7 32 28 17 44 49 130 181 181 267 27 314 626 314 526 314 526 315 315 315 315 316 317 317 317 317 317 317 317 317 317 317	1 142 5 5 12 9 49 49 311 313 32 58 154 137 472 76 514 157 514 157 514 827 1 312 172 513 172 513 172 514 100
Mean income	\$7 697	\$2 316	\$2 320	\$2 644	\$2 038	\$2 834	\$2 718	\$2 948	\$2 226	\$4 758	\$4 498	\$3 240	\$4 206	\$7 121
All feetBas  With wage or solary income Mean wage or solary income Mean mage or solary income Mean nonturn self employment income Mean nonturn self employment income Mean form self temployment income Mean form self temployment income Mith Social Security income Mean Social Security income Mean Social Security income Mean solar self self temployment Mean public assistance or public welfore income Mean public assistance or public welfore income Mean other income Mean other income	\$84 \$41 \$13 858 83 \$4 480 6  38 \$1 693 5	2 293 1 884 87 869 215 \$5 346 258 \$20 721 \$07 \$1 434 251 \$684 486 \$1 576	942 806 54 850 53 \$3 163 72 \$5 287 215 \$1 399 61 \$897 137 \$2 074	871 671 87 920 111 \$3 421 44 \$3 893 254 \$1 376 88 \$609 212 \$2 020	\$44 447 \$10 317 65 \$13 337 42 \$2 950 103 \$1 535 35 31 256 149 \$3 853	1 951 1 742 50 181 216 54 966 262 51 181 337 51 257 135 5788 5788 51 692	758 863 35 633 74 \$3 211 6  154 \$1 433 148 \$858 163 \$1 169	1 917 1 715 56 898 110 \$3 592 20 268 \$1 327 181 51 001 338 \$1 162	705 662 \$11 202 56 \$2 294 \$1 \$1 844 14 481 \$4 295	871 821 \$14 276 155 \$9 878 14  \$7 \$1 500 5  485 \$4 738	945 679 \$8 816 90 \$3 582 28 \$2 8 22 434 \$998	\$65 \$16 \$0 713 42 \$3 436 3 72 \$1 824 38 \$553 169 \$1 362	992 905 \$13 040 136 \$6 030 13 	1 183 1 095 \$13 781 190 \$4 118 11 
RATIO OF FAMILY INCOME TO POVERTY LEYEL.														
Percent of families with incomes (ess than 50 of 24	10 36 34 24 38 192 66 6	68 59 64 79 67 135 216 29!	9 8 4 6 10 0 6 7 10 0 12 3 20 8 25 9	93 77 104 68 51 140 186 28 1	59 93 27 66 33 145 170 407	7 5 7 2 6 2 6 2 7 0 15 0 19 5	15 J 6 S 8 4 9.1 7 9 18 O 19 8 15 O	10 1 7 8 10 1 7 5 7 1 15 0 22.8 19 6	13 07 28 21 88 183 513	0 6  1.7 0 7 1 1 11 3 84 6	4 1 3.1 3.3 3.0 5.7 11.1 24.2 45.5	2.7 3.7 3.7 4.1 4.6 17.5 26.2 37.5	29 2.7 0.8 1.6 1.3 5.2 15.9 69.5	0 4 0 5 1 8 1.7 2.1 3.9 18 3 71.3
INCOME BEIOM POVERTY LEVEL!														
Families Percent all all families Mean tamily income Mean machine defect Percent receiving public assistance income Mean machine all family With related thiddren under 18 years Mean size all family With related thiddren under by years Mean number of respleted thiddren under 18 years With related thiddren under by years Mean number of related thiddren under by years Mean number of related thiddren under 18 years With related thiddren under 18 years With related thiddren under 18 years With related thiddren under by years Percent in labor fince. Mean number of related thiddren under 5 years Percent in labor fince.	27 4 0 34 259 3783 6 44 21 21 6 6	467 21 2 32 034 \$1 521 27 6 4 43 342 3 21 178 1 53 147 118 2 94 62 1 1 52	229 24 3 \$2 125 \$1 489 20 1 4 03 140 3 109 82 1 76 42 38 3 16 60 6 1 52	229 27 4 \$1 85 \$1 424 21 3 3 59 1 38 2 74 56 1 48 60 42 2 12	98 17.9 \$1.764 \$1.522 13.3 3.66 50 3.28 33 2.09 15 15	409 21 0 31 911 \$1 566 21 3 4 11 286 3 01 184 1 77 97 80 3 60 3 60 52 59 6 1 88	289 30 2 \$2 091 \$1 803 33 9 4 41 231 3 46 -137 1.53 169 753 3 24 89 59 6 1 60	\$37 28 0 \$2 342 \$1 569 20.5 4 32 421 3 16 265 1.67 265 236 3 25 157 74 5 1 64	47 67 81 022 81 983 2 94 33 1 82 23  21 16	\$ 06	10 5 \$1 637 \$1 536 61 3.55 60 2 50 49 3 35 12 7	57 10.1 \$2 483 \$1 870 22 8 5 49 433 22 	\$4 6.5 \$1 209 \$1 904 15.6 3 23 43 2.00 24  16 3 3	22 27 32 039 31 242 6 06 26 4 08 26 1 00 6
family books  Percent 65 years and over  Crulina male heads under 65 years  Percent in labor force	27 2 22 2 21	467 223 247 610	729 30 6 116 73 3	239 32 6 113 63 7	32 7 51 70 6	409 21 3 250 74 8	289 18 3 90 72 2	\$37 179 215 716	47 26 34 6	3 5 	23 2 69 47 8	\$7 21 1 36 72 2	64 16 9 41 56 1	18 8 26 100 0
Streamed Individuals  Percent at all unrelated individuals  -man income  Grain signified effect  A ment receiving public assistance income  Procent 65 vects and over	J5 5	378 58 J \$836 \$966 29 4 51 J	132 56 7 \$740 \$1 037 22 0 50 8	138 50 9 \$946 \$845 22 5 56 5	\$5 46.2 \$470 \$1.328 7.3 36.4	263 49 7 \$777 \$1 039 19 8 42 6	145 47.5 \$946 \$872 36 6 40 7	219 49 7 3953 \$886 22 8 39 3	1 796 66 1 \$750 \$1 162 0 3 0 5	62 58 5 \$741 \$1 106	TB 33 5 1773 31 132 19 2	40 42 9 \$918 \$876 30 0 65 0	194 45 6 \$592 \$1 314	16 12 4 
Percent of all persons Percent receiving Social Security inclume. Percent is rearr and over Percent receiving Social Security inclume. Percent receiving Social Security income Pelated Children under 18 years Percent living with both parents	185 77 65 65 74 83 8	2 447 27 0 13 8 4 6 50 4 1 086 49 8	7 054 22 7 1# 2 16 8 48 0 49 4 56 5	997 27 5 20 2 25 0 65 1 422 53 6	414 21 2 13 5 15 9 77 3 176 61 9	1 944 25 7 11 6 13 1 50 8 792 42 4	1 420 34 7 9 3 9 8	2 \$40 30 9 11 0 8 9 74 8 1 332 36 0	1 934 42 6 5 8 0 5  59 42 4	87 2 5 6 9	429 12 5 10 0 12 6 68 5 136 91 2	273 15.6 26.8 16.4 100.0 186 76.3	403 10 3 2 7 4 5 91 73 6	210 4 5 5 7 5 7 5 7 8 6 8 6
Nassehalds Parcent of all households Owner occupied Maga voice of unit Renter occupied Maga voice of unit Percent for any some or all plumbing focities.	32 5 6 19 14 57 6	\$29 27 9 325 \$6 700 214 \$44 46 9	334 31.6 168 \$6.200 56 \$56 44.2	36.4 150 35.600 80 355 33.8	129 26 7 75 \$4 900 54 \$55 \$6 6	397 29 6 261 \$9 100 136 \$47 50 9	57 % 225 354 17.5	43; 21 7 251 \$9 700 382 365 16 0	617 35 6 	18 25 5 13	141 13.5 57 \$11.500 84 \$128	90 15 2 35 \$8 300 55 \$82 21 i	123 11 0 30 \$17 500 102 \$706	18 70 44 74 500

Excludes lamping of institutions, inembers of the Armed Forces living in barrocks, college students in domintones, and unrelated individuals under 14 years

P = 12 SMSA

CENSUS TRACTS

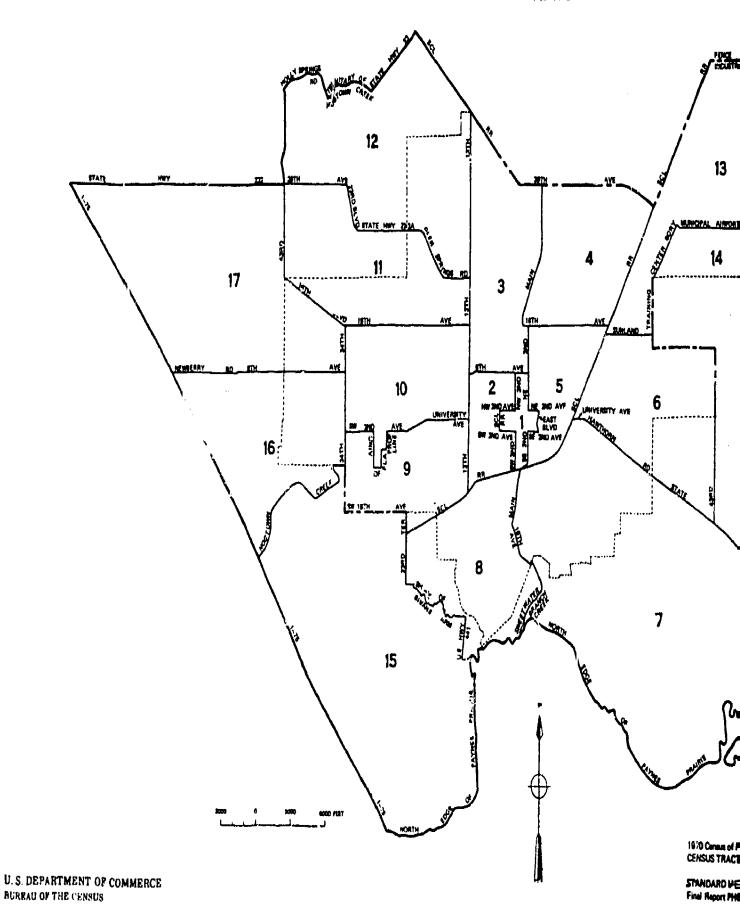


WIDDLEJOWN

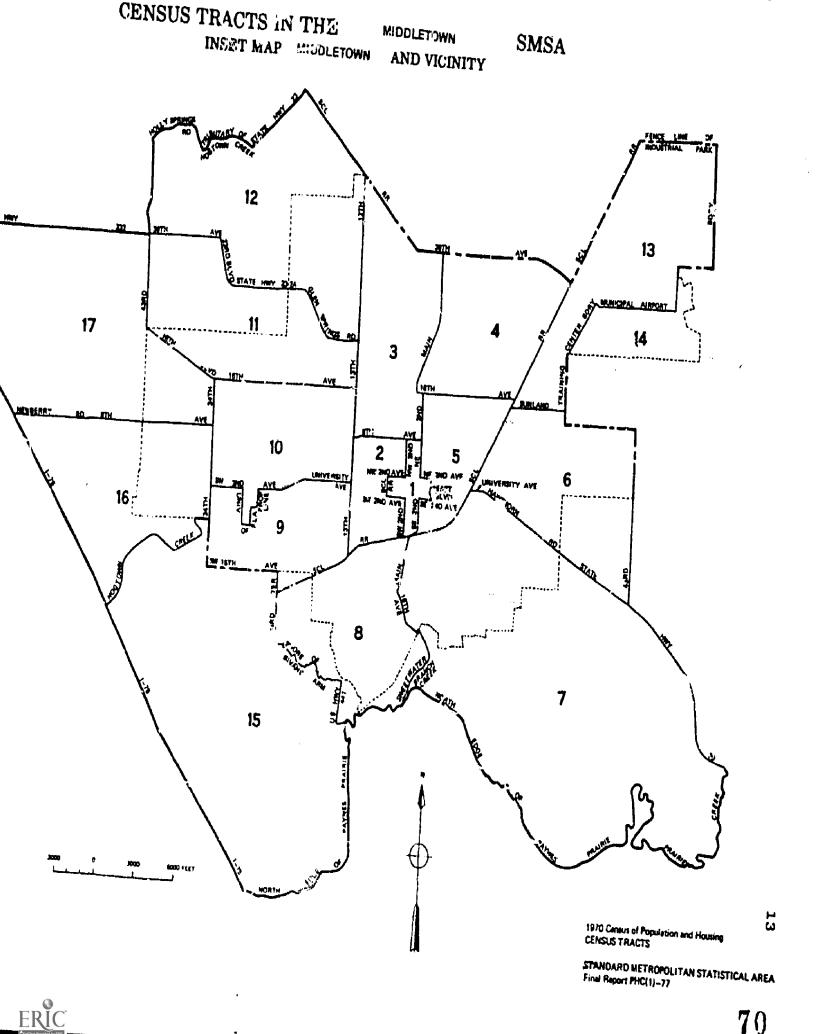
SMSA

INSET MAP - MIDDLETOWN

AND VICINITY





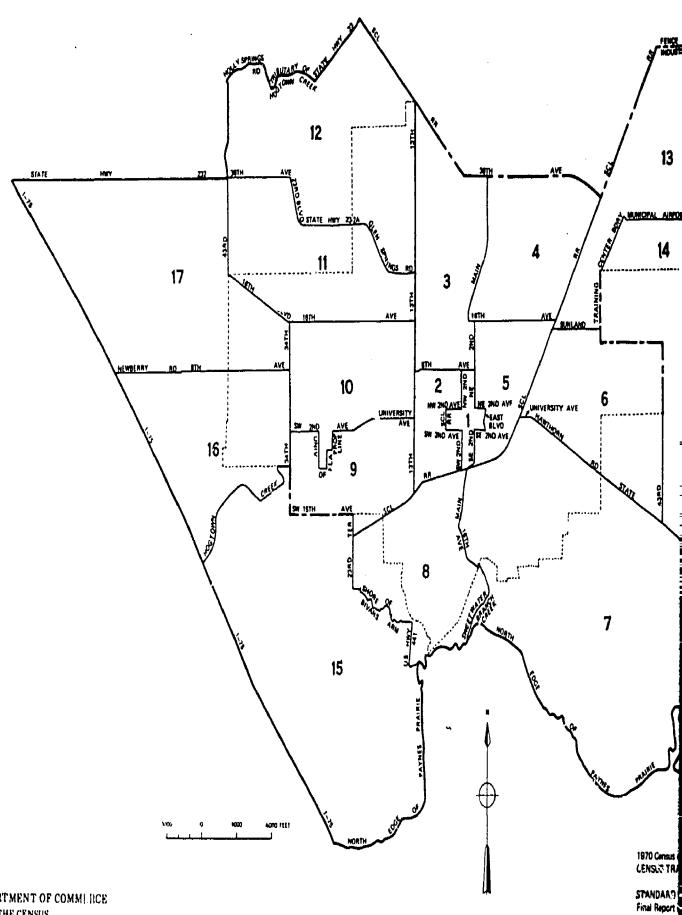


MIDDLETOWN

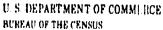
**SMSA** 

INSET MAP - MIDDLETOWN

AND VICINITY



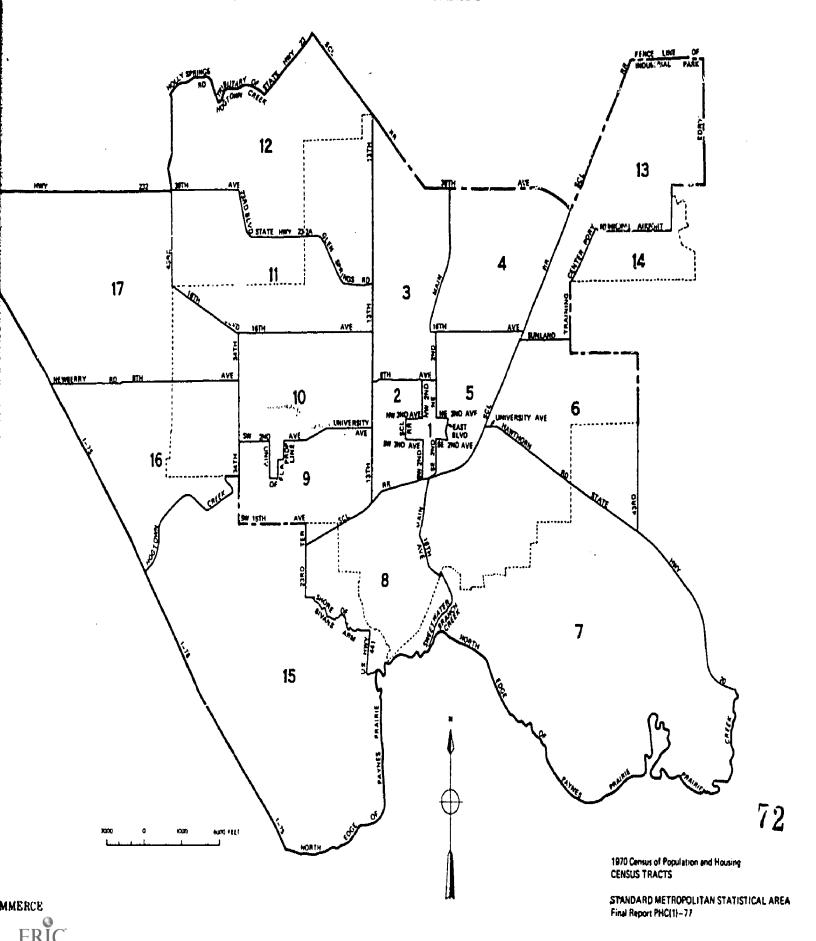






INSET MAP - MIDDLETOWN

AND VICINITY



#### APPENDIX A - DATA FOR SMALL AREAS

#### I. SMSA's - Standard Metropolitan Statistical Areas

The population residing in SMSA's constitutes the "metropolitan" population. Except in the New England States, a standard metropolitan statistical area is a county or group of contiguous counties that contains at least one city of 50,000 inhabitants or more (or "twin cities" with a combined population of at least 50,000). Contiguous counties are included in an SMSA if, according to certain criteria, they are socially and economically integrated with the central county. In the New England States, SMSA's consist of towns and cities instead of counties. An SMSA includes at least one central city (there is one exception to this) and the complete title of an SMSA identifies the central city or cities. In the 1970 census, there were 233 SMSA's. The boundaries of an SMSA may change over time as the area grows. The metropolitan population is further classified as "in central cities" and "outside central cities."

#### Census Tracts in Metropolitan Areas

For statistical purposes each SMSA is divided into census tracts. initially designed to be small, relatively homogeneous and permanent areas with an average population of about 4,000. Data about tracts from the decennial censuses are published in Census Tract Reports, Series PHC(1). Tract boundaries are established cooperatively by a local committee and the Bureau of the Census so that the tracts tend to be uniform with respect to population characteristics, economic status, and living conditions, although sometimes the more synamic, growing areas may not be homogeneous in terms of characteristics. Because the tract boundaries are generally maintained over time, historical comparisons can be made, although in 1970 some major boundary changes were made in some SMSA's. Sometimes the boundaries are changed because of a revised physical feature (a new freeway for example), subdivided because of a large population increase, or because some old boundaries have lost their significance. Tables A and B in the Census Track Report show the comparability of tracts between 1960 and 1970. The Census Tract Reports, one for each SMSA, also have tabulations of population and housing information for each census tract and maps to show the areas.

#### Other Small Area Data in SMSA's

Complete count and sample population and housing data are also available on computer tape and microfilm for enumeration districts (ED's) and block groups (BG's). ED's and BG's are subdivisions of census tracts, places, and MCD's/CCD's. While these data have a number of limitations, they can be used as building blocks for geographic areas not tabulated by the Census Bureau. Their small size allows users substantial flexibility when aggregating to



Appx. A con't.

create data for user-defined areas.

Block data (identified in the urbanized areas of all SMSA's) may also be used as building blocks although only complete count data are available. Block statistics are published in HC(3) reports and are on computer tape.

#### II. Nonmetropolitan Tracted Areas

The population living outside SMSA's constitutes the nonmetropolitan population. Some nonmetropolitan counties also had census tracts designated because it was expected that they would eventually become a part of an SMSA. A few other isolated areas were also tracted if a local committee was willing to draw tract boundaries. While SMSA tracted areas have data published in PHC(1) reports, nonmetropolitan tracted areas remain unpublished but are available for less than \$10 from the Customer Services Branch, Data User Services Division, Bureau of the Census, Washington, D.C. 20233.

#### III. Nonmetropolitan Untracted Areas

Most nonmetropolitan areas do not have census tracts. Data are published for cities and towns and on computer tapes and other unpublished forms are available for county subdivisions called Minor Civil Divisions (MCD) or Census County Divisions (CCD), and for still smaller Enumeration Districts (ED), and places.

Minor Civil Divisions are primary political and administrative subdivisions of counties in 29 States. The most common type of MCD is the township but there are also towns, precincts, magisterial districts, etc. In the 1970 census there were 28,130 MCD's.

In 21 States, MCD's are not suitable for presenting census data, primarily because of frequent boundary changes. Over 7,000 Census County Divisions have been established as relatively permanent statistical areas by the Bureau of the Census in cooperation with State and local authorities. States containing CCD's are: Alabama, Arizona, California, Colorado, Delaware, Florida, Georgia, Hawaii, Idaho, Kenlucky, Montana, New Mexico, North Dakota, Oklahoma, Oregon, South Carolina, Tennessee, Texas, Utah, Washington, and Wyoming.

Tabulations are available for MCD's and CCD's on computer tapes (First, Second, Fourth, and Fifth Count, File C) and on microfilm (about \$8/reel - and nost States are one reel), or by paper printout (\$10/county). These can be purchased from the Census Bureau. Limited published data for MCD/CCD's are in PC(1)-B.

Enumeration Districts are further subdivisions of MCD's and CCD's and another source of small area data for nonmetropolitan untracted areas. They are geographic areas delineated for administrative convenience in controlling and directing the conduct of the Census. These data are available on computer tape and microfilm.



#### APPENDIX B - POVERTY INDEX

The poverty index provides a range of low-income cutoffs adjusted by the factors shown in the table below.

			Nonfarm		2 Farm			
Size of family	Total	Total	Male fread	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	

Source: Table A, in Appendix B of General Social and Economic Characteristics Report, PC(1)-C, page App. 30.

The index allows only for differences in the costs of living between farm and nonfarm families; differences between cities and regions of the country, for example, are not taken into account. In 1969, the thresholds, for the index ranged from \$1,487 for a female unrelated individual over age 65 living on a farm to \$6,116 for a nonfarm family with a male head and with seven or more persons. The average threshold for a nonfarm family of four headed by a male was \$3,745.



#### APPENDIX C - COMPUTATION ILLUSTRATION

Data are not always published in the exact form desired but it is often possible to compute what is needed. In this case study, for example, the park director wanted an approximation of the number of 5-14 year olds in low-income families. The description below illustrates a method for doing this if you are willing to assume that the proportion of children aged 5-14 is the same in both the total and the low-income family population. The steps below relate to the columns in Figure 2.

(1) From Table P-4, compute the number of related children under 18 in the low-income families:

Column 1 = (Mean number of related children under 18 years)(Number of families with income below the poverty level with related children under 18 years)

For the SMSA, this is: (2.88)(2,478) = 7,137

(2) From Table P-1, compute the total population age 5-14 years:

Column 2 = (Males 5 to 9 years) + (Males 10 to 14 years) + (Females 5 to 9 years) + (Females 10 to 14 years)

For the SMSA, this is: 4,809 + 4,791 + 4,588 + 4,673 = 18,861

(3) From Table P-1, the number of persons under 18 years is shown not in the "age by sex" stub (although it could be computed from this), but in the last line of the stub "Type of Family and Number of Own Children." Thus it often pays to check other categories.

For the SMSA, the number of persons under 18 years is 32,923.

(4) Compute the proportion of the total 0-17 population which is 5-14 years:

Column 4 =  $\frac{\text{Column 2}}{\text{Column 3}}$ 

For the SMSA, this is:  $\frac{18,861}{32,923} = 0.57$ 

(5) Compute an estimate of the number of 5-14 year olds in low-income families:

Column 5 = (Column 4)(Column 1)

For the SMSA, this is: (0.57)(7,137) = 4,068



#### APPENDIX D - ACCURACY OF THE DATA

The Census Bureau has shown a continuing concern for the quality of the data obtained in the decennial censuses. Human and mechanical nonsampling errors occur in any mass statistical operation such as a decennial census. When estimates are made from sample tabulations they are subject to both nonsampling errors and sampling errors.

The Census Bureau has conducted studies of nonsampling errors in its evaluation and research programs. They cover the accuracy of selected subject matter (response errors) and the effectiveness of the enumeration process (coverage errors). These studies are published in the PHC(E) report series. Most of the information in this series is applicable to census statistics at the national level; for example, income other than earnings (such as Social Security, public assistance, interest, dividends, etc.) tends to be underreported which could overstate the low-income group the park director was most interested in. On the other hand, there is evidence that low-income people are underenumerated, a fact which could serve to undercount the group of interest. At best, this information can be only approximately applied to statistics for small areas.

Some of the data are collected from the entire population ("complete count" or 100 percent items) and some from a sample of the population. Complete count data in the tract reports are in Tables P-1, H-1, and H-3. The data in the other tables are all based on a sample as noted in a sentence under the title of the tables (see Table P-4 for example) which refers you to the text.

In this case study, for example, the park director can identify income as 20 percent sample data by consulting the listing of sampling rates for various subjects in Table C of Appendix C in the back of the PHC(1) report. Since income we allected at a sample of households rather than at all households, the data sample to sampling variability, which is also discussed in Appendix C of 1 (1).

Basically, sampling variability means that sample data tabulated in census reports may be different from the values that would have been obtained if a complete count of the population had been made. In using sample data therefore, the researcher should account for sampling variability by using the data in Tables D through F of Appendix C. These tables enable the researcher to approximate the <u>standard error</u> of any sample tabulation in the report.



<sup>1/</sup> For a list of these reports and an index to the subjects in the reports, see <u>Data User News</u>, Volume 10, No. 8 (August 1975), p. 1-2, 8. The reports are also listed in <u>Data Access Description</u> No. 39.

The standard error can be used to obtain a <u>confidence interval</u> before making decisions based on the data. A confidence interval is a range of estimated values with a prescribed confidence of including the value that a full census would have obtained. The procedure for constructing a confidence interval is illustrated below.

The interpretation of a confidence interval may be explained as follows:

If all possible samples were selected, each of these were surveyed under essentially the same conditions, and an estimate and a estimated standard error were calculated from each sample, then -

- 1. approximately two-thirds of the intervals from one standard error below the estimate to one standard error above the estimate would include the average value of all possible samples. We call an interval from one standard error below the estimate to one standard error above the estimate a two-thirds confidence interval.
- 2. approximately nine—tenths of the intervals from 1.6 standard errors below the estimate to 1.6 standard errors above the estimate would include the average value of all possible samples. We call an interval from 1.6 standard errors below the estimate to 1.6 standard errors above the estimate a 90—percent confidence interval.
- 3. approximately nineteen-twentieths of the intervals from two standard errors below the estimate to two standard errors above the estimate would include the average value of all possible samples. We call an interval from two standard errors below the estimate to two standard errors above the estimate a 95-percent confidence interval.
- 4. almost all intervals from three standard errors below the sample estimate to three standard errors above the sample estimate would include the average value of all possible samples.

Thus, for a particular sample, one can say with specified confidence that the average of all possible samples is included in the constructed interval.

In relation to this case study, Table F lists age as having a sample rate of 20 percent; but there is also a headnote which reads "Subjects marked with an asterisk were tabulated on a 100 percent basis in Table P-1..." Since the age data in this case are taken from Table P-1, they are not sample data and there is no need to estimate the standard errors for the age data in Table P-1.

Family <u>income</u> and <u>poverty status</u> are both 20 percent items and their standard errors should be computed. For each subject, Table F provides a factor by which the appropriate value in Table D or E should be multiplied to obtain the standard error. The values in Tables D and E give approximate



standard errors which ignore some aspects of the sample design, sample size, and estimation processes. The factors in Table F adjust the approximate standard errors to account for these effects. For cross-tabulations of more than one subject (for example, race and poverty status) use the largest factor.

In Middletown there are an estimated 1,365 families with income below the poverty level and with related children under 18 years old. This number lies between the values of 1,000 and 2,500 shown in Table 5; linear interpolation gives a value of 66 as the approximate standard error. Since the factor for poverty status \_\_\_\_\_ able F is 1.0, multiply 66 by 1.0 to arrive at a standard error of 66 It is now possible to construct a confidence interval as follows:

- 1. To find the upper end of a 95 percent confidence interval, add two standard errors (2 x 66 = 132) to 1,365; thus, the upper end of the 95 percent confidence interval is 1,629.
- 2. To find the lower end of a 95 percent confidence interval, subtract two standard errors from 1,365; thus, the lower end of the 95 percent confidence interval is 1,233.
- 3. The 95 percent confidence interval is written (1,233, 1,629). This means that there are 95 out of 100 chances that this range would contain a complete census count. To construct a 99 percent confidence interval, multiply the approximate standard error (66) by  $2\frac{1}{2}$  (66 x  $2\frac{1}{2}$  = 165); the 99 percent confidence interval is (1,200, 1,530).

The approximate standard error for tabulations by census tract can either be derived from Table D or be computed from a formula. Notice that it is relatively much higher for tracts with a small population. For numbers that fall between those shown in the table, standard errors may be estimated by linear interpolation or by using the formula given below. For example, in Tract 0007 it is estimated that there were 391 low-income families with children under 18 (Table P-4). Table D lists the standard errors for 250 or 500. By linear interpolation the estimated standard error would be about 38. Alternatively the approximate standard error can be computed by using the formula:

$$\sqrt{N^2 (1-f)^{\frac{pq}{n}}}$$

$$60 + \frac{(1.365 - 1.000)}{(2.500 - 1.000)}(85 - 60) = 60 + 6 = 66$$

2/ Computation:

$$30 + \frac{391 - 250}{500 - 250} \times (45 - 30) = 38$$



<sup>2/</sup> Linear interpolation for this example is performed as follows:

Where N = total population of the geographic area (in this case, there are a total of 1309 families in census Tract 0007.) Note that "N" is the number of housing units, families, or persons in the geographic area, not those with a given characteristic. In this example, you would not use the total number of families in poverty in the tract as this is a base defined by a particular type of population; rather you use the total number of families in the tract which is 1,309.

f =the sampling fraction 1/5.

 $n = fN \text{ (in this case: } 1/5 \times 1,309)$ 

 $p = \frac{X}{N}$  where X is the estimated number - in this case, 391

$$q = 1 - \frac{X}{N}$$

Thus the problem is:

$$\sqrt{(1,309)^2(1-\frac{1}{5})} \left(\frac{\left(\frac{391}{1,309}\right)}{\left(\frac{1}{5}\right)} \frac{1-\left(\frac{391}{1,309}\right)}{\left(\frac{1}{5}\right)}\right)$$

$$= \sqrt{1,097}$$

33, the approximate standard error

It is common practice to use a 95 percent confidence interval so in this case both add and subtract 66 (two standard errors) to 391; the range for Tract 0007 is then from 325 to 457 low-income families with children under 18.

Tables D-F also enable you to compute standard errors of percentages. For example, in Tract 0007, almost 30 percent (391/1,309) of the families were low-income families with children under 18. To determine the approximate standard error of this percentage, use Table E. Once again, a full range of numbers is not given. You could use 2.7 in this example as this is the closest approximation for the particular estimated percentage and base of the percentage. But you could also interpolate or use the formula:

$$\sqrt{(1-f)^{\frac{pq}{n}}}$$

where the letters have the same meaning they had in the previous formula.

In this particular example, the computation is:

$$\sqrt{(1-\frac{1}{5})\begin{pmatrix} \frac{391}{1,309} & 1-\frac{391}{1,309} \\ \frac{1}{5} & \frac{1}{5} & 1,309 \end{pmatrix}} =$$

0.025 or 2.5 percent, the approximate standard error, which we multiply by the appropriate factor for the subject involved (1.0 in this case) to get the estimated standard error.

Using the common practice of applying two times the standard error, the chances are 95 out of 100 that between 25 and 35 percent of the families in Tract 0007 were low-income and had children under 18.



#### 24 TABLES FOR COMPUTING APPROXIMATE STANDARD ERRORS FOR MIDDLETOWN SMSA

TABLE D. Approximate Standard Error of Estimated Number Based on 20-Perbent Sample (Range of 2 chances out of 3)

Estimated number (persons or housing units)	Standard error	Estimated number (persons or housing units)	Standard error
50,	15	1,000	60
100	20	2,500	85
250	30	5,000	100
500	45		

TABLE E. Approximate Standard Error of Estimated Fercentage Based on 20-Percent Sample (Range of 2 chances out of 3)

Estimated percentage		Base (	of percentage (	persons or hous	ing enity)	
Estimated becomeda	500	1.000	2,500	5,000	10,000	15,000
2 or 98	1.3	0.9	0.6	0.4	0.3	0.2
5 c~ 95	2.0	1.4	0.9	0.8 (	0.4	0.4
10 or 90	2.7	1.9	1.2	6.9	0.6	0.5
25 or 75	3.0	2.7	1.7	1.3	0.9	0.7
50	4.5	3.2	2.0	7.4	1.0	0.8
		- Address	grade markets and	•	118 22	

TABLE F. Factor to be Applied to Standard Errors

(Subjects marked with an asterisk were tabulated on a 100% basis for tables P-1, H-1, and H-3. Standard errors are not applicable to these tables!

Population subjects <sup>1</sup>	Sample raus (percant)	Factor	Housing subjects <sup>1</sup>	Sample rate (percent)	Factor
*Race	20	0.9	*Tenure	20	0.2
*Age	20	0.8	*Rooms	20	1.0
*Household relationship	20	0.5	Persons per room	20	0.4
*Family composition	20	0.6	*Value	20	1.0
Country of origin (including	20	0.0	Units in structure	20	0.8
Spanish heritage subjects)	15	1.6	Year structure built	20	0.8
Nativity, and parentage	15	1.7	Heating equipment	20	0.3
School enrollment	15	1.0	Basement	20	0.9
Years of school completed	20	1.0	Source of water	15	1.0
Residence in 1965	15	2.0	Sewage disposal	15	1.0
Employment status	20	0.8	Air conditioning	15	1.1
Place of work	15	1.3	Year moved into unit	15	1.1
Means of transportation	15	1.5	Gross rent	20	•
to work	15	1.3		20	0.9
	20	1.1	All other —20 percent		1.0
Occupation		1.1	—15 percent	15	1.2
	20			İ	
Class of worker	20 20	1.1	ł		
income—persons		1.0			
—families	20	1.0	1		
Poverty status—persons	20	1.9	į		
—families	20	1.0	i I	!	
All other 20 percent	20	1.0	ı		
—15 percent	15	1.2	ı İ	1	

<sup>&</sup>lt;sup>1</sup>Tabulations of data for persons of Spanish haritage are based on the 15-percent sample. For subjects shown in this table as based on the 20-percent sample, the factor for persons of Spanish heritage is obtained by multiplying the appropriate factor in this table by 1.2. For subjects shown as based on the 154,24cant sample, the factor in this table can be used directly.



#### CASE STUDY

#### MIGRATION PATTERNS OF SOUTHERNERS

NOTE: Materials Needed for Case Study

GENERAL SOCIAL AND ECONOMIC CHARACTERISTICS PC(1)-C, for any State U.S. Government Printing Office Washington, D.C.

U.S. Department of Commerce Bureau of the Census October 1975 Reprinted August 1976



#### CASE STUDY

#### MIGRATION PATTERNS OF SOUTHERNERS\*

#### <u>Situation</u>

Southern States have recently experienced many changes in long-standing population trends. During the Sixties, growth from in-migration became important for many of the States, and in the early 1970's it has also been an important source of growth for even the most rural of the Southern States which have traditionally had heavy population losses. A group of Southern governors decided to meet to discuss mutual problems related to population change and possibly devise some population policies. They were primarily concerned with two issues: (1) population distribution (e.g., what are the characteristics of people who migrate into, out of, and within the region? what are the losts and benefits of large cities? are there policies which can effectively encourage people to remain in small- and medium-sized towns? what are the effects on the environment of alternative forms of population distribution?); and (2) the interrelations of population and economic development policies (could the governors effect industrial location and population distribution at the same time? what are the educational and occupational characteristics of migrants to and from the South, and how might this impact on economic development, etc?).

Prior to the meeting, a demographer was hired as a consultant to prepare information about the Southern population that would be useful to those making public policies. One part of the study will be concerned with the migration patterns of Southerners. The demographer turns to several data sources, one of which is the decennial censuses.

### Census Questions Relevant to a Migration Study:

On spril 1, 1970, a census of the United States population t ok place. Several questions asked at that time are relevant to a study of migration. For example, the demographer wants to determine the demographic and socioeconomic characteristics of migrants so as to provide some information about their impact on economic development. She wants to know something about the comparative propensity for migration of metropolitan and nonmetropolitan residents and the characteristics of those who move and those who do not, information which may be useful input for devising population distribution policies.

Question i: List some questions asked in the decennial census relevant to a study of migration patterns (refer to Appendix B of PC(1)-C or figure 1).



<sup>\*</sup>Prepared by Cynthia Murray Taeuber, Data User Services Division. Bureau of the Census. Comments on this case study are invited.

#### Figure 1. Subject Items Included in the 1970 Census

#### COMPLETE COUNT DATA ITEMS

-Shown for all census areas including city blocks

#### Population Items

Number of units at this address

Telephone Color or race

Age Sex Marital status

Private entrance to living quarters Complete kitchen facilities Rooms

Water supply Flush toilet Bathtub or shower Basement

Tenure (owner/renter)

Commercial establishment on property

Housing I tems

Value Contract rent Vacancy status Months vacant

#### SAMPLE DATA ITEMS

5 percent.

(These variations

not in Consus

Tracts reports)

-Not shown in some reports, e.g., Block Statistics -Summaries are subject to sampling variability

#### Population Items

#### Housing Items

Number of units in structure and

Components of gross rent

Heating equipment

Year structure built

whether a trailer

Farm residence

20 percent . . . . . . . . . State or country of birth Years of school completed Number of children ever born Employment status Hours worked last week Weeks worked in 1969 Last year in which worked Occupation, industry, and class of worker Livity 5 years ago income in 1969 by type Country of birth of parents Mother tongue

Year moved into this house Bathrooms Place of residence 5 years ago School of college enrollment

(public or private) Veteran status Place of work

Means of transportation to work Mexican or Spanish origin or descent

Citizenship Year of immigration When married

Vocational training completed Presence and duration of disability Occupation-industry 5 years ago

Source of water Sewage disposal Air conditioning **Automobiles** 

Stories, elevator in structure Fuel-heating, cooking, water heating Bedrooms Clothes washing machine

Clothes dryer Dishwasher Home food freezer i elevision Radio Second home

#### DERIVED VARIABLES ( Illustrative examples)

#### Population Items

Families Fantily type and size Poverty status Spanish surriame Spanish heritage Population density Size of place Foreign stock

#### Housing Items

Persons per room ("crowding") Household size Plumbing facilities

Institutions and other group quarters Gross rant



The information on these questionnaires is collected and computerized at the Census Bureau for research purposes and, most importantly, to aid governmental units in their decisions on needed programs and policies and on the allocation of funds for programs. By law, answers by individuals to census questions are here strictest confidence, and thus names and addresses are never released and a particular individual can never be identified by any data released.

#### Sample Questions:

Some of the data are collected from every individual (100 percent or complete count data items) and some from only a sample of those answering the questionnaires ("sample" data come from 20 percent, 15 percent, and 5 percent of the population). Sampling permits the collection of data which reflect the characteristics of all people in an area even though the entire population was not actually questioned. This process also allows the data to be obtained at a much lower cost.

Question 2: Figure 1 indicates which data items collected from the questionnaire are complete count items and which are sample items. Indicate whether the data items you listed in question #1 are complete count or sample items.

Sample data for areas with small populations should be used with caution. Appendix C of the Census population reports gives specific information about the accuracy of the data. The published sample data can be thought of as approximations of the exact statistics that would have been found had there been a 100-percent count of those items. One can compute a range of possible values in which the exact statistic would probably be found; the magnitude of this range can be computed from instructions given in Appendix C. While sample data must be used with caution for areas with small populations, it is reliable for larger population groups.

#### Definition of the Region:

Just how does one define the South? The Census Bureau gives some data for regions, groupings of contiguous states, ore of which is called the South. The region is further divided into divisions (smaller groupings of contiguous States), and the South has three. A map, "Census Regions and Geographic Divisions of the United States," is shown in Figure 2.

Question 3: List the States for the region and divisions of the South.



FIGURE 2.—Census Regions and Geographic Divisions of the United States

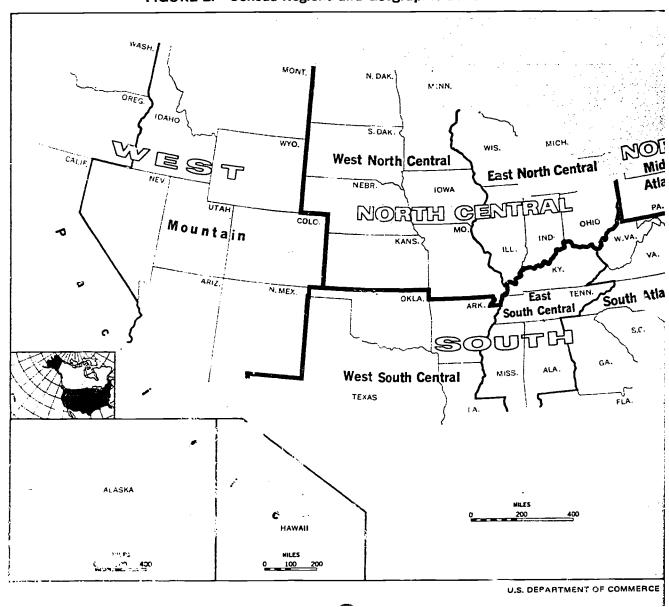
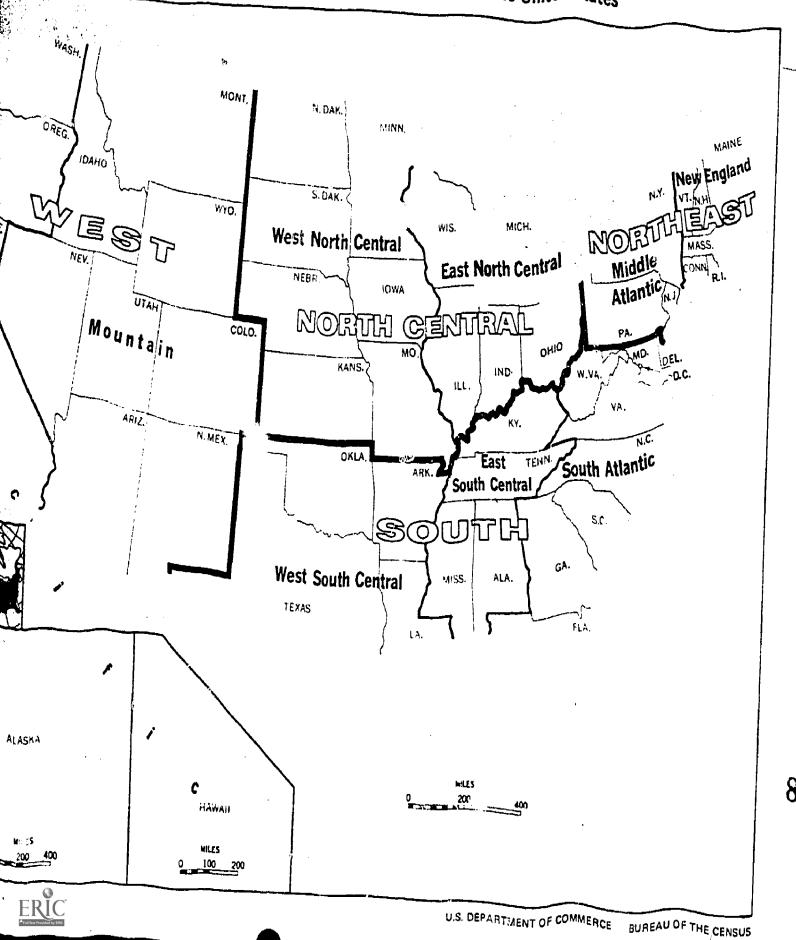


FIGURE 2.—Census Regions and Geographic Divisions of the United States



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In this case, the group of governors is from all of the above States (the Census South) except Delaware and the District of Columbia. Thus, in some cases the researcher can obtain the data by adding the individual States; in some cases by using the Census South data and subtracting the relevant Delaware and Washington, D. C., data; and in some cases the data are published only for the Census region and divisions. When the publications do not have the data in the desired form, the researcher should also check the documentation for the census computer tapes which have more data than the printed reports for differe a geographic levels.

#### Data Summaries:

The basic format for the presentation of 1970 Census data is as statistical summaries for geographic areas. Summary data are aggregations of data derived from the individual questionnaires for geographic areas such as blocks, tracts, counties, States, divisions, regions, etc. This is the type of data presented in the printed reports and computer summary tapes.

Question 4: Using the Table Finding Guide from the <u>U.S. Summary Report</u>, PC(1)-C1, "General Social and Economic Characteristics" (figure 3), find which tables show data on residence in 1965 compared to residence in 1970. What tables are concerned with "residence in 1965" for regions, divisions, and States? What are the subdivisions of the major head or, "residence in 1965"? (See figure 6.)

#### Printed Publications and the Data:

For this particular piece of research, the demographer intends to use only printed reports although more data are available on computer tapes. There are four volumes on population characteristics for each State and the United States which were published in a combined hard-cover edition (PC(1), Chapters A-D) and four separate soft-bound volumes (below).

- Number of Inhabitants, PC(1)-A
- General Population Characteristics, PC(1)-B
- General Social and Economic Characteristics, PC(1)-C
- Detailed Characteristics, PC(1)-D

There are several ways of finding which tables contain the needed data. As mentioned earlier, for general information it is probably simplest to open to the very beginning of the book where a "Table Finding Guide" (figure 3) is located which list the table numbers for subjects by geographic areas for which data can be found. If extensive cross-classifications are desired, it is best to use the Census Bureau's <u>Index to Selected 1970 Census Reports</u>!



Available from Subscriber Services Section, U.S. Bureau of the Census, Washington, D.C. 20233, \$3.70.

#### **TABLE FINDING GUIDE—Subjects by Type of Area and Table Number**

This guide lists all subjects covered in this report, but does not indicate all cross-classifications (e.g., by sex). An asterisk (\*) indicates that the table presents data for Negroes and persons of Spanish heritage. Oata on allocation rates appear in tables C-1 to C-4.

		ູ່	nited States		Ray	iens		Standari metropolitai statistical area
Subject	Tetal	Urbon Rocal sentarm <sup>4</sup> Rocal form <sup>5</sup>	Metropolitan and andmetropolitan residence	Size of place	Total	Urben Reral needarm <sup>1</sup> Rural farm <sup>1</sup>	Regions Divisions Status	Standari consolidated area Urbanized area Places o 50,000 or more
SUMMARY CHARACTERISTICS		<del></del>	<del> </del>	†	<del>                                     </del>			
Social	140 14:	=	_ =		140 141	=	140 141	183,185,187 184,186,188
GENERAL CHARACTERISTICS								_
Age	85° 85°	85°	107,124* 107,124*	96,118° 96,118°	130°	=	-	
SOCIAL CHARACTERISTICS Nativity and parentage State of birth Country of origin Mother tongue	68,86° 69,87° 70.86° 86°	68,86° 69.87° 70,86° 86°	108 109,125* 108 108	97 98,119° 97 97	136 131°,136 136	136 136 136	143 143 144,145 146,147	-
Residence in 1965 by selected classes of migrants Year moved into present house	72,87° 87° 87°	72.87* 67* 87*	109,125* 109 109	98,119* 98 98	131 • 137	137 - -	148 149 150	=
School enrollment	73,74,88° 75,88°,89° 88°	73,74.88* 75,88*,89* 88*	110,125° 110,111,125° 110	99,119* 99,100,119* 99	131°,137 131°,137	137 137 -	154,155 156,157 -	-
Manital history	89* 85*.89* 85*,89*		111 107,111,124-,125- 107,111,124-,125-	96,100,118*,119* 96,100,118*,119*	130°,136 130°,136	136 136	_ 159 159	- - -
Fertility: Own children under 5 years old Children ever born	76,89° 76,89°	76.89° 76.89°	111 111,125°	100 100,119*	131*,136 131*,133	136 136	158 158	=
Type of group quarters	89*	89-	111	100	-	-	16.0	-
Disability	89.	89-	111	100	-	_	160	-
Veteran status	71,87*	71,87*	109	98		-	, 153	-
ECONOMIC CHARACTERISTICS Employment status by marital status and presence	77,90*	90*	112,126*	101,120*	132*,137	137	161	_
of own children	90•	90•	112,126*	101,120*	132*	-	162	_
school	88° 78,90° 19, <b>93°</b>	83 • 80 • 88 •	110,126* 112,126* 115,126*	99,120° 101,120° 104,120°	132*.137 132*,137 135*	137 137 -	16: 164 175,176	-
Labor mobility	93* 81,91* 80,82,92* 80,93*	93* 91* 92*	115,126* 113,127* 114,128* 115,126*	104,120* 102,121* 103,122* 104,120*	133*,136 134*,138 133*	138 138	177 165-168 169-172 173,174	- - -
Last occupation of experienced unemployed	93-	93•	715,923*	104,122*	-	-	-	_
Place of work	87*	87*	109	96	132*.137	137	151	-
Means of transportation to work	87*	87*	109	98	132*	-	152	=
Incurry in 1969 Total Type Median earnings by occupation	83,84,94* 94* 94*	83,84,94* 94* 94*	116,128* 116,128*	105,122* 105,122* 105,121*	135°,139 139	139 139	178,180 179,181	=
Poverty status in 1969	95*	95*	116,127* 117,129*	106,123*	135*,139	139	182	_

See correction note, page 359, für farm and nonfarm residence.



For example, the researcher knows that the South had net in-migration during the 1960's. She is interested in knowing whether migrants have moved primarily to the metropolitan or nonmetropolitan South and whether there are differences in this movement by race. (It's like being a detective—if there is a difference, the researcher would want to look further for a reason. For example, is there a difference in job availability for blacks and whites which can be altered by public policies? Or is there a difference in lifestyle preferences which will affect any public policies made?)

She already knows the information is not in the U. S. Summary volume (from Question #4) but guesses it may be in the individual State volumes which give more information. Turning to the Table Finding Guide in the State population volumes, she finds "residence in 1965" under the subject listings; under the /nonmetro column, Table 72 is listed but the researcher the guide if race or any other characteristics are included cannot 😼 in the rning to that table she finds that metropolitan and none further subdivided but no characteristics such as race are metropo includeg. To find out if the specific information wanted is available in any of the other tables of the State reports, the researcher turns to the Index of Selected 1970 Census Reports (see figure 4). As this page shows, there are a number of cross-classifications of population characteristics and geographic areas for this subject but none are by race and by met opolitan/nonmetropolitan residence. Studying the Index, the researcher discovers it is possible to get this data by race and by urban/rural residence in Table 50 of the PC(1)-C State report. Using the "urban-rural" dichotomy rather than the metro/nonmetro sichotomy is acceptable for her purposes. The data given in this table are for "residence in 1965," "State of birth," "year moved into present nouse," all by race and urban/rural residence.

Because the researcher wants to compare 15 States and the data are all in separate volumes, she must prepare a table.

Question 5: From Table 50 in the PC(1)-C State reports, fill in the correct data for the table on page 9 for ary State(s) you wish to pick. Compare the States to the total Ur ed States by filling in the table from the data in Table 8/ (figure 6, page 10). (The Index to Selected 1970 Census Reports has a table which gives the correspondence between State report and U. S. Summary report table numbering.) The correct data for the State of Maryland are given (figure 5).

The researcher will prepare such a table for the 15 Southern States she is concerned with and will add the State data to obtain regional data. The individual States can thus be compared to regional trends and the region to the Nation.

If the researcher had been satisfied with using the Census definition of the South, she could use Table 137 in the U. S. Summary PC(1)-C report which is reproduced here (figure 7, page 12). Note, however, that these tables do not give any race data. Averages for the total Southern population can



TIGURE 4	TINDEY	10	SELECTE	<u>n 13/0</u>	<u> </u>
RESIDENCE IN 1965 ( UNIVERSE: PERS	2) SHT NI CAO	ARMEO	FORCES IN		
1965 FOR: STAT	E: BY TYPE ( E: METRO/CC	OF RES	SIOENCE	PC(1)-C	51
U/RNF/RF FOR4 SMSA	'S: CC'S. 116	RAM R		PC(1)-C	72
UA'S: PLACE	S 50.000+ ES 10.000-50	0.000	CINT HOLK:	PC(1)-C PC(1)-C	82
FOR: COUN	TIES			PC(1)-C	
MHO LIVEO II	TES OF INSTI N A DIFFEREN	IT COU	INTY IN 1965 Sidence	PC(1)-C	61
U/RNF/RF FOR: SMSA				PC(1)-C	72
UA'S; PLACES	S 50.000+ ES 10.000-50			PC(1)-C PC(1)-C PC(1)-C	
RESIDENCE IN 1965 (*)	9) BY AGE (1	7) BY	SEX (2) BY		
UNIVERSE: PERSI FOR: STATE				PC(1)-D	145
RESIDENCE IN 1965 ( UNIVERSE: MALES ARMED FORCES	5 IN 1970	FOR:	STATE	PC(1)-D	145
RESIDENCE IN 1965 (9 UNIVERSE: MALES ARMED FORCES	)) BY AGE (7 20 YEARS O 10 1965	) BY ( LD AN) FOR:	RACE (4) D OVER IN STATE	PC(1)-D	145
RESIDENCE IN 1965 (9 UNIVERSE: PERSO ATTENDING CO	MS 20 VEADS	OID A	AMD OVED	Ē PC(1)-D °	145
RESIDENCE IN 1965 (9 RESIDENCE NI					
UNIVERSE: PERSO ATTENDING CO	INS 1: YEARS LLEGE IN 19	OLD / 70	AND OVER FOR: STATE	E PC(1)-D 1	145
RESICENCE IN 1965 (6 LHIVERSE: MALE OLO ANO OVER	CIVILIAN VE	TERANS TATE		PC(1)-D 1	151
RESIDENCE IN 1965 (6 (2) BY TOTAL UNIVERSE: PERSO FOR: STATE	) BY CENSUS AND PERCENT NS 5 YEARS (	T (2)			45
RESIDENCE IN 1965 (2 OCCUPATION ( OCCUPATION II UNIVERSE PERSO FOR: STATE	14) BY EMPLO N 1965 (14)	YHENT	STATUS AND		
RESIDENCE IN 1965 (9 UNIVERSE: PERSO	) BY RACE (4 NS 5 YEARS O	I) ILD AM	n nver	PC(1)-D 1	78
FURI STATE:	U/RNE/RE			<u></u>	50
RESIDENCE IN 1965 (9) SEX (2) UNIVERSE: PERSOI					
FUR: STATE	NS 5 YEARS 0			PC(1)-D 1	45
UMIVERSE: MALES ARMED FORCES	20 YEARS OL IN 1965	D AND FOR:	OVER IN STATE	PC(1)-0 ·	. •
RESIDENCE IN 1965 (9) UN:VERSE: PERSON ATTENDING COL	IS 20 YEARS	OLD A	NG OVER	PC(1)-0 .	. !
RESIDENCE IN 1965 (9) UNIVERSE: MALES ARMED FORCES	15 YEARS OLI	D AND	AGE (8) OVER IN STATE	PC(1)-D 1	45
RESIDENCE IN 1965 (2) WITH PARENTS UNIVERSE: PERSON ATTENDING COL	3Y RACE (4 (2) BY AGE 3 15 YEARS	) 8Y ( (3) OLO AI	RESIDENCE ND OVER	DC443 D 4	
RESIDENCE IN 1965 (6) PERCENT (2) B	BY BACE (2	. RY 1	TOTAL AND	PUCID-0: 14	•3
UNIVERSE: PERSON FOR: STATE RESIDENCE IN 1963 (3)				PC(1)-C 4	45
UNIVERSE: PERSON 1965 LIVING I 1965 FOR:	S IN THE AR! N A DIFFERE!	MED FO	JNTY IN	PC(1)-C 5	50

UNIVERSE: PERSONS ATTENDING COLLEGE IN 196 WHO LIVED IN A DIFFERENT COUNTY IN 196	65
FOR: STATE: U/RNF/RF	PC(1)-C 50
RESIDENCE IN 1965 (2) BY RACE (4) UNIVERSE: PERSONS IN THE ARMED FORCES IN 1970 MHO LIVED IN A DIFFERENT COUNTY II 1965 FDR: STATE: U/RNF/RF	N PC(1) C 50
RESIDENCE IN 1965 (2) BY RACE (4) UNIVERSE: INMATES OF INSTITUTIONS IN 1970 MHO LIVEO IN A OIFFERENT COUNTY IN 1965 FOR: STATE: U/RNF/RF	S P4(1)-C 50
RESIDENCE IN 1965 (2) BY RACE (4) BY RESIDENCE	
UNIVERSE: PERSONS ATTENDING COLLEGE IN 197 WHO LIVED IN A DIFFERENT COUNTY (9 1965 FOR: STATE: UJRNF/RF	)   PC(1)=C 50
RESIDENCE IN 1965 (9) BY RESIDENCE WITH PARENTS (2) 8Y AGE (3) BY RACE (4) UNIVERSE, PERSINS 15 YEARS OLD AND OVER ATTENDING COLLEGE IN 1970 FOR: STAT	
RESIDENCE IN 1965 (2) BY RESIDENCE WITH PARENTS	
UNIVERSE: PERSONS ATTENDING COLLEGE IN 197 NSW LIVED IN A DIFFERENT COUNTY IN 1965 FOR: STATE: BY TYPE OF RESIDENCE FOR: STATE: METRO/CC/NONMETRO BY	0 PC(1)-C 61
U/RMF/RF FOR: SMSA'S: CC'S, URBAN REMAINDER:	PC(1)-C 72
UA'S: PLACES 50.000+ FOR: PLACES 10.000-50.000 FOR: COUNTIES	PC(1)-C 82 PC(1)-C 102 PC(1)-C 119
RESIDENCE IN 1965 (2) BY RESIDENCE WITH PARENTS (2) BY RACE (4) UNIVERSE: PERSONS ATTENDING COLLEGE IN 1979	ń
WHO LIVED IN A DIFFERENT COUNTY IN 1965 FOR: STATE: U/RNF/RF	PC(1)-C 50
RESIDENCE IN 1965 (9) BY SEX (2) BY RACE (4) BY AGE (17) UNIVERSE: PERSONS 5 YEARS OLD AND OVER FOR: STATE	PC(1)-D 145
RESIDENCE IN 1965 (2) BY SEX (2) BY EMPLOYMENT STATUS AND OCCUPATION (14) BY EMPLOYMENT STATUS AND OCCUPATION IN 1965 (14) UNIVERSE: PERSONS 25 YEARS OLD AND OVER FOR: STATE	T PC(1)-D 178
RESIDENCE IN 1965 UNIVERSE RESTRICTORS: LIVING IN A DIFFERENT COUNTY IN 1965 INMATES DF INSTITUTIONS IN 1970 WHO LIVED IN A DIFFERENT COUNTY IN 1965	
STRATIFIED BY RESIDENCE IN 1965 (2) BY RACE (4) FOR: STATE: U/RNF/RF	PC(1)-C 50
STRATIFIED BY RESIDENCE IN 1965 (2)	
RESIDENCE FOR: STATE: METRO/CC/NDNMETRO BY U/RNF/RF	PC(1)-C 61
FOR: SMSA'S: CC'S, URBAN REMAINDER: UA'S: 2LACES 50,000+	PC(1)-C 72
FOR: PLACES 10.000-50.000 FOR: COUNTIES	PC(1)-C 102 PC(1)-C 119
PERCENT LIVING IN A DIFFERENT COUNTY IN 1965 OF PERSONS 5 YEARS OLD AND OVER TOTAL	
FOR: SMSA'S. UA'S. PLACES 10.000+ FOR: COUNTIES	PC(1)-C 40 PC(1)-C 43
PERSONS IN THE ARMED FORCES IN 1970 WHO LIVED IN A DIFFERENT COUNTY IN 1965	
STRATIFIED BY RESIDENCE IN 1965 (2) BY RACE (4) FGR: STATE: U/RNF/RF	PC(1)-C 50
STRATIFIED BY RESIDENCE IN 1965 (2) FOR: STATE: BY TYPE OF	
RESIDENCE FOR: STATE: METRO/CC/NONMETRO BY U/RNF/RF	PC(1)-1 61
FOR: SMSA'S: CC'S, HDRAN	PC(1)-C 72 PC(1)-C 82
REMAINDER; UA'S: PLACES 50.000+ FOR: PLACES ?0.000-50.000 FOR: COUNTIES	PC(1)-C 102 PC(1:-C 119



# Worksheet for Question 5

# RESIDENCE IN 1965 FOR TOTAL POPULATION FIVE YEARS OLD AND OVER BY RACE AND URBAN/RURAL RESIDENCE: 1970

1	Tatal Nam	Carra			<del></del>	<del></del>	<del></del>	<del></del>	<del></del>			
	Total Pop. Age 5+	Same House	D 1	FFER	ENT	HOUSE	IN	UNI	TED	S		
STATE				Sane Cc ty		DI	FFERE	ENT	COUN	T \		
OF RESI-		4.		_		Same State	DI	FFER	ENT	S		
DENCE in 1970			Total		Total		Total	North- east	North Cen- tral	.5		
URBAN WHITE												
U. S. Maryland	2,207,468	1,128,769	914,479			188,128	310,759	92,892	47,021	13		
				URBA	N NE	G. R O.		<del></del>	<del></del>	+		
U. S. Maryland	514,534	235,502	215,495	143,217	72,278	17,620	54,658	6,142	2,450	4		
I	U R	BAN P	ERSO	NS O	F SP	ANISH	LAN	GUAG	E	<del></del>		
U. S. Maryland	41,107	10,370	19,705	7,687	12,018	2,605	9,413	2,026	685	4		
				RURA	L *. W }	I T E				<del></del>		
U. S. Maryland	724,701	403,760	277,998	139,008	138,990	65,295	73,695	22,581	10,114	3		
1			<u> </u>	RURA	L* NE	GRO	·	<del></del>	·····	<u>-</u>		
U.S. Maryland	122,135	70,041	33,601	21,702	11,899	7,829	4,070	730	192			
	RU	RAL * P	ERSO	NS O	F S P	ANISH	LAN	GUAG	E			
U. S. Maryland	5,000	1,728	2,476	784	1,692	346	1.346	. 366	88			
* D 11 D A	1 - DUDA1	NONEADM +	DUDAL CAL	DM OD	DUD	I - TOTAL	_ HDR AN	<u>L</u>	<del> </del>	↤		

\* R U R A L = RURAL NONFARM + RURAL FARM O R RURAL = TOTAL - URBAN

Source: U. S. Bureau of the Census, Census of Population: 1970, (PC(1)-C22, Maryland. U. S. G Printing Office, Washington, D. C., Table 50.

# Worksheet for Question 5

# RESIDENCE IN 1965 FOR TOTAL POPULATION FIVE YEARS OLD AND OVER

BY RACE AND URBAN/RURAL RESIDENCE: 1970

Pop.	Same	D 1	I F F E R	ENT	HOUSE	IN	UNI	TED	STAT	FS
5+	House		Same	· · · · · · · · · · · · · · · · · · ·		<del></del>	· · · · · · · · · · · · · · · · · · ·		<del></del>	
			County			FFERE	<u>.</u> 6	C O U N	T Y	
					Same   State	D; I	FFER	ENT	STAT	E
		Total		Total		Total	North- east	North Cen- tral	South	West
			URBA	N WH	ITE					
468	1,128,769	914,479	415,592	498,887	188,128	310,759	92,892	47,021	136,750	34,096
			URBA	N NE	G. R O.	····			A Company of the Comp	
534	235,502	215,495	143,217	72,278	17,620	54,658	6,142	2,450	44,034	1,982
UR	BAN P	ERSO	NS O	F SP	ANISH	LAN	GUAG	E	-are the same week	
107	10,370	19,705	7,687	12,018	2,605	9,413	2,026	685		1,733
			RURA	L* WH	ITE				· ····	
701	403,760	277,998	139,008	138,990	65,295	73,695	22,581	10,114	32,895	8,105
<del></del>			RURA	L * NE	GRO				Salar at the	
135	70,041	33,601	21,702	11,899	7,829	4,070	730	192	3,011	137
RU	RAL* P	ERS 0	NS O	S P	ANISH	LAN	GUAG	E		
000	1,728	2,476	784	1,692	346	1.346	366	88	562	330
URAL	NONFARM +	RURAL FA	RM O R	RURA	L = TOTAL	- URBAN				

reau of the Census, Census of Population: 1970, (PC(1)-C22, Maryland. U.S. Government Office, Washington, D.C., Table 50.



FIGURE 6

(Data bused on sample, see text). For minimum base for derived figures (percent, median, etc.) and meaning of symbols, see text)

Table 87. Mobility, Commuting, and Veteran Status by Race for Urban and Rural Residence: 1970

United States **United States** Persons of Spanish heritoge Persons of Sponish heritoge Negro Total White Negro STATE OF BIRTH Tatel netive population
Born in Stote of residence
Born in different State
Percent of total
Northwast
North Central
South
West
Born obtaind
West
State of birth not reported 193 540 744 131 609 789 50 904 066 263 10 700 014 15 416 469 19 249 677 5 537 906 2 101 757 8 945 154 169 334 220 115 327 410 45 069 723 26 6 10 376 473 14 958 820 14 472 289 5 262 138 1 911 200 7 045 890 22 282 714 14 913 330 5 480 929 24 6 295 709 398 439 4 691 839 94 942 116 538 1 771 917 7 840 428 5 177 133 1 478 620 18 9 170 334 226 248 584 989 497 049 1 017 199 167 476 140 595 148 90 947 916 40 762 334 29 0 8 853 829 12 230 834 15 355 491 4 322 180 1 874 748 7 010 170 121 173 428 78 786 057 35 359 268 29.2 8 568 103 11 814 724 10 890 113 4 086 328 1 696 149 5 331 954 6 827 001 4 443 732 1 264 315 19.5 155 692 193 995 482 862 426 766 974 515 144 439

Table 87. Mobility, Commuting, and Veteran Status by Race, for Urban and Rural Residence: 1970—Continued

[Data based on a limple lises text for minimum base for derived figures i percent, median, etc.) and meaning of symbols, see text] Rural nontarm United States Negro Negro STATE OF BIRTH Total active population

Born in Street of residence

Born in different Store

Percent of total
North Central

South

West

Born bood of sed, etc.

Stote of birth not reported. 912 178 654 573 197 580 21 7 14 070 74 961 93 703 64 843 38 892 21 133 44 769 134 33 693 970 9 148 755 20 5 1 769 379 2 754 663 1 080 103 207 390 1 699 039 40 494 013 30 034 254 5 764 442 21 6 1 733 591 2 716 259 3 270 540 1 044 052 196 338 1 498 979 3 758 643 3 232 727 348 414 9 3 32 621 27 520 280 161 3 112 4 744 172 758 7 486 779 6 507 097 946 010 12 3 74 779 427 837 311 636 131 758 18 213 214 957 8 196 444 6 967 903 972 977 11 9 76 828 16 725 16.5 572 2 292 8 424 5 437 3 792 1 904 76 E06 431 025 329 523 135 623 19 619 235 945 4 8 1 903 2 276 16 677 386 285 17 237 RESIDENCE IN 1965 Tetal pagastetian, 5 years ald ead ever

Some house

Different house in United States
Same county

Different county

In Armed Forces in 1965
Persons attending college in 1965
Some State.

Different State.

Different State.

In Armed Forces in 1965
Persons attending college in 1965
Some State.

Different State.

In Armed Forces in 1965
Northbeat

Marin Central

South
West

Abroad

In Armed Forces in 1965
Moved 1965 residence not reported. 891 496 418 674 391 231 222 154 169 077 41 470 964
20 372 893
6 879 653
9 176 011
7 103 642
199 951
3 155 017
153 527
163 464
596 882
222
1 064 742
672 655
887
77 015
: 952 529 37 618 201 20 072 044 7 563 323 6 514 196 7 349 127 193 559 325 554 4 023 209 3 025 918 149 598 159 019 572 366 707 745 1 006 874 648 933 243 962 73 738 652 2 359 442 2 041 391 1 130 118 840 456 289 662 5 043 5 851 180 473 100 189 2 757 21 667 17 352 52 747 8 423 7 991 2 818 179 962 7 761 489 5 962 177 1 607 608 1 059 274 548 334 9 019 18 429 369 C42 179 292 6 293 5 817 50 947 48 603 14 700 3 460 177 004 104 642 59 800 55 990 21 191 14 749 106 200 9 975 4 774 91 113 172 348 1 996 2 256 4 252 53 4 650 172 13 588 4 877 48 8 + 3 1 185 2 467 230 259 7 649 8 759 30 178 29 917 31 838 1 926 49 753 96 15 851 RESIDENCE IN 1965 OF SELECTED CLASSES OF MIGRANTS 8 586 5 554 449 Different county in 1965 In Armed Forces 688 354 165 274 Icmate of



be compared not only to the U. S. as a whole, but also to other regions. The regional tables also make it possible to determine from which regions population moves to the South as well as to which regions most Southerners move. For example, from Table 137, the "residence in 1965" category shows that 626,013 people lived in the South in 1965 and moved to the Northeast by 1970. Further, it shows that almost eight out of ten of those movers to the Northeast went to an urban area (492,289/626,013) and the remainder to a rural area. A slightly larger proportion of the North Central population was Southern (1,007,058/51,733,952 = 1.9%) than of the Northeast (626,013/45,056,815 = 1.4%).

Question 6: From the table you completed for question 5 (figure 5):

- (a) Compute what part of the total population in the category (urban white, urban Negro, etc.) were nonmovers from 1965 to 1970 for each of the States and the United States.
- (b) From the States you picked, what proportion moved to a different region and what proportion moved within the same regior but a different State?
- (c) What proportion of the movers made short-distance moves (different house but same county)? What proportion moved within the same State? To a different State?
- (d) What group (urban white, rural Negro, etc.) had the highest rate of movement? Are rural people as a whole more likely to move than urban people? Blacks than whites? Spanishlanguage people compared to blacks? Show the data to support your answers.
- (e) Study State Table 50 again. Why is it that the white population + black population does not equal the total population?
- (f) Is Spanish-heritage population considered a race? (See concept definition in PC(1)-C report.)
- (g) Study the heading of figure 5 and complete the following: Total population age 5+ = Same House + Different House Different House = Different County = Different State =

If the researcher had been insistent about having the migration data by race and metropolitan/nonmetropolitan residence rather than the urban/rural dichotomy, she could have compiled most of the data herself. As the guide and <u>Index</u> show, migration data are available by county in separate tables for the total population, Negroes, and persons of Spanish heritage. State maps at the beginning of the state population census reports indicate which counties are metropolitan.

ERIC THE PROVIDED OF STREET

#### FIGURE 7

Table 137. Migration, Place of Work, Education, and Employment Status by Urban and Rural Residence for Regions: 1970

RESIDENCE IN 1965  Total population, 5 years and and ever  27 012 861 21 27 05 516 4 900 876 405 447 28 325 322 34 948 859 11 021 549 3 71 500 800 800 405 447 28 325 322 19 407 100 5 923 998 829 70 90 800 800 800 800 800 800 800 800 800	1		Norti	neast	1		North (	entral	
Total peptidation, 5 years and and every   45, 664, 815, 34, 308, 314, 8, 342, 337, 953, 978, 1732, 952, 344, 988, 91, 102, 1544, 377, 377, 91, 102, 103, 103, 103, 103, 103, 103, 103, 103	Regions	Total	Urbon	Rural nonform	Rural form	Total	Urbon	Rural nonform	Rural farm
Some Nouse	RESIDENCE IN 1965							•	
Definement Notes in United States   15 0.09 d.56   12 0.00 281   2 949 586   89 789   20 494 874   15 213 647   4 576 458   70 50me county   9 142 425   7 448 400   1 630 741   57 284   12 491 191   9 491 355   2 548 041   4 578 458   70 50me county   1 6 40 72 755   1 6 50 74   1 6 50 741   1 7 72 75   1 7 7 75	Total papalation, 5 years old and over	45 054 815	36 308 314	8 242 537	505 978		34 998 E50	11 021 549	3 713 542
Some South									2 934 264
Definition country	Different house in United States	15 069 656	12 030 261	2 949 586	89 789			4 576 458	704 769
Some Stote	Same county								452 523
Deferent State									252 246
Morthean									180 193
North Centrol	Defferent State								72 053
South									3 110
West   220 079   191 467   37 535   1 077   366 83   424 397   128 642   1									40 918
Abroad									13 601
Moved 1965 residence for reported   2 153 779   1 813 204   331 316   9 273   2 474 304   1 932 282   471 997   7									14 424
PLACE OF WORK  All werkers  19 004 834 15 511 341 3 282 082 213 393 21 387 145 15 734 171 4 170 805 1 44 074 074 074 074 074 074 074 074 074	Abrood								4 465
## Worked in country of residence   19 004 634   15 511 341   3 282 082   21 389 145   15 758 171   4 170 805   144		2 133 779	1 813 204	231 319	9 2/3	2 4/4 304	1 932 202	4/1 987	70 044
Worked in County of residence   12 586 478   10 127 767   2 299 6379   169 072   16 564 168   12 549 678   2 857 080   13 February 10 1 workers   66.2   65.3   69.8   79.2   77.4   79.6   66.5   66.5   66.5   66.5   70.6   70.5   70.6   70.5   7	PLACE OF WORK			•	- 1				
Process of all workers   66.2   65.3   69.8   79.2   77.4   79.6   66.5									1 440 189
Worked outside country of residence         4 889 415         4 109 622         750 760         29 033         3 392 912         2 199 607         1 027 134         20 Phoce of work not reported           Proce of work not reported         1 530 943         1 273 972         241 683         15 288         1 432 085         1 048 886         286 591         9           SCMPTILE ENROLLMENT         13 754 373         10 940 387         2 449 784         146 033         16 824 188         12 100 485         3 480 549         1 23 Notes 12									1 157 410
Poce of work not reported   1 530 943   1 273 972   241 683   15 288   1 432 085   1 048 886   286 591   9	Percent of all workers								79.3
SCHT-DLE ENROLLMENT Total carefled, 3 to 34 years and  13 754 373 10 946 387 2 649 784 164 033 16 826 188 12 109 645 3 480 549 1 22.  Mursery school 201 57 853 9 053 320 78 056 64 281 11 706 Endergorten 787 222 618 913 160 874 7 312 998 616 721 599 217 449 57 Public 694 138 50 074 147 070 6 885 936 826 67 939 903 94 55 Elementory (1 to 8 years) 7 615 607 5 919 207 1 597 035 97 365 9 434 109 6 552 903 94 57 Public 694 138 500 75 191 100 874 7 312 998 816 721 599 217 449 57 Public 694 138 500 75 191 207 1 597 035 97 365 9 434 109 6 552 903 94 57 Public 694 907 4 611 914 1 470 184 90 809 8 066 388 5 421 041 1 999 083 654 67  1 410 105 2 689 690 669 224 51 191 4 190 267 2 892 714 900 642 391 Public 10 10 10 10 10 10 10 10 10 10 10 10 10									206 171
Total serified, 3 to 34 years ald   13 734 373 10 940 387 2 649 784 166 033 16 826 188 12 109 645 3 480 549 1 22	Place of work not reported	1 530 943	1 273 972	241 683	15 268	1 432 085	1 048 886	286 591	96 608
Not Series   124   100   203 852   36 427   749   726 403   206 266   26 576	SCHOOL ENROLLMENT				1				
Fubble   67 221   57 853   9 053   220   78 056   64 281   11 706	Total carolled, 3 to 34 years old		10 940 587	2 649 784	144 033		12 109 685	3 480 549	1 235 757
Knoderporten   787 222   618 913   160 874   7 312   998 616   721 549   217 449   57 Public   694 138   540 074   147 070   6 865   936 826   670 979   706 394   5 8 Public   7 615 607   5 919 207   5 97 305   9 354 109   6 552 903   2 147 073   7 615 607   5 919 207   5 97 305   9 354 109   6 552 903   2 147 073   7 7 7 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9		241 100						26 652	3 659
Public         694 138         560 074         147 070         6 885         936 826         670 939         708 394         5           Elementory (1 to 8 years)         7 615 607         5 919 207         1 597 035         97 345         9 434 109         6 532 903         2 147 073         73           Public         6 194 907         4 611 914         1 472 184         90 809         8 066 388         5 421 041         1 990 083         654 1041         199 083         648 1041         199 083         649 089         669 224         51 191         4 190 267         2 892 714         900 642         39           Sublic         2 289 7800         2 188 477         622 251         48 550         3 730 110         2 488 395         842 368         37           1 702 339         1 508 719         1 966 593         1 736 253         1 736 253         1 736 253         1 736 253				9 053				11 706	2 048
Temperatury (1 to 8 years)									59 467
Public     6 194 907     4 611 914     1 492 184     90 809     8 066 388     5 421 041     1 989 083     655       High school (1 to 4 years)     3 410 105     2 689 690     669 224     51 191     4 190 267     2 892 714     900 642     39       1 5 5     2 899 280     2 188 477     622 231     48 550     3 730 110     2 488 395     842 368     37       1 702 339     1 508 719     1 966 593     1 736 253								208 394	57 356
High school (1 to 4 years) 2 689 690 649 224 51 191 4 190 267 2 892 714 900 642 390 100 100 100 100 100 100 100 100 100 1									734 133
2 859 280 2 188 477 622 751 9 550 1 730 110 2 488 395 862 368 377 1 702 339 1 508 719									656 264
1 702 339 1 500 719									396 911
	M			622 251	48 550			862 368	379 347
		1 /02 339	1 508 719			1 966 593	1 736 253		587
55.7 55.7 55.7	3 to 31 m	55.3	344		-	55.7	55.7		

Table 137. Migration, Place of Work, Education, and Employment Status by Urban and Rural Residence for Regions: 1970—Continued

	TOOIS COME OF SOIL	1944, SAN HELT. 11	D 11444110111 10022 10	or control trigore.	s (percent, medion,	TIC.7 GIA THOUSAN	d cu shunous: 244 .	-2.,
		Soc	<i>y</i> th			We	nst ,	-
Regions	total	Urban	Rural nonform	Rural form	Total	Urban	Rural nonform	Rural form
RESIDENCE IN 1945				1				
level papelistics, 5 years old and ever	57 426 811	37 119 913	17 509 253	2 797 645	21 876 516	26 434 741	4 497 405	744 334
Some house	29 153 085	17 528 341	9 517 499	2 107 245	14 072 453	11 526 634	2 030 598	515 221
Different house in United States	24 307 553	16 647 867	7 047 749	611 937	15 221 580	12 714 607	2 305 B6G	201 113
Same county	13 510 217	8 892 563	4 189 128	428 526	8 212 236	6 989 194	1 102 101	120 941
Different county	10 797 336	7 755 304	2 858 621	183 411	7 009 344	5 725 413	1 703 759	80 172
Same State	4 870 872 5 926 464	3 159 413 4 595 891	1 588 632 1 269 989	122 B27 60 584	3 129 449 3 879 895	2 466 400 3 259 013	616 620 587 139	46 429 33 743
Driferent State	1 063 799	893 160	166 837	3 802	474 095	433 100	40 J75	33 /43
North Central	1 282 091	976 757	286 360	16 974	961 834	860 272	116 529	5 133
South	2 784 119	2 098 325	655 416	30 378	852 579	745 788	102 .53	4 38
West	796 455	627 649	159 376	9 430	1 571 387	1 219 853	327 832	23 652
Abrood	739 737	641 489	94 619	3 629	696 850	630 406	61 307	5 137
Moved, 1965 resident a not reported	3 226 436	2 302 216	849 386	74 834	1 885 633	1 563 🕬	299 840	22 853
PLACE OF WORK				ļ				
All treatures	23 354 844	15 854 694	4 440 457	1 039 293	13 101 944	11 103 705	1 699 434	278 805
Worked in county of residence	17 511 808	12 323 460	4 415 107	773 241	10 802 152	9 180 517	1 367 503	254 132
Percent of all workers	75.0	77.7	68.3	74.4	82.4	82.7	80.5	850
Worked autside county of residence	4 011 738	2 306 552	1 524 679	18C 507	1 394 107	1 170 952	198 548	24 607
Place of work not reported	1 830 898	1 224 682	520 671	85 545	905 685	752 236	133 383	20 066
SCHOOL ENROLLMENT				į.				
Total paralled, 3 to 34 years old.	17 505 253	11 520 200	5 217 447	747 378	10 547 182	8 709 935	1 547 050	450 111
Nursery school	245 820	208 413	34 912	2 467	<b>230 189</b>	209 574	19 314	1 283
Public	70 907	53 539	15 655	1 685	87 065	76 275	9 979	793
Ker/e-garten	657 121	503 876	140 667	12 378	581 439	489 894	82 701	8 776
Note	389 727	286 127	94 294	9 113	523 718	440 511	75 243	7 912
Elementory (1 to 8 years)	10 497 636	6 567 693 6 060 747	3 457 113	472 830	5 662 <b>6</b> 67 5 236 221	4 581 150 4 192 787	937 2.5 907 302	144 502 138 132
5-ble	9 875 662 4 305 7/9	2 731 822	3 358 884 1 322 828	456 031 251 119	2 574 493	2 087 400	404 670	82 423
High school (1 to 4 years)	4 064 033	2 532 431	322 020	244 230	2 410 042	1 939 747	390 998	79 297
Cohege	1 796 137	1 302 401		28 584	1 498 194	381 933	370 770	13 127
								1
		_			55.5			4.1



Question 7: List the metropolitan counties of one of the States you are interested in. Which tables have migration data by counties?

These data are available for the total population of counties and separately for counties with at least 400 blacks. The researcher must make a table to add the data in the desired category for all the nonmetropolitan counties or, more simply, subtract the metropolitan counties from the total Southern population (since total population = metropolitan county population + non-metropolitan county population). The basic point here is that it is usually possible to obtain data in the desired form although it may take some extensive adding and subtracting from the basic units (one of the advantages of using data from computer summary tapes is that calculations are easily done).

Question 8: Make a table for the total metropolitan population of any State showing information from the "residence in 1965" question.

The above has been concerned with recent migration patterns of the population; lifetime migration may also be studied with the "state of birth" category as well as "year moved into present house." This researcher is concerned with policy and thus will also study the trends from these categories.

#### Using Subject Reports:

The researcher has other sources for migration information. The Census Bureau has produced special "subject reports" (Series PC(2)) from the 1970 Census which have information for the Nation, its regions, and in some instances, States and metropolitan areas. The reports on migration are:

STATE OF BIRTH, PC(2)-2A, statistics on State of Birth and residence in 1970 for the native population.

MOBILITY FOR STATES AND THE NATION, PC(2)-2B, State-to-State migration data for all persons, persons in armed forces, and college students.

MOBILITY FOR METROPOLITAN AREAS, PC(2)-2C, characteristics of migrants and nonmigrants for metropolitan areas with over 500,000 population.

LIFETIME AND RECENT MIGRATION, PC(2)-2D, presents place of birth information, along with residence in 1965 and 1970 in terms of census regions and divisions.

MIGRATION BETWEEN STATE ECONOMIC AREAS, PC(2)-25, gives an origin/destination matrix of 1965 to 1970 migration for the 510 State Economic Areas (groups of counties within States which include all SMSA's



according to their 1960 definitions; thus this report corresponds directly to a 1960 report showing 1955 to 1960 migration for the same areas).

The demographer uses a table from one subject report, MOBILITY FOR STATES AND THE NATION, PC(2)-2B, to study the education level of migrants to the South as compared to native Southerners. Table 25 (figure 8, pages 16-19) has this information for black and white males according to their State of birth and their residence in 1970 (this is referred to as "lifetime migration" as opposed to "recent migration" information derived from comparing residence in 1965 and 1970).

Question 9: The table shown on page 15 is derived from Table 25 (figure 8).

Fill in the table. Prepare a second table showing the percentage distribution for the columns.

- Question 10: (a) From the table computed for Question 9, are migrants to the South better educated than native Southerners?
  - (b) How do native Southerners compare to "return migrants" (those born in the South, lived outside the South in 1965, lived in the South in 1970)?
  - (c) Age is an important explanatory demographic variable. Does this help explain the large differences between native and nonnative education levels?
  - (d) Looking at the differences in the education levels of native Southerners and migrants to the South, what can you say to the governors about probable competition for jobs? Are there other variables you should look at to substantiate further your position?
  - (e) What do the education levels of migrants mean to the South in terms of the type of industry that can be brought into the South in the future?

# Worksheet for Question 9

# YEARS OF SCHOOL COMPLETED BY WHITE AND NEGRO MALES WHO LIVED IN CENSUS SOUTH REGION IN 1970 BY REGION OF BIRTH, AGE 25+ and 25-34 YEARS\*

		LIV	E D	I N	SOU	-	T H	IN.	19	7 0	<u> </u>
Age and Years		NATIV	E WH	ITE	,		N	A T I V	E	NEGRO	
of School Completed	TOTAL	Born in North	Born in West	Born in in South in 1965	South Outside South in 1965		TOTAL	Born in North	Born in West	Born in in South in 1965	South Outside South in 1965
Total 25+ Years	12,722,505	1,900,749	160,593	9,549,343	348,583		2,421,260	33,535	2,648	2,095,355	49,208
Elem. 0-8											
HS 1-3									_		
HS 4		,						.,			
Coll. 1-3											
Coll. 4+		, - n									
25-34 yrs.	3,092,755	429,016	66,026	2,221,158	164,465		576,808	11,335	1,152	468,875	26,374
Elem. 0-8											
HS 1-3										att	
HS 4											
Coll. 1-3		,								,	<del>* · · ·</del>
Coll. 4+		•								•	

Source: U. S. Bureau of the Census, Census of Population: 1970, Subject Reports, Final Report PC(2)-2B, Table 25, U. S. Government Printing Office, 1973.



<sup>\*</sup>Excludes foreign-born population.

1Data based on 15-percent sample, see lext. For meaning of symbols, see text)

				Notive	white							Native !	legro			
South				,	Во	rn in South							Bor	n in South		·
Standard Metropolitan					Living	in South in	1965	Outside					Living i	n South in	1965	Outside
Statistical Areas		<b>Born</b> in	Born In			ln.	Not in	South or abroad		Born in	Born in	Totali	Tolal*	In SMSA's	Not in SMSA's	South or obrood in 1965
	Total <sup>1</sup>	North	West	Tatal)	Total)	SMSA's	SMSA's	in 1965	Total	North	West	Total	101017	musu 2	2012/13	111103
SOUTH																
Total, 25 years old and ever	1 681 291 1 476 281	1 900 749 280 010 113 887 95 775 39 411	160 953 15 800 5 096 6 119 2 629	10 085 910 3 527 752 1 475 333 1 304 274 502 033	9 549 343 3 407 818 1 421 638 1 255 968 483 890	4 639 399 1 289 247 421 385 463 682 258 959	4 831 690 2 096 960 991 944 783 697 221 791	348 583 60 435 21 040 24 945 9 439	2 421 260 1 388 778 780 796 513 646 77 802	33 535 7 276 3 591 2 919 557	2 648 717 378 253 68	1 289 241 725 746 478 210 70 364	461 495 67 726	563 962 266 515 237 108 50 133	220 42J 17 070	49 208 10 315 6 123 3 542 500
\$10,000 to \$14,999 \$15,000 or mare	235 259	21 692 9 245	1 516 440	196 209 59 903	188 324 57 498	113 461 31 760	74 167 25 361	3 850 1 161	13 498 2 956	181 28	11 7	12 179 2 742	11 605 2 642	8 519 1 687	2 959 934	134 16
High school, 1 to 3 years. Under \$3,000 \$3,000 to \$6,999 \$7,000 to \$9,999 \$10,000 to \$14,999 \$15,000 or more.	880 454 635 454	264 524 50 123 39 291 65 234 42 714 17 162	18 234 2 591 6 955 4 686 2 850 1 152	2 018 327 356 568 742 977 537 589 289 063 92 130	931 676 340 246 706 573 516 344 279 302 89 211	953 768 129 495 293 833 293 426 180 859 56 155	963 405 208 042 407 111 219 142 96 493 32 617	52 249 7 974 23 505 13 068 6 046	479 148 149 234 253 946 62 417 11 268 2 283	6 562 1 823 3 309 1 138 225 67	585 227 296 41 15	430 799 131 467 231 757 55 542 9 964 1 969	405 916 122 504 219 547 52 667 9 351 1 847	248 833 64 790 133 869 41 356 7 530 1 288	152 G47 56 220 82 956 10 616 1 696 559	9 166 2 992 4 825 1 068 258 23
High school, 4 years. Under \$3,000 \$3,000 to \$6,999 \$7,000 to \$19,999 \$10,000 to \$14,999 \$15,000 or mare.	3 176 687 317 304 941 164	553 046 57 109 149 332 151 737 133 288 61 580	44 362 3 662 14 515 13 245 9 379 3 561	2 455 884 232 795 738 778 812 879 506 093 165 339	2 285 917 216 457 672 317 759 077 480 102 157 964	1 198 510 90 595 283 596 418 445 304 403 101 471	1 064 439 123 652 380 921 332 830 171 670 55 357	121 546 9 408 48 762 39 269 18 819 5 288	363 158 76 415 195 300 73 486 15 462 2 495	10 670 1 993 5 199 2 523 810 145	774 174 433 143 24	328 104 67 036 178 155 66 941 13 788 2 184	294 311 60 476 159 343 60 141 12 337 2 014	192 366 34 468 99 782 46 547 9 977 1 592	97 168 25 153 56 965 12 477 2 188 385	19 564 3 051 11 396 4 184 841 92
College, 1 to 3 years Under \$3,000 \$3,000 to \$6,999 \$7,000 to \$14,999 \$10,000 to \$14,999 \$15,000 or mare	1 352 297 142 907 296 607 360 227 345 853 206 703	295 683 30 864 60 131 65 182 79 712 59 794	29 B41 2 612 7 265 7 130 7 433 5 401	975 137 100 173 216 471 276 758 247 841 133 894	906 912 92 180 197 055 258 436 233 275 125 966	548 616 44 331 99 454 157 220 158 918 88 693	349 399 46 965 95 292 98 515 72 291 36 336	50 460 5 327 14 542 13 510 11 017 6 064	101 678 20 597 44 823 26 709 7 998 1 551	4 158 776 1 408 1 179 647 148	375 79 166 58 64 8	91 591 18 117 40 989 24 265 6 909 1 311	81 454 16 078 36 328 21 575 6 285 1 188	59 548 9 664 25 433 18 035 5 415 1 001	20 681 6 166 10 339 3 196 799 181	6 490 1 118 3 047 1 799 449 -77
College, 4 years or more Under \$3,000 \$3,000 to \$6,999 \$7,000 to \$9,999 \$10,000 to \$14,999 \$15,000 or more	1 723 650 113 587 215 277 301 470 495 609 597 707	507 486 33 348 57 499 67 513 139 780 209 346	52 716 7 653 6 496 7 490 14 664 20 413	1 098 810 67 212 141 076 215 721 325 274 349 527	1 017 020 61 422 129 629 201 038 300 101 324 830	649 258 33 863 66 032 111 023 197 735 240 605	357 496 26 791 62 180 87 543 99 186 81 796	63 893 3 929 8 485 10 694 20 243 20 542	88 498 10 262 25 249 27 192 17 944 7 851	4 869 442 855 1 005 1 420 1 147	197 50 66 14 23	78 354 8 542 22 538 25 012 15 945 6 317	72 644 7 783 21 096 23 646 14 459 5 660	47 414 4 713 11 805 15 122 11 054 4 720	24 363 2 962 9 123 8 205 3 242 831	3 673 363 762 780 1 195 573
25 to 34 years old Elementary, 0 to 8 years Under \$3,000 \$3,000 to \$6,999 \$7,000 to \$9,999 \$10,000 to \$14,999 \$15,000 or mare	115 840 213 792 76 386	429 016 16 535 4 039 7 330 3 318 1 411 437	66 026 2 954 717 1 328 551 294 64	2 460 240 390 951 103 966 194 471 67 385 20 856 4 331	2 221 158 361 567 96 203 180 402 62 049 19 024 3 889	1 137 261 139 176 30 294 63 974 31 772 10 978 2 158	1 048 967 217 485 64 557 114 055 29 411 7 772 1 690	164 465 14 001 2 938 7 349 2 711 854 149	576 808 151 513 69 327 71 653 8 770 1 526 237	906 401 402 71 32	1 152 82 55 21 6	522 839 140 533 64 378 66 990 7 612 1 328 225	468 875 131 062 59 771 62 959 6 952 1 171 209		197 311 74 167 37 843 33 866 2 095 314 49	26 374 1 989 931 890 129 28
High school, 1 to 3 years	247 375 150 489 54 354	41 086 4 195 18 508 12 145 5 005 1 233	6 920 838 3 428 1 799 682 173	446 097 51 462 213 523 428 002 44 327 8 783	408 339 46 613 194 152 118 097 41 328 8.149	194 103 18 832 78 220 65 814 26 310 4 927	207 954 27 043 113 033 50 524 14 233 3 121	24 054 2 620 13 013 6 140 1 948 333	172 552 51 316 99 318 18 436 2 902 580	2 026 622 1 030 315 44 15	277 139 132 - 6	153 930 44 432 90 401 16 096 2 509 491	141 113 40 075 83 818 14 595 2 188 437	81 026 20 327 47 728 10 950 1 697 324	57 594 18 966 34 686 3 401 428 113	4 918 1 392 2 809 565 133 19

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resides natives for whom State at both was not reported and natives born in outlying areas or born about you area or local despersions with no report on State at residence in 1965. Hinclindes persions reporting State but not metropolition nonnetropolition status at 1960 residence

MOBILITY FOR STATES AND THE NATION

Table 25. Region of Birth of Native White and Native Negro Males 25 Years Old and Over Living in the South by Age, Years of School Completed, and Income in 1969: 1970—Continued

(Duto based on 15 percent sample, see text, for meaning of symbols, see feet)

				Kalive	white					······································		Notive I	legro			
South			<u>۔ نے جسانہ جیت</u>		Bo	ora in South					-		Bor	n in South		
Standard Metropolition Statistical Areas		_		,	Living	j in South in 1	965	Outside		_			Living	in South in	1965	Outside
Statistical Areas	Total	Barn in North	Born in West	Totale	Total	in SMSA's	Not in SMSA's	South or abroad in 1965	Total	Born In North	Born in West	Tolof?	Totota	In SMSA's	Not in SMSA's	South or obroad in 1965
SOUTH Continued						•				•	,					
25 to 34 years old - Continued																
High school, 3 years, Under \$3,000 \$3,000 to \$6,099 \$7,000 to \$9,999 \$10,000 to \$14,999 \$85,000 ar more	1 120 983 70 479 414 432 415 618 165 691 34 763	140 838 7 813 51 074 48 522 27 824 5 605	20 903 1 435 8 904 6 927 3 075 562	915 860 54 504 338 880 348 086 147 785 26 605	820 721 48 026 295 238 315 864 136 654 24 939	413 033 19 220 121 007 172 745 85 458 14 603	394 432 27 939 169 065 138 235 49 219 9 974	67 662 3 818 32 123 22 887 7 771 1 063	180 599 33 393 104 94', 35 601 5 917 743	4 979 925 2 749 1 013 240 52	461 100 305 56 -	163 910 29 133 96 042 32 778 5 326 631	141 643 25 473 82 870 28 277 4 470 553	88 710 13 911 49 501 21 315 3 572 411	49 718 10 952 31 536 6 285 811 134	13 201 1 692 8 212 2 780 470 47
CoBege, 1 to 3 years Under \$3,000 \$2,010 to \$6,999 \$7,000 to \$9,999 \$10,000 to \$14,999 \$15,000 or mare	441 088 41 104 120 935 152 369 98 475 28 205	77 914 7 567 20 466 23 651 19 830 6 400	13 339 1 429 4 330 3 940 2 658 982	334 187 29 858 91 600 120 511 72 787 19 431	297 937 25 217 79 332 109 005 66 395 17 928	182 254 - 13 933 - 41 617 - 68 384 - 46 231 - 12 089	110 675 10 863 36 210 38 899 19 193 5 510	26 985 3 371 9 464 8 506 4 635 1 009	42 695 7 371 20 235 12 062 2 627 400	1 784 364 686 531 169 34	236 23 120 37 48 8	38 492 6 414 18 494 10 993 2 266 325	32 134 5 312 15 469 9 148 1 942 263	23 121 3 207 10 564 7 461 1 651 238	8 236 1 965 4 528 1 464 260 19	4 300 619 2 128 1 303 224 26
College, 4 years or more Under \$3,000 \$3,000 to \$6,999 \$7,000 to \$9,999 \$10,000 to \$14,999 \$15,000 or more	\$67 673 43 073 100 082 145 911 188 926 89 681	152 643 12 579 25 419 31 889 55 400 27 356	21 910 2 311 4 614 4 865 7 257 2 863	373 145 25 441 66 027 104 778 120 250 56 649	332 594 22 322 58 817 95 099 106 235 50 121	208 695 13 491 31 534 54 115 72 253 37 302	118 421 8 445 26 362 39 347 32 126 12 141	31 763 2 323 5 512 7 221 11 459 5 248	29 449 3 059 10 861 9 712 4 760 1 057	1 640 206 424 419 474 117	96 23 54 6 9	25 974 2 432 9 681 8 834 4 160 867	22 923 2 023 8 823 7 935 3 442 700	14 842 1 365 4 819 5 391 2 699 568	7 596 601 3 867 2 358 664 106	1 966 -231 490 511 602 132
35 to 44 years old Elementary, 0 to 8 years Under \$3,000 \$3,000 to \$6,999 \$7,000 to \$9,999 \$10,000 to \$14,999 \$15,000 or more	2 802 072 643 522 138 284 286 211 144 383 58 781 15 863	401 539 26 624 4 511 9 886 7 146 3 831 1 250	37 346 3 285 622 1 441 686 464 72	2 245 965 579 226 125 381 261 033 128 789 50 728 13 295	2 110 868 549 052 117 453 247 974 122 800 48 260 12 565	1 101 219 222 674 36 278 86 353 64 260 29 007 6 776	991 313 321 708 80 047 159 513 57 489 18 925 5 734	94 162 16 051 3 452 7 267 3 456 1 447 429	518 538 240 408 92 274 123 056 21 095 3 333 650	9 285 - 1 482 519 727 179 50	619 182 76 86 20	473 061 222 693 85 351 114 486 19 240 3 010 606	445 065 212:609: 80 791 109 957 16 422 2 871 568		184 754 111 127 50 346 55 088 4 840 682 171	11 814 2 333 1 024 1 111 162 36
h school, 1 to 3 years.  Under \$3,000 \$1,000 to \$6,999 \$7,000 to \$9,999 \$10,000 to \$11,999 \$15,000 or more.	541 697 52 367 181 446 176 016 104 025 27 843	49 691 3 835 13 776 16 675 11 947 3 458	3 945 277 1 368 1 202 791 307	461 305 44 202 157 063 150 944 86 860 22 236	440 656 41 101 149 454 145 070 83 520 21 511	224 047 16 323 60 125 80 802 53 414 13 383	213 111 24 271 88 116 63 161 29 572 7 991	13 366 1 501 5 171 4 035 2 200 459	132 845 33 018 74 139 20 892 4 035 761	2 064 417 1 118 426 79 24	147 14 99 19 9	119 979 29 142 67 857 18 744 3 576 660	113 556 26 978 64 695 17 918 3 364 601	72 255 14 775 40 288 14 045 2 717 430	39 722 11 830 23 580 3 549 592 171	2 309 726 1 170 320 89 4
High school, 4 years. Under \$3,000 \$3,000 to \$6,999 \$7,000 to \$9,999 \$10,000 to \$14,999 \$15,000 or mare.	815 123 48 219 200 000 284 415 215 132 67 357	128 719 5 707 27 414 40 235 40 157 15 206	10 006 586 2 639 3 098 2 822 861	647 610 37 987 161 745 232 905 166 090 48 883	603 467 34 597 147 175 218 216 157 209 46 270	318 404 13 857 58 299 118 093 99 003 29 152	279 779 20 274 87 509 98 289 56 989 16 718	33 775 2 069 11 397 11 574 6 746 1 989	92 667 15 843 49 159 21 357 5 375 933	3 169 530 1 449 849 281 60	220 47 91 70 12	83 450 13 818 44 688 19 298 4 836 81	75 824 12 256 40 754 17 607 4 459 748	51 898 7 163 26 483 13 951 3 690 611	22 998 4 968 13 851 3 330 727 122	4 590 759 2 455 1 092 248 36
College, 1 to 3 years	319 071 16 330 51 109 89 675 106 183 55 774	63 182 2 623 8 012 14 464 22 813 15 270	6 623 264 1 227 1 459 2 252 1 421	238 100 12 308 39 429 71 005 78 165 37 193	221 361 11 254 35 667 - 66 590 - 73 303 34 547	139 404 5 827 17 587 40 153 50 596 25 241	79 978 5 318 17 705 25 862 22 044 9 049	12 663 711 2 829 3 283 3 833 2 007	26 863 3 469 11 962 8 169 2 781 482	1 113 139 212 376 239 53	37 18 6 13	24 186 2 925 11 044 7 396 2 431 390	21 836 2 629 9 896 6 781 2 180 350	17 072 1 781 7 236 5 829 1 929 297	4 444 790 2 530 843 228 53	1 481 162 685 394 210 30

includes natives for whom State of birth was not reported and natives born in authying areas or born abroa

Ancludes persons with no report on State of residence in 1

or heles persons reporting State but not metropolitan nonmetropolitan status of 1965 resident



Table 25. Region of Birth of Native White and Native Negro Males 25 Years Old and Over Living in the South by Age, Years of School Completed, and Income in 1969: 1970—Continued

(Data based on 15-percent sample, see fext for meaning of symbols, see fext)

				Notive	white							Native N	legro			1
South	<u></u>				80	n in South							Boro	in South		
Standard Metropolitan				<del></del>	Living	in South in 1	965	Outside					Living i	n South in	1965	Outside
Statistical Areas		Born in	Bôrn in			In	Not in	South or abroad		Born in	Born in			In	Not in	South or obroad
; ;	Total	North	Wesi	Total?	ţolal)	SM\$A's	SMSA's	in 1965	Total <sup>1</sup>	North	West	Totoli	Total)	SM5A's	SMSA's	in 1965
SOUTH Continued																
35 to 44 years old - Continued																
College, 4 years or inare	482 659 14 886 32 165	133 323 3 632 5 903	13 487 414 664	319 724 9 541 23 802	296 332 8 734 21 846	196 690 5 107 10 652	96 737 3 503 10 921	18 307 623 1 362	25 755 1 682 6 029	1 457 93 157	33 10 -	22 753 1 338 5 327	21 240 1 237 5 041	14 562 858 2 861	6 463 367 2 172	1 101 48 171
\$7,000 to \$9,999 \$10,000 to \$14,999 \$15,000 or more	68 659 155 145 211 804	12 049 39 747 71 992	1 319 4 064 7 026	52 788 106 680 126 913	49 735 99 051 116 966	27 252 66 166 87 513	21 958 32 059 28 296	2 089 6 006 8 227	8 593 6 640 2 811	281 474 452	7 16	7 926 5 906 2 256	7 883 5 319 1 960	4 925 4 277 1 641	2 668 977 279	128 496 258
45 to 64 years old	4 849 568 1 784 462	706 260 95 592	47 <b>89</b> 0 6 277	3 887 346 1 598 749	3 765 689 1 553 736		1 930 939 950 917	71 522 20 435	913 <b>558</b> 636 905	10 092 3 201	665 308	842 305 592 926		<b>429 218</b> 271 222	377 936 298 588	8 059 3 704
Elementory, 0 to B years Under \$3,000 \$3,000 to \$6,999 \$7,000 to \$9,997 \$10,000 to \$14,999	567 685 726 625 315 255 132 848	22 667 34 287 21 613	1 786 2 367 1 249 657	518 047 659 453 276 845	499 324 642 007 270 747 108 774	138 327- 225 758 146 627 65 921	358 006 413 001 123 015 42 312	8 045 7 689 2 826 1 390	302 732 276 859 44 724 7 859	1 357 1 447 281 99	121 127 42 11	285 532 258 012 40 640 7 124	275 012 250 956 39 549 6 876	101 851 133 341 29 902 5 154	170 936 115 935 9 449 1 685	2 303 1 131 205 60
\$15,000 or more	42 049	4 619	218	33 868	32 884	18 070	14 583	485	1 731	17	1	1 618	1 572	974	583	5
High school), I to 3 years. Under \$3,000 \$3,000 to \$6,999 \$7,000 to \$9,999 \$10,000 to \$14,999 \$15,000 or more.	1 046 683 163 217 351 260 283 846 179 980 68 380	110 797 15 071 32 565 30 606 22 590 9 965	6 110 967 1 750 1 536 1 272 585	882 226 137 293 301 843 240 633 148 401 54 056	859 636 132 086 294 145 235 563 145 181 52 661	433 855 48 564 119 830 136 131 95 720 33 610	421 857 82 541 173 043 98 581 48 837 18 855	11 941 2 503 4 216 2 668 1 776 778	146 922 44 863 74 634 22 399 4 158 868	2 163 572 1 081 385 97 28	127 53 57 17	132 888 40 082 68 115 20 202 3 732 757	128 056 38 239 65 834 19 579 3 656 748	82 266 20 475 42 407 15 901 2 998 485	44 974 17 513 22 989 3 558 651 263	716 763 183 32
High school, 4 years Under \$3,000 \$3,000 to \$6,999 \$7,000 to \$9,999 \$10,000 to \$14,999 \$15,000 or mare	1 022 390 104 772 253 186 286 104 253 640 124 688	215 715 17 645 45 615 55 931 60 202 36 322	11 862 1 022 2 477 3 022 3 309 2 032	756 263 79 824 193 928 217 988 192 677 81 846	730 144 75 826 186 931 211 508 176 966 79 913	398 674 31 284 80 782 119 527 114 439 52 592	327 763 49 016 105 056 90 959 61 755 25 977	17 678 2 415 4 469 4 556 4 118 2 120	77 270 18 872 37 833 15 824 4 001 740	2 144 348 861 624 278 33	80 22 29 17 12	69 559 16 703 34 495 14 218 3 479 664	66 162 15 703 32 929 13 635 3 261 634	45 006 9 212 21 858 10 840 2 607 519	20 544 6 385 10 764 2 683 611 101	1. 534 467 648 287 123
Callege, 1 to 3 years Under \$3,000 \$3,000 to \$6,999 \$7,000 to \$9,999 \$10,000 to \$14,999 \$15,000 or mare	458 959 37 890 81 827 101 879 128 094 109 269	8 251 17 385 21 667 32 819 33 920	8 449 461 1 264 1 539 2 337 2 848	318 785 26 910 59 350 75 178 88 674 68 673	305 845 25 523 56 725 72 978 85 578 65 041	185 424 12 163 27 310 42 797 57 256 45 898	118 810 13 185 29 068 29 797 27 921 18 839	9 460 792 1 795 1 567 2 371 2 935	25 216 5 188 10 832 6 114 2 460 622	1 075 217 317 251 229 61	95 31 40 8 16	22 716 4 639 9 875 5 549 2 092 561	21.532 9.430 5.332 2.043 540	15 754 2 596 6 495 4 494 1 717 452	5 670 1 561 2 886 826 309 88	569 242 202 89 15 21
College, 4 years or more Under \$3,000 \$3,000 to \$6,999 \$7,000 to \$9,999 \$10,000 to \$14,999 \$15,000 or more	537 074 24 840 46 445 68 313 131 087 266 389	170 114 6 814 11 910 15 734 36 60B 99 048	15 197 597 792 1 079 2 933 9 791	331 323 15 439 31 157 48 474 87 324 148 929	316 328 14 437 29 516 46 845 84 241 141 289	203 143 7 703 14 249 24 017 52 885 104 289	6 574 6 574 15 110 22 541 30 913 36 454	12 008 632 1 203 1 140 2 428 6 605	27 245 2 980 6 431 8 137 6 092 3 605	1 509 101 195 256 448 509	55 12 12 12 7 24	24 216 2 524 5 709 7 584 5 474 2 925	23 238 2 373 5 461 7 365 5 298 2 741	14 940 1 349 3 045 4 391 3 836 2 319	8 160 991 2 401 2 938 1 451 379	558 74 83 136 92 173

Includes persons reporting that we are reported and nature born in national means or born intended. Includes persons with no report on State of residence in 1965.



Table 25. Region of Birth of Native White and Native Negro Males 25 Years Old and Over Living in the South by Age, Years of School Completed, and Income in 1969: 1970—Continued

[Date based on 15-percent sample, see lest. For meaning of symbols, see fext]

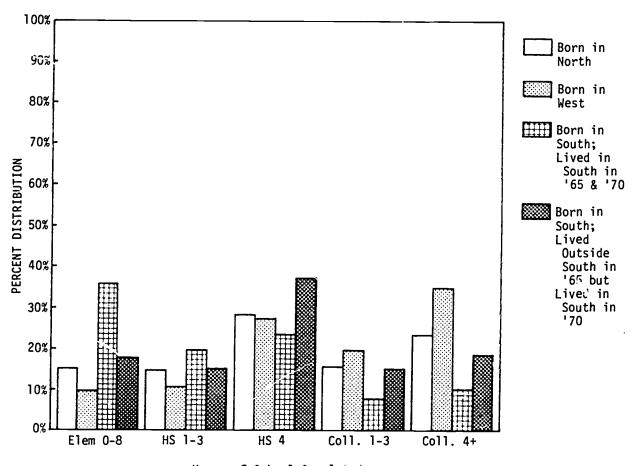
•	Date peres on 1	nesed on 15 percent temple, sex lest. For meaning of symbols, sex text!  Native white										Native	legro	-		
South						rn in South							Sor	n in South		
Standard Metropolitan					Livino	in South in 1	965	Outside					Living	in South in	1965	Outside
Statistical Areas		Born ()	Born in	•		in	Not in	South or abroad	*adali	Born in	Born in West	Total?	Total <sup>1</sup>	in SMSA's	Not in SMSA's	South or abroad in 1965
	Total	Narth	West	T010 7	Totals	SMSA's	SM5A's	in 1965	Total	North	44.631	(Oldi-	, cau-	anian a	# PROPERTY OF	101 1780
SOUTH - Continued																
65 years old and ever. Elementory, 0 to 8 years Under \$3,000 \$3,000 to \$4,999 \$7,000 to \$19,999 \$10,000 to \$14,999 \$15,000 or inore.	1 978 116 1 179 670 859 482 249 653 39 314 18 774 12 447	343 934 141 259 82 670 44 272 7 334 4 044 2 939	9 691 3 284 1 971 983 143 101 86	1 497 359 968 826 727 999 190 317 29 014 13 107 8 389	1 451 678 943 463 708 658 185 585 28 294 12 766 8 160	585 178 332 694 216 486 87 597 16 300 7 555 4 756	840 471 606 850 489 334 97 128 11 876 5 158 3 354	18 434 9 948 6 505 2 640 446 159 98	412 356 359 952 313 463 42 078 3 293 780 338	2 023 1 687 1 314 343 26	212 145 126 19	379 884 333 089 290 485 36 722 2 872 717 293	348 442 323 394 281 988 37 623 2 803 687 293	165 681 139 002 114 432 21 919 2 660 409 162	201 \$17 183 077 166 421 15 541 706 278 131	2 961 2 299 1 865 410 4 10
High school, 1 to 3 years. Under \$3,000 \$3,000 to \$6,999 \$7,000 to \$7,999 \$10,00' to \$14,999 \$15,000 or more.	310 826 161 674 100 373 25 103 13 452 10 224	62 950 27 022 24 442 5 808 3 177 2 5"J	1 259 509 409 149 105 87	228 699 123 611 70 548 18 010 9 475 7 055	223 045 120 446 68 822 17 614 9 273 6 890	101 763 45 776 35 658 10 679 5 415 4 235	120 483 74 187 32 919 6 876 3 851 2 650	2 888 1 350 1 105 225 122 86	26 829 20 037 5 855 690 173 74	309 212 60 12 5	34 21 8 5	24 002 17 811 5 385 600 147 51	73 191 17 212 5 200 575 143 61	13 286 9 213 3 446 460 118 49	9 757 7 911 1 701 108 25	245 158 83 - 4
High school, 4 years. Under \$3,000 \$3,000 to \$6,999 \$7,000 to \$7,999 \$10,000 to \$14,999 \$15,000 or more.	218 191 93 834 73 546 22 10° 15 5.0 13 113	67 774 25 944 25 229 7 049 5 105 4 447	1 591 619 495 198 173 106	136 151 60 490 44 225 13 900 9 541 8 005	131 585 58 008 42 973 13 489 9 273 7 842	68 449 26 234 23 508 8 080 5 503 5 124	62 456 31 423 19 291 5 347 3 707 2 688	2 431 1 106 773 252 184 116	12 622 B 307 3 363 704 189 79	378 190 140 37	13 5 8	11 185 7 382 2 930 647 147 79	10 682 7 044 2 790 622 147	6 722 4 182 1 940 441 108 51	3 908 2 848 814 179 39 28	239 133 81 25 -
College, 1 to 3 years Under \$3,000 \$3,000 to \$6,999 \$7,000 to \$9,999 \$10,000 to \$14,999 \$15,000 or more.	133 179 47 583 42 736 16 304 13 101 13 455	40 545 12 423 14 268 5 400 4 250 4 204	1 430 458 444 192 186 150	84 065 31 097 26 092 10 064 8 215 8 597	81 769 30 124 25 331 9 863 7 999 8 450	41 534 12 408 12 940 5 886 4 835 5 465	39 936 17 599 12 309 3 957 3 133 2 938	1 352 453 454 154 178 113	6 904 4 569 1 794 364 130 47	186 56 93 27 10	1	6 197 4 139 1 576 327 120 35	5 952 3 950 1 533 314 120 35	3 601 2 060 1 138 251 118 14	2 331 1 850 395 63 2 21	140 95 32 13
College, 4 years or more Under \$3,000 \$3,000 to \$6,999 \$7,000 to \$9,999 \$10,000 to \$14,999 \$15,000 or more	136 244 30 788 36 585 18 587 20 451 29 833	51 406 10 323 14 267 7 841 8 025 10 950	2 127 331 426 227 410 733	74 618 16 791 20 990 9 681 11 020 17 036	71 766 15 929 19 450 9 359 10 574 16 454	40 730 7 562 9 597 5 639 6 431 11 501	30 746 8 269 9 787 3 697 4 088 4 905	1 815 351 406 244 350 462	6 049 2 541 1 926 750 452 378	263 42 79 49 24 69	13 5 8	5 411 2 248 1 821 668 405 269	5 243 2 150 1 771 663 400 259	9 070 1 141 1 080 415 242 192	2 144 1 003 683 241 150 67	48 10 18 5 5
STANDARD METROPOLITAN STATIS/YCAL AREAS																
Total, 25 years old and over.  Elementory, 0 to 8 years  Under \$3,000 \$3,000 to \$4,999 \$7,000 to \$9,999 \$10,000 to \$14,999 \$15,000 or more.		1 399 441 173 314 58 932 60 574 29 292 17 174 7 342	118 493 10 001 2 661 3 824 2 022 1 108 326	4 147 445 1 349 334 437 939 486 968 271 449 119 U	4 478 470 1 290 046 417 251 465 009 261 249 114 609 31 926	4 258 177 1 225 331 394 919 439 020 250 177 110 265 30 950	272 494 54 067 18 988 21 697 9 227 3 432 723	209 949 25 328 7 154 10 360 4 985 2 131 698	1 377 114 671 785 318 596 280 965 59 999 10 275 1 950	25 829 4 957 2 217 2 101 467 152 20	2 194 510 256 183 53 11	1 222 958 600 245 282 958 253 890 53 148 9 120 1 779	1 138 283 572 880 268 532 242 915 51 047 8 675 1 711	552 824 258 454	34 432 13 956 7 354 5 810 693 84	32 848 4 811 2 497 1 862 342 105 5
High school, 1 to 3 years. Under \$3,000 \$3,000 to \$6,999 \$7,000 to \$9,999 \$10,000 to \$14,999 \$15,000 or more.	1 286 131 185 088 400 777 382 201 238 313 79 752	188 046 29 772 59 426 49 780 34 434 14 634	12 062 1 382 4 279 3 331 2 187 903	1 003 758 136 081 311 350 309 148 488 795 58 384	955 267 128 181 292 695 295 745 182 324 56 322	903 129 119 806 273 642 280 662 174 433 54 586	43 497 7 051 16 048 12 512 6 483 1 403	28 465 3 586 11 808 8 012 3 887 1 172	311 064 83 893 164 903 51 124 9 '52 ; 692	5 045 1 246 2 589 952 200 58	493 195 242 35 15	272 321 70 894 146 746 45 026 8 228	254 514 65 138 137 827 42 535 7 698 1 316	243 545 62 018 131 696 41 063 7 493 1 275	7 093 2 161 3 969 838 84 41	5 937   741   3 226   759   192   19

Includes persons within State of both was not reported and natives born in outlying areas or born abread. Thickdes persons with no report on State of residence in 1965. Includes persons reporting State but not metropollism nonmetropy. As test

MOBILITY FOR STATES AND THE NATION

Question 11: From the percentage distribution table computed in Question 9, make a bar graph like the one below for black males 25+, white males 25-34, and black males 25-34.

# YEARS OF SCHOOL COMPLETED FOR WHITE MALES, AGED 25+, LIVING IN CENSUS SOUTH IN 1970 BY PLACE OF BIRTH



Years of School Completed

Question 12: What would you tell the governors about the policy implications of the data and information derived from the table in Question 9? (Of course, policymakers need more than just demographic data to make their decisions, but with such information they are better able to make policy decisions which fit the demographic trends).

#### CASE STUDY ON MIGRATION

#### ANSWER SHEET

#### QUESTION #1

Identification of migrants: State of birth; year moved into this house; where person lived in 1965; current place of residence. Possible characteristics of movers: race; sex; age; educational attainment; occupation; income; etc.

#### QUESTION #2

State of brith--20%
Year moved into this house--15%
Place of residence 5 years ago--15%
Current place of residence--100%
Race--100%

Sex--100%
Years of school completed--20%
Occupation--20%
Income--20%

#### QUESTION #3

#### South Region

South Atlantic Division

Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida

East South Central Division
Kentucky, Tennessee, Alabama, Mississippi

West South Central Division
Arkansas, Louisiana, Oklahoma, Texas

#### QUESTION #4

Table 148 gives information for regions, divisions, and States. Tables 131 and 137 give the information for regions only but also give information about migration by race and by urban/rural residence.

#### The subdivisions are:

Same house (nonmovers)
Different house in U. S., same county as in 1965
Different house in U. S., different County, same State
Different house in U. S., different county, different State
Abroad in 1965
Moved, 1965 residence not reported.



#### QUESTION #5

The answer depends on the States chosen. Maryland is given as an example.

Urban White	Urban Negro	Urban Spanish Language	Rural White	Rural Spanish Language
			1	

(a) PERCENT NONMOVERS (Same House : Total Population Aged 5+):

U. S.	51.8	49.0	41.7	57.2	61.9	48.0
Maryland	51.1	45.8	25.2	55.7	57.3	34.6

(b) PROPORTION TO A DIFFERENT REGION

/(Total Different State - South) - Total Fopulation Aged 5+7

[	Maryland	.08	.02	.11	.06	.01	.16
- 1					ľ		1

PROPORTION TO THE SAME REGION (South + Total Population - 3ed 5+):

Maryland .06 .09 .12 .05 .03	.11
------------------------------	-----

(c) SHORT-DISTANCE MOVES (Same County + Total Population Aged 5+):

Maryland	.19	.28	.19	.19	.18	.16

WITHIN THE SAME STATE (Different County in Same State + Total Pop. Aged 5+):

Maryland	.09	.03	.06	.09	.06	.07

TO A DIFFERENT STATE (Different State ÷ Total Population ∧ged 5+):

Maryland	.14	.11	.23	.10	.03	.27

(d) From part (a) above, persons living in the rural areas of Maryland in 1970 were more likely to have moved sometime in the preceding 5 years than were those in urban places. Maryland's urban blacks were more likely

#### QUESTION #6 (cont.) -- Answer

to make short distance moves than the other groups, while the black population had the lowest proportion moving for all the longer distance moves. Of the three groups, the Sparish-language population was the most likely to have moved from another State and region since 1965.

- (e) Because "other races" are not shown here. Total Population = white + Negro + other races.
- (f) Spanish language is not a racial category although almost all persons of Spanish language are part of the white population. Thus persons of Spanish language are already included in the counts of the population by race.
- (g) Different House = Same County (Different House) + Different County Different County = Same State (Different County) + Different State Different State = Northeast + North Central + South + West

#### QUESTION #7

Tables 119; 125; 130

#### QUESTION #8

The answer depends on the State chosen. The data must be compiled by adding together the data for all the counties in each SMSA in the State.

#### QUESTION #9

See chart on next page.

#### QUESTION #10 (possible answer)

- (a) Male migrants to the South, both black and white, are generally better educated than the resident population. Among both black and white males, the majority of those born outside the South but living in the South in 1970 had at least a high school education, while the majority of native Southern males had a high school education or less.
- (b) Return migrants were more like those born in the North and West--the majority had at least a high school education.
- (c) The differences are related to the lower education levels among the older Southern population; among the young, the majority of both native Southern males and nonnatives had at least a high school education; among white nonnatives, however, there was also a large number with at least four years of college. Migrants to the South, especially the younger ones, have relatively high education levels.



(Answer: question No. 9)

EDUCATION	N	ATIVE	TIHW	E			NATIV	ll g	EGRO	
				Born in	SOUTA					n SOUTH
Lived In South, 1970	Total	Born in North	Born in West	Lived in South in '65 & '70	Outside South or abroad ='85	Total	Born in North	Born in West	Lived in South in '65 & '70	Outside South or abroad- '65
Total, 25+ yrs.	12,722,505	1,900,749	160,593	9,549,343	348,583	2,421,260	33,535	2,648	2,095,355	49,208
Elem. 0 - 8	4,044,086	280,010	15,800	3,407,818	60,435	1,388,778	7,276	717	1,241,030	10,315
H.S. 1 - 3	2,425,785	264,524	18,234	1,931,676	52,249	479,148		585	405,916	9,166
H.S. 4	3,176,687	553,046	44,362	2,285,917	121,546	363,158	10,670	774	294,311	19,564
C611. 1 = 3	1,352,297	295,683	29,841	906,912	50,460	101,678	4,158	375	81,454	6,490
Coll 4+	1,723,650	507,486	52,716	1.017.020	63.893	88,498	4,869	197	72,6LA	3,673
25-34 yrs.	3,092,755	429,016	66,026	2,221,168	164,465	576,808	11,335	1,152	468,875	26,374
Elem. 0 - 8	436,432	16,535	2,954	361,567	14,001	151,513	906	82	131,062	1,989.
H.S. 1 - 3	526,579	41,086	6,920	408,339	24,054	172,552	2,026	277	141,113	4,918
H.S. 4	1,120,983	140,838	20,903	820,721	67,662	180,599	4,979	461	141,643	13,201
Coll. 1 - 3	441,088	77,914	13,339	297,937	26,985	42,675	1,784	236	32,134	4,300
Coll. 4+	567,673	152,643	21,910	332,594	31,763	29,449	1,640	96	22,923	1,966
% Distrib.										
25+	100.0	100,0	100,0	100.0	100,0	100.0	100.0	100.0	100.0	100.0
Elem. 0 - 8	31,8	14.7	9.8	35.7	17.3	57.3	21.7	27.1	59.2	21.0
H.S. 1 - 3	19.1	13.9	11.4	20.2	15.0	19.8	19.6	22.1	19.4	18.6
H.S. 4	25.0	29.1	27.6	23.9	34.9	15.0	31.8	29.2	14.0	39.8
Coll. 1-3	10.6	15.6	18.6	9.5	14.5	4.2	12.4	14.2	3.9	13.2
Coll. 4+	13.5	26.7	32.8	10.7	18.3	3.7	14.5	7.4	3.5	7.5
25 - 34	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Elem. 0 - 8	14.1	3.9	4.5	16.2	8.5	26.3	8.0	7.1	28.0	7.5
H.S. 1 - 3	17.0	9.6	10.5	18.4	14.6	29.9	17.9	24.0	30.1	18.6
H.S. 4	36.2	32.8	31.7	37.0	41.1	31.3	43.9	10.0	30.2	50.1
Coll. 1 - 3	14.3	18.2	20.2	13.4	16.4	7•4	15.7	20.5	6.9	16.3
Coll. 4+	18.4	35.6	33.2	15.0	19.3	5.1	14.5	8.3	4.9	7.5

<sup>&</sup>quot;Excludes foreign-born population.



Source: U.S. Bureau of the Census, Census of Population: 1970 Subject Reports, Final Report PC(2) -2B Mobility for States and Nation, Table 25, Washington, D.C., U.S. Government Printing Office, 1973.

#### QUESTION #10 (cont.) -- Answer

- (d) Migrants to the South, being better educated on the whole, are likely to provide stiff competition for available jobs. One might also wish to study education cross-classified with income as shown in figure 8 and the occupation of migrants and patives (see another subject report: Occupation and Residence in 1965, PC(2), Table 1).
- (e) It implies that industry will be able to find a skilled, relatively well-educated labor force (provided the migrants congregate somewhat rather than becoming diluted in the larger population) and thus better paying industries are able to move South.

#### QUESTION #11

The other graphs are similar to the one shown on page 20.

#### QUESTION #12

Answers will vary.

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# CENSUS DATA FOR COMMUNITY ACTION

Revised August 1975

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### INTRODUCTION

The purpose of this publication is to demonstrate how 1970 census population and housing data can be used in community action projects and to provide the background information needed in order to use the data. Emphasis is placed on what can be found in 1970 census reports, which are often available in libraries and offices of city planners, chambers of commerce, and other community agencies, or can be purchased for a modest price. Information about more technical products, such as census data on computer tape, can be found in other materials (see the concluding section, p. 19).

In explaining "community action," it is common to cite projects carried out by the citizens of a neighborhood, such as setting up a day-care center, pressing local government for a playground for their children, or encouraging voter registration. The emphasis in explanations is usually on the "action" phase of community action. But there often are three earlier phases as well: First, people begin to realize that a problem exists and want to do something about it; second, there is thought and study to learn the nature and extent of the problem; and third, planning and organizing to tackle the problem are begun. Information from the census, collected in April 1970, can often help out in each of these three phases, that is, in detecting a problem, determining its seriousness, and planning ways to solve it. The community action projects mentioned above furnish good examples of ways in which census data can be used. Consider the first, setting up a day-care center:

Community-supported day-care facilities are often needed in neighborhoods having many working women with small children, or families with no father in the household. The income level of the neighborhood has bearing too, since families with higher incomes can more easily afford adequate private care. Several kinds of useful information about neighborhoods can be found in census reports, such as the number of working mothers who live with their husbands and have children under six years old, the number of families with incomes below the poverty level without a father present, and the average number of children under 6 years old in such families. This kind of information can help in estimating how many mothers might be interested in a day-care center, how many children might be involved, and where the best location would be.

This is just one of many possible applications of census data. Vie will discuss it and several others in greater detail in the section titled "Examples of Census Applications." But first there is certain basic information about the census which should be covered.

Using census data requires some study and patience. Only certain kinds of information are collected in the census, and the results are published for only particular kinds of areas. Also, since it is necessary to get a lot of information in a relatively small space, the tables in census reports may seem hard to read and the technical terms hard to understand. With these problems in mind, much of the remainder of this report is devoted to giving an introduction to the census which will make using census data easier and less time-consuming.

### **INFORMATION FROM THE CENSUS**

In the 1970 census, questions were asked about such subjects as age, race, education, income, ownership or rental of houses and apartments, and number of rooms in houses or apartments. (See figure 1 for a complete list.) Similar information was collected in the 1960 census. While you cannot obtain information from the Census Bureau about specific individuals or homes because this is forbidden by law, you can obtain summary information about geographic areas such as city blocks, neighborhoods, cities, counties, and States as a whole. By summary information we mean the total number of persons or housing units with particular characteristics, such as the number of men 25 to 34 years old, families headed by females, or housing units renting for \$150 to \$200 per month.

Some 1970 census questio s were asked of everyone or asked about every housing unit (apartment or house). The summary information resulting from these questions is called 100%, or complete-count, data. Other questions were asked of just a sample of all households, either 20%, 15%, or 5%. This was accomplished by giving every fifth household a "long form" with the complete-count questions plus some additional ones. The summary information resulting from the sample questions is called sample data. To make it comparable to the complete count data, the sample data is "inflated" to represent the total population (e.g., data collected from a 20 percent sample of all households is multiplied by approximately five).

Figure 1
1970 Census Content and Coverage

_	Sample		Sample
population Items	Percentages	Housing Items	Percentages
Relationship to head of household	100%	Number of units at this address	100%
		Telephone	100
4065 T T T T T T T T T T T T T T T T T T T	11 401	ACCESS to unit.	100
Sex	100	Complete kitchen racilities	. 100
SexMarital status	100	KOOMS	. 100
State or country of birth Years of School completed Number of charter ever born	20	Water supply	. 100
Years of School pleted	20	riush toilet	. 140
		Bathtub or shower.	. 100
Employment status.  Hours worked last week.  Weeks worked	20	basement.	100
Hours worked stub.	. 20	Tenure?	100
Weeks Worked last year.	. 20	commercial establishment on property	. 100
1980 year In h Worked	20	Value	100
UCCUPA DATA A TANK CLASS OF WORKER	20	Contract rent	100
Activity 5 years ago	20	vacancy status.	100
Income last year: Wage and salary income Self-employment income Other income	~~	Months vacant	100
Wage and salam income.	20		
Self-employment income.	20	Components of gross rent	20
Other income	20	Heating equipment.	20
Country of L. narento	7.5	Year structure built.	20
Country of birth of parents	15	NUMBER OF HEATS IN STRUCTURE SHU WOLL	201
Mother tongue Year moved into this house	15	Farm residence (acreage and sales of farm products).	20
Maca of rank to this years	· 15	Source of inter	
Place of residence 5 years ago.  School or college enrollment (public or private)	· 15	Source of water	15
Veteran status	. 15	Sewage disposal.	15
Place Of Wom	15	Bathrooms.	15 15
Place of work Means of transportation to work	15	Air conditioning.	12
Shorts Wilk.	• 47	Automobiles	15
Mexican or Spanish origin or descent	• 5	Stories, elevator in structure	ĸ
. [1] [2022-0]	• 7	Fuelheating, cooking, water heating	5
Year of immigration. When marries	• 5	Bedrooms.	5
When married grations completed	• 5	Clothes washing machine	5
Vocational training completed	• 5	Clothes dryer	5
1. ERCHO 10 3 1.100 180 hall 440	• 7	Dishwasher.	<i>5</i>
Occupation industry 5 years ago	• 5	nome lood freezer.	5
		Television	5
Such as wife of head, other relative of head, or not related to head,		Radio	5
Direct Score of Francisco Control Control		Second home	5
3 "Complete kitchen facilities" is defined as including a sink with		***************************************	

Figure 1 shows which questions were 100% and which were sample. The entries briefly suggest the subject of each question, but a few examples are needed to illustrate how the information collected is subsequently reported by the Census Bureau.

The question on "relationship to head of house-hold" permits reporting such information as the number of men and women who head families and the number of husband-wife households.

-"Years of school completed" furnishes information needed to know the number of persons in a neighborhood who have completed elementary school, high school, or college, their average number of school years completed, and similar statistics.

-The question on number of "rooms" in each house or apartment permits publication of such information as the number of housing units by size (one room, two rooms, etc.) and by persons per room (for example, 1.00 or less per room, 1.01 to 1.50 and 1.51 or more).

### **GEOGRAPHIC AREAS REPORTED**

Census reports present data for several kinds of areas which are likely to be of interest in community action programs. However, there are often locally defined small areas for which no data are published, such as school districts, police precincts, or community service districts. It is sometimes possible to add up published data for smaller areas to present data for special districts of local interest.

The census reports contain data for the following areas (also see figure 2):

Political units of the Nation, including States, congressional districts, counties, minor civil divisions (subdivisions of counties; e.g., towns or townships),\* incorporated places (e.g., cities and villages), and wards in some cities. Both 100 percent and sample data summaries are prepared for these areas, except for minor civil divisions (100 percent only) and for wards (population counts only).

Statistical areas (listed in order according to diminishing average population size), such as:

-standard metropolitan statistical areas (SMSA's-comprising a county containing a city of 50,000 or more, plus any contiguous socially and economically related counties. Both 100 percent and sample data are available for SMSA's.)

-urbanized areas (UA's—comprising a city of 50,000 or more, plus the surrounding closely settled urban fringe, loosely defined as a city and its suburbs. Both 100 percent and sample data are published.)

census tracts (subdivisions of SMSA's, averaging 4,000 population, covering all SMSA's recognized at the time of the 1970 census. They often can be considered neighborhoods. Both 100 percent and sample data are available.)

-blocks (city blocks, generally bounded by four streets, defined in urbanized areas and in additional areas which contracted with the Bureau for tabulations. Only 100 percent data is published.)

Generally speaking, the smaller the type of area, the smaller the amount of information published about it. This is the practice because of the need to preserve the confidentiality of information about individuals and because of the limitations of the data collected. For example, as the above discussion indicates, no sample data are published for blocks. Blocks generally have such a small population (averaging around 100 people) that sample data would be unreliable and could be quite misleading. Also, if published, information might be furnished on income, education, or some other subject which could be associated with a particular person or household.

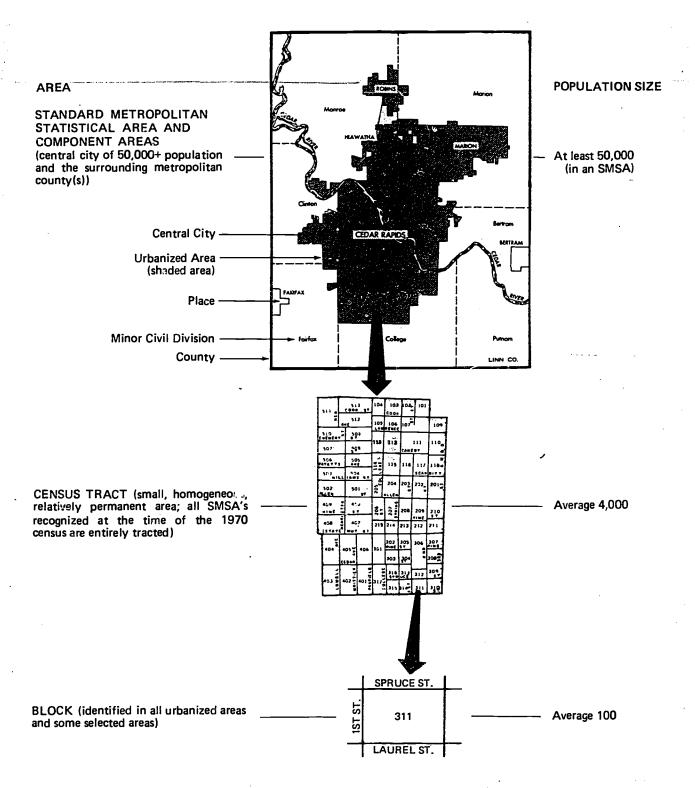
In community action projects, statistical data for city blocks and census tracts will be most important. Blocks are the smallest area for which any data are reported. Census tracts, averaging about 4,000 people, are generally the smallest areas for which sample data are reported. Data for larger areas, such as cities or counties, may be useful, too, to permit comparing the small areas with the large. For example, to dramatize overcrowded housing conditions in a neighborhood, it may be effective to compare statistics for that neighborhood with the city as a whole.

Residents of cities not in metropolitan areas are often concerned about the same types of problems as are residents of metropolitan cities. Generally, census statistics for non-metro cities are available as city-wide totals only. Outside of SMSA's, the number of areas having census tract statistics is quite small. However, the Census Bureau on a contract basis has tabulated block statistics for more than 900 non-metropolitan cities, towns, townships, etc. Contact your local government or write to the Director, Bureau of the Census, to find out if your community is one of the 900.

If block statistics are not published for your city, you will have to use published statistics for either an incorporated place, unincorporated place, or township or similar minor civil division. Some unpublished data for subdivisions of such areas can be obtained on

<sup>\*</sup>In 21 States minor civil divisions (MCD's) are not adequately defined for reporting census statistics. To take their place, Census and local officials have designed census county divisions (CCD's).

## Figure 2 Geographic Areas in 1970 Census Reports





computer tape from the Census Bureau, along with maps showing their boundaries. These subdivisions are called enumeration districts, and they have an average population of about 800. (See page 19, "Additional Information.")

### **CENSUS REPORTS**

The 1970 census reports are divided into three principal series: population census reports (the PC reports), housing census reports (the HC reports), and joint population and housing reports (PHC reports). Those which are most likely to be of value in Ommunity action planning are briefly described in figure 3. The HC(3) Block Statistics Reports and PHC(1) Census Tract Reports will generally be of greatest value because of the relatively small size of the areas reported.

### **HOW TO USE CENSUS REPORTS**

The clearest way to describe how to use census reports is by giving an example which illustrates, step-by-step, what is involved.

Objective: To locate information on employment and income for a particular neighborhood in a large city (50,000 or more people) or its surrounding area.

Report needed: Two considerations come into play in selecting the right report: the need for small area (neighborhood) data and the need for employment and income data, which are sample data (see figure 1). City block data would best meet the first requirement, but no sample data can be published for such small areas. Census tracts are the smallest areas for which employment and income data are available. Therefore, the Census Tract Report which includes the desired city is needed.

Select tracts: To find out if a census tract or combination of tracts can satisfactorily represent your neighborhood, you will need a census tract map. One is contained in each Census Tract Report. For illustration, the tract outline map for Great Falls, Montana, and vicinity is shown on page 6. Since a tract generally has a population of around 4,000, it may seem too large for your purposes. Also, your neighborhood may lie in parts of two or three tracts. Since it is not possible to separate out data for the portions of interest to you, it will be necessary to deal only with the tract having the largest portion of your neighborhood or to add the data for each tract together to obtain data for the combined two-or three-tract area. For example, in the Great Falls map illustration, census tract 2 might adequately represent a

### Figure 3

### Descriptions of Selected Report Series from the 1970 Census of Population and Housing

Number of Inhabitants (PC(1)—A). One per State. Final official population counts are presented for States, counties, SMSA's, urbanized areas, minor civil divisions, census county divisions, all incorporated places, and unincorporated places of 1,000 inhabitants or more.

General Population Characteristics (PC(1)—B). One per State. Statistics on age, sex, race, marital status, and relationship to head of household are presented for States, counties, SMSA's, urbanized areas, minor civil divisions, census county divisions, and places of 1,000 inhabitants or more.

General Social and Economic Characteristics (PC(1)—C). One per State. These reports focus on the population subjects collected on a sample basis. Each subject is shown for some or all of the following areas: States, counties, SMSA's, urbanized areas, and places of 2,500 inhabitants or more.

General Housing Characteristics for States, Cities, and Counties (HC(1)-A). One per State. Statistics on 100-percent housing subjects are presented for States,

counties, SMSA's, urbanized areas, and places of 1,000 inhabitants or more.

Detailed Housing Characteristics for States, Cities, and Counties (HC(1)—B). One per State. These reports focus on the housing subjects collected on a sample basis. Each subject is shown for some or all of the following areas: States, counties, SMSA's, urbanized areas, and places of 2.500 inhabitants or more.

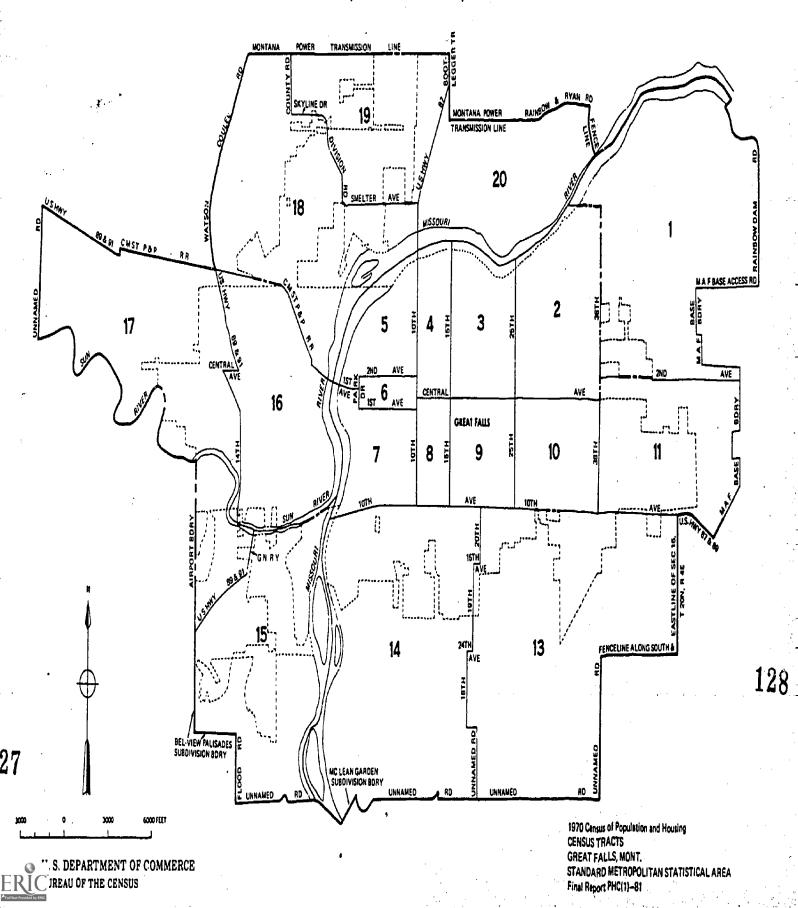
Block Statistics (HC(3)). One report for each urbanized area showing data for individual blocks on selected 100-percent housing and population subjects. The series also includes reports for the communities outside urbanized areas which have contracted with the Census Bureau to provide block statistics from 1970 census.

Census Tract Reports (PHC(1)). One report for each SMSA, showing data for most of the population and housing subjects included in the 1970 census. Some tables are based on the 100-percent tabulation, others on the sample tabulation.

Figure 4

## Census Tracts in the Great Falls, Mont. SMSA

Inset Map-Great Falls and Vicinity



neighborhood, or perhaps tracts 2 and 10, combined, would be a more meaningful area.

Read background material: Before proceeding to look up data, acquaint yourself with the key background material. It will be helpful to read the introduction to the Census Tract Report, beginning on p. IV, and the discussion of census tracts and standard metropolitan statistical areas in Appendix A of the report. Also, read the definitions in Appendix B which are relevant to the data you are interested in (in this case, the definitions for "reference week," "employment status," "income in 1969," and "poverty status in 1969"). It will probably be helpful to familiarize yourself with the other definitions, as well, at this time or later.

Locate the data: Check the table of contents to locate the tables with data you need. Table P-3, "Labor Force Characteristics," will include data on employment, and table P-4, "Income Characteristics," will include the income data. If the tracts in which you are interested have more than 400 Negroes or Spanish Americans, table P-6, "Economic Characteristics of the Negro Population," and table P-8, "Economic Characteristics of Persons of Spanish Language," may provide additional useful data. (Figure 7, page 13-18, shows the contents of each tract table.)

You will find that most tables in tract reports cover several pages. This is necessary because a tract requires an entire column when reported in a table. Each tract is identified in tables and on the tract maps by a code number unique within the SMSA. However, rather than being presented in numerical order for the entire SMSA, the tracts in each table are in numerical order within places of 25,000 or more and within the balance of the

or the tables of the Census Tract Reports.

Reading the table: The first section of table P-3, titled in ployment status, furnishes data specifically on employment. Figure 5 shows this section of a table for several census tracts in Great Falls, Montana, as well as for the County (the County Cascade County, but not in Great Falls). The first few items of data for each census tract are in the second were who are "male, 16 years old and over old, and females, 16 years old and over year aking the females, 16 years old and over.

year aking tract 2 ("0002") as an example, we can learn 1,643 males, 16 years old and over, live there. Of this a job or 1,244 are in the labor force; that is, either have loyment are unemployed and looking for work (see "emplete definition of "labor force" and related terms), A few lines farther down, we see that 25 males, 16 years old uch males in the civilian labor force.

when reading the entries in the stub (left-hand side of table), it is important to be aware of indentation. Except when a percent, median, or some other derived indicators are being given, indentation indicates that an entry "male to the preceding entry. For example, under enrolled in school." Of those not enrolled in school, 26 are "not high school graduates." Of those not labor force." enrolled in school graduates is indented under "not high school graduates" is indented under "not high school graduates" is indented under "not high school graduates." is indented under "not high school graduates."

Figure 5

Table P-3. Labor Force Characteristics of the Population: 1970

[Data based on sample, see text. For minimum base for derived figures (percent, median, etc.) and meaning of symbols, see text]  $^1$ 

Census Tracts		ascade County					1	Great Falls				
Census Traces	Tatal	Great Falls	Balance	Trect 0001	Tract 0002	Troct 0003	Troct 0004	Tract 0005	Tract 0006	Troct 0007	Tract 0008	Troct 0009
EMPLOYMENT STATUS												
Male, 16 years old and over	24 845	19 040	7 805	236	1 643	1 452	911	1 102	424	1 272	763	1 354
Labor force	21 796	15 073	6 723	205	1 244	1 136	671	803	280	833	550	1 027
Percent of total	B1.2	79.2	86.1	86.9	75.7	7B.2	73.7	72.9	66.0	65.5	72.1	76.6
Civilian lobar farce	17 160	13 677	3 483	169	1 120	957	612	623	255	700	461	994
Employed	16 232	12 928	3 304	153	1 095	902	569	601	193	604	437	900
Unemployed	928	749	179	16	25	• 55	43	22	62	96	24	
Percent of civilian labor force	5.4	5.5	5.1	9.5	2.2	5.7	7.0	3.5	24.3	13.7	5.2	94 9.5
Not in lobar force	5 049	3 967	1 082	31	399	316	240	299	144	439	213	317
Inmote of institution	169	162	7 1	-	_	11	18	4	-	17	7	
Enrolled in school	1 443	1 146	297	21	151	69	67	34	11	41	20	111
Other under 65 years	1 202	904	298	5	79	62	35	68	59	158	. 64	75
Other 65 years and over	2 235	1 755	480	5	169	174	120	193	74	223	1 122	าว์เ
Male, 16 to 21 years old	4 321	2 705	1 616	32	243	253	152	190	31	155	93	216
Not enrolled in school	2 027	890	1 137	**	63	102	81	128	26	92	41	
Not high school graduates	333	228	105	_	26	20	18	17	11	47	12	82
Unemployed or not in labor force	117	98	19	-	12	10	12	6	'-	28	- 12	34 21
Female, 16 years old and over	27 377	21 333	4 044	218	1 846	1 746	1 088	1 384	422	1 241		
Labar force	11 008	9 110	1 898	124	801	700	421	556	222	50B	925 361	1 741
Percent of total	40.2	42.7	31.4	56.9	43.4	40.1	38.7	40.1	52.6			859
Civilian labor force	10 941	9 089	1 852	124	801	700				40.9	39.0	49.3
Employed	10 039	B 376	1 663	118	740		421	556	222	497	361	B59
Unemployed				110		626	404	529	195	434	299	762
Percent of civilian labor force	902	713	189		61	74	17	27	27	63	62	97
Net in labor force	B.2	7.8	10.2	4.B	7.6	10.6	4.0	4.9	12.2	12.7	17.2	11.3
Not in labor force	16 369	12 223	4 146	94	1 045	1 046	667	830	200	733	564	882
Morried women, husbond present	17 848	13 117	4 731	183	1 246	1 071	565	603	95	558	590	912
In lobar force	6 869	5 410	1 459	103	479	394	197	147	55	231	206	445
With own children under 6 years	5 465	3 792	1 673	67	333	257	166	184	11	158	186	197
in labor force	1 572	J 199	373	30	99	16	28	30	6	54	64	85
		_	}	•								"
•					_			<u> </u>				

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GREAT FALLS, MONT., SMSA



<sup>&</sup>lt;sup>1</sup>A dash "-" represents zero. Three dots "..." indicate that the data are being withheld to avoid disclosure of information for individual housing units, or that the base average, percentage, or ratio is too small for it to be shown.

#### **ACCURACY OF THE DATA**

Most census reports include some discussion of the accuracy of the data. In Block Statistics Reports, information on accuracy is found on page IX. In Census Tract Reports, it is presented in Appendix C. Broad considerations and problems are dealt with, rather than specific difficulties which may affect the data for the particular area being reported. For example, the procedures are described for inflating sample data so that the reported figures reflect approximate characteristics of the entire population, rather than only 20, 15, or 5 percent.

Errors discovered in the data after a report has been compiled, but before it has been printed, are reported in a "correction note" on the page preceding the first table of the report. It is a good idea to check any correction notes before using data from the reports.

Studies are now underway to learn how effective the Census Bureau was in counting everyone. After the 1960 census, such studies suggested that about 3% of the total population had been missed, including about 10% of the Negro population. We anticipate that 1970 data will prove to be more complete; however, at the small-area level there may sometimes be serious problems of accuracy. For example, in low-income, inner-city neighborhoods it is often difficult to reach everyone, particularly males in the 15-30 age range. Also, processing difficulties, misplaced records, low response rate, and similar problems will in rare cases significantly affect data for particular small areas.

The possibility of substantial changes in the characteristics of areas since April 1970, when the census was collected, should also be kept in mind. Such activities as highway construction, which requires housing demolition, or the addition of new apartment buildings can have dramatic impacts on the characteristics of neighborhoods in the course of a couple of years.

### **EXAMPLES OF CENSUS APPLICATIONS**

The following examples suggest a few of the ways in which census data may be of use in community action programs. Three examples concern fairly complicated programs and require detailed discussion. They are followed by three briefer examples.

Most specific references to census data in the following examples are for data found in Census Tract Reports and Block Statistics Reports. Figures 6 and 7, pages 12-18, present complete descriptions of their contents. Persons living in areas which do not have tract and block statistics (see pp. 3-4) may use statistics for the place or county as a whole (Figure 3, p. 5, indicates in which

reports these statistics can be found) or arrange to obtain statistics for enumeration districts (see page 19, "Additional Information").

### **Evaluation of Projects Involving Relocation**

In urban areas, projects are often proposed and carried out which convert residential land to use for other purposes and involve relocation of varying numbers of people. Expressway construction, urban renewal, construction of office buildings, and similar projects may have this effect. Understandably, community groups frequently seek to influence decision-making relating to these projects in order to change their design, change their location, or have them cancelled. Census data may be very valuable in both developing and evaluating plans for changes in land use, particularly if the area to be affected involves one or more city blocks. The following discussion of expressway location will help to illustrate this.

Location is an extremely important and often controversial consideration in expressway construction through heavily populated areas. Of the many problems associated with expressways, such as noise, pollution, and the creation of a "wall" dividing neighborhoods, the greatest concern is probably the frequent need to displace people and destroy residential units. Census data can be useful in evaluating the impact of various routes on people and housing. Highway planners often use census data for this purpose, and community groups may wish to as well.

First, let us consider how Block Statistics Reports could be used. Counts of the number of people in each affected block can be summed and compared with such figures for alternate routes. The average number of persons per housing unit can be calculated for each block and used in conjunction with total population figures, number of occupied units (owner plus renter), and number of one-person households to help in estimating housing requirements of persons to be displaced. The figures on average number of rooms, average property value of owner-occupied units, and average rent are also useful in anticipating housing requirements.

The percent Negro and percent 62 years and over deserve special consideration. Since there may be discriminatory practices in housing sale or rental in some areas, Negro families may need special assistance in finding satisfactory alternate housing. The elderly may also face added difficulties, as will be discussed below, so the percent 62 years and over or approximate number in this age group (tota) population multiplied by the proportion 62 years and over) should be noted.



<sup>\*</sup>The calculation is total population minus number in group quarters, divided by the total number of occupied units.

Census Tract Reports are also an important source of statistics for assessing the impact of expressway construction. A greater quantity of data is available for tracts than for blocks, and sample data (income, education, occupation, etc.) are also included. As a result, tract data permit a much more thorough understanding of neighborhoods which may be affected by proposed construction. However, since tracts in densely settled areas are made up of several blocks and generally have a population numbering a ound 4,000, it is not possible to focus on the path of proposed construction with the precision made possible by block statistics.

A variety of types of tract data deserve consideration—number of young children (Census Tract Report, table P-1), number of a particular foreign stock (table P-2), number of families with incomes below the poverty level (table P-4), number of units lacking complete plumbing facilities (table H-1), count of units according to the year that present residents moved in (table H-2), and various other types of data. The application of such data in evaluating expressway routes or other major construction is not easy or straightforward, but the result may be a more complete understanding of the potential social impact involved. The following discussion about the elderly will help to illustrate this.

As mentioned earlier, the elderly face added difficulties if required to find new housing. They often own low or moderate-value homes and have modest fixed incomes. In many communities comparable alternate housing at a price they can afford to pay is scarce or unavailable. Also, if they have lived in the same neighborhood for a number of years, moving may mean disrupting a social pattern which has been important in their lives and which may be impossible to replace.

Census tract data will help in assessing the impact of a project on the elderly. Counts of the numbers of men and women 60 to 64 years, 65 to 74 years, and 75 and over are given in table P-1. Table P-3 provides a count of the number of males 65 years and older who are not in the labor force. The number of families with Social Security income and the average ("mean") amount of such income for those families is presented in table P-4. In the same table, several indicators of income below the poverty level among persons over 65 years are given.

### Establishment of Adult Education Programs

City school systems, junior colleges, or other community organizations sometimes conduct adult education programs to enable persons to complete high school, learn new skills, or study other subjects of interest to them. A community action organization may find census statistics of considerable value in proving the need for an adult education program or in convincing

officials to add particular types of courses or conduct courses in more convenient facilities.

The nature of the neighborhood involved will suggest the types of census data which should be checked in connection with assessing the need for adult education programs. In general, data on education, employment status, income, and similar subjects will be of greatest value. (See the content and coverage list on page 2). Since the key subjects are based on sample results, census tracts are the smallest area which can be studied.

A quick review of some of the kinds of tract data and their implications for adult education planning will demonstrate their potential value.

### Table P-1 (see page 13)

-The number of persons 65 years old and over is important in determining the need for daytime and evening courses oriented towards arts, crafts, and other leisure-time pursuits.

### Table P-2 (see page 13)

- -The count of persons with Spanish language background or Puerto Rican birth or parentage may suggest a need for courses taught in Spanish and courses to improve English language usage.
- -A low percent of 16 and 17 year olds enrolled in school, and the percent of 16 to 21 year olds not high school graduates and not enrolled in school, might indicate the need for offering high school completion courses.
- -Counts of persons 25 years old and over in each tract by the years of school completed will help in determining the appropriate academic level for adult education courses to be offered.

### Table P-3 (see page 14)

-Number and percent unemployed, along with the number of males 16 to 21 years old who are not high school graduates and are unemployed, will be useful in determining the need for job training and the kind which should be offered. Employment opportunities in the area are also an important determinant.

#### Table P-4 (see page 14)

-The number of families with income below the poverty level and with children under 18 or children under 6 may suggest the need for instruction in low budget meal planning, health care, and similar family and home oriented subjects.

The preceding illustrations suggest some of the ways in which census data may relate to adult education



planning. Each community group will probably be able to find others which are specifically appropriate for its neighborhood. Also, it will usually be necessary to consider several different characteristics in order to press for or help plan an adult education program which will meet all the needs of the community.

### **Assessing Day-Care Requirements**

A neighborhood's need for day-care facilities depends upon a variety of conditions, such as availability of day-care at major places of employment, availability of retired relatives or neighbors who might care for children, and the number of employed women with small children. Census data can be of value in assessing some of these conditions.

As with most neighborhood-related problems, relevant data at the block level would be desirable. However, the Block Statistics Reports include only a couple of possibly relevant statistics. One, the number of persons 62 years and over, is a very rough measure of potential part-time day-care center employees. The other, number of families headed by women, might be helpful in judging the areas within a neighborhood where day-care center needs may be greatest.

The Census Tract Report presents information of more direct interest. Table P-1 furnishes the number of 3 and 4 year olds and the number under 5 by sex in each tract. Table P-2 shows the number of children (3 years or older) enrolled in nursery school and in kindergarten. Table P-3 gives the number of married women, living with their husbands, with children under 6 years old and the number of such women in the labor force (working or looking for work). Table P-4 furnishes median and mean family income, the number of families in various income brackets, and number and percent of families below the poverty level. It also gives the number of families below the poverty level with children under 6 years old, the number of such families headed by females, and related statistics.

Census statistics, such as those just mentioned, may prove of value for comparing areas and getting a rough idea of where day-care centers might be most needed. They do not measure actual demand, though. Additional information, perhaps generated by door-to-door canvassing of the neighborhood, would be required for that.

### OTHER COMMUNITY PROJECTS

### Playgrounds

The need for more playground space may seem obvious to many community residents, but the responsible city officials are usually dealing with many demands for funds and need solid information to help them decide among the competing demands. Census Tract Reports

furnish the number of children by age—how many under 5 years old, how many 5 to 9 years old, etc. — and Block Statistics Reports provide the percent of the total population under 18. By itself, this kind of information can be a rough indication of the need for more playgrounds. It will be even more effective if the neighborhood group can get information from the local government on the amount of area now devoted to playground space, figure out how much space is available per 100 or 1,000 children, and compare with similar information for other parts of the city. If there is more than one possible site for a new neighborhood playground, census data can be heloful in picking the site most convenient to the largest number of children.

### Voter Registration

It is always important for a neighborhood to exercise its fair share of impact at the polls, and one part of making sure that the impact is as great as possible is to have a high portion of the eligible voters registered. If voter precincts can be approximated by combining census blocks and tracts, then statistics on the number of persons of voting age can be compared with counts of the people actually registered to help detect a low registration rate and determine whether a special registration drive is needed. If registration statistics by age (e.g., number of registered persons 18-20, 21-24, etc.) are available, they can be compared with census statistics by age to see if particular age groups need to be reached.

### Housing Improvement

While community groups are seldom in a position to undertake housing improvement programs such as low interest loans, strong code enforcement or renovation of deteriorating housing, they may be able to tackle such programs indirectly through convincing local officials of the need. Census tract and block reports contain a great deal of information which reflects aspects of housing adequacy. For example, the number of units lacking hot water, a toilet, or a bath for private use and the number of overcrowded (1.01 or more persons per room) units is given for each block. Similar information, in greater detail, is presented in tables H-1 and H-2 of the tract reports. Information of this kind would be an important part in a presentation or report on the need for housing improvement in particular neighborhoods.

### **BLOCK AND TRACT REPORT CONTENTS**

The Block Statistics Reports and Census Tract Reports are the principal sources of census data for community action projects. The following two figures, numbers 6 and 7, show the complete range of data presented in each. Figure 6 is an excerpt from an actual Block Statistics Report. Figure 7 shows only the stubs of the census tract tables, (figure 5, on page 8, illustrates a part of one of these tables with real data.)



Figure 6 Characteristics of Housing Units and Population, by Blocks: 1970-Con.

		PAPO	n1 01 10	TOI POPA	lation 3	Yet	r-round it	outing t	aits		1		•			Occupi	ed housin	g units						
Blocks								Units	in-			) Owner					Renter			per	toom nous			-
Within Census Tracts	Tatal bopu- io- tion	34 C	la group quar- ters	Unit of 18	62 years and over	Total	Lock- ing some er oil plumb- ing facili- ties	One- unit struc- tures	Struc- tures of 10 cr more units	Total	Lock- ing some or oil plumb- ing facili- ties	Aver- oge num- ber of rooms	Aver- oge value (dal- lars)	Per- ceni Kegra	Total	Lock- ing some or oil plumb- ing facil- ties	Aver- oge num- ber of rooms	Aver- oge con- troct rent (doi- iors)	Per- cent Negro	Total	With all piumbing facilities	One- Person house- holds	With female head of family	with room- ers, board- ers, or lodg- ers
401 402 403 404 405 406 407 408 501	127 93 32 220 98 161 97 31 337	165	39	RRS BT THE TH	14 17 9 27 10 11 16 16 22	44 38 9 122 28 46 34 6 194		33 16 6 17 11 30 30 4 16	86	29 15 6 13 14 34 30 4 13		5.6 6.8 5.5 7.0 7.8 6.5 7.2 	17600 14200 6200 24300 34100 18800 25000  57100 48900	7	15 23 3 106 14 12 2 2 178		4.9 3.6 3.4 5.2 4.8	85 85 114 92 93	33	1 2 3 1 1 1 1 1 1		5 12 2 62 8 5 8 4	5 5 1 5 1 3 3 1 10	
503 504 505 506	81 104 20 440		-	KAKK	12 15 5 13	29 29 6 131	-	28 28 5 129	-	26 28 5 126	•	6.9 7.3 7.4 7.0	31200 41400 60000 41900		2 1 1 2		•••	***	-	1 - - 1	1	5 1 1 8	3	
107 2 101 103 104 105 105 106 107 108 109 110 111	4000 96 30 115 97 194 189 245 59 24	1		ADSHREADS .	10 3 10 8 14 12 7 7 33	1304 27 9 40 31 69 66 75 14 8	21	998 20 9 33 31 57 61 70 14		817 21 7 25 25 25 51 52 53 9	6	5.5 5.8 4.4 4.9 5.6 5.2 5.0 5.6 4.9	14600 17100 14100 14500 17500 15600 15700 13800 13900	1	448 5 1 15 6 16 14 20 5	15	4.6 1.8 4.4 4.5 3.4 4.6 5.1 6.2	91 ° 65 ' 104 '		87 2 2 2 2 3 5 3 1	84 2 2 3 5 3 3	201 4 2 6 2 10 12 9 2	.111	12 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2
112 113 114 205	22 24 29 94		:	47 28 24	14 3 11	6 9 12 36 9	1	6 7 3 6 9		2 2 2 26	***	***	#11 ### #14	-	2 6 9	-	4.5 3.7 4.6	108 98	-	1	3	- 1 7	1 1 1 5	

A dash " represents zero. Three dots "..." indicate that the data are being withheld to avoid disclosure of information for individual housing units, or that the base average, percentage, or ratio is too small for it to be shown.

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Blocks are indented under the census tracts in which they are located, e.g., blocks 101, 103, 104, etc. under tract 707.

Note that figures in this column are percentages, not numbers of Nagroes, number under 18 years, etc. To obtain approximate counts, multiply total population by the percentage and divide by 100.

## . Figure 7 Published Census Tract Report-Population Data

Table P-1. General Characteristics o Population	f the	Table P-2. Social Characteristics Population	of the
Census Tracts		Census Tracts	
RACE		MATIVITY, PARENTAGE, & COUNTRY OF ORIGIN	•
White		All perses  Native of native parentage	
Negro Percent Negro		Hative of foreign or mixed parentage	
•		Foreign stock	
AGE BY SEX		United Kingdom	
Mula, all ages Under 5 years		2magsu	
J and 4 years	• .	Germony Poland	
5 to 9 years		Czechoslavokia Austria	
6 years. 10 to 14 years.	•	Hungary U.S.S.R.	
14 years 15 to 19 years		ITORY	
15 years		Conada . Mexico .	
16 years 17 years		Other America	
18 years.		All diner and not reported	
20 to 24 years		Persons of Sponish language! Other persons of Sponish surname!	
21 years		Persons of Spanish mather tangue Persons of Puerto Rican birth or parentage	
25 to 34 years 35 to 44 years			
45 to 54 years		SCHOOL ENROLLMENT	
60 to 64 years		Enrolled persons, 3 to 34 years eld	
65 to 74 years 75 years and over		Public Kindergarten	
Foncio, ell ages	-	Public	
Under 5 years 3 and 4 years		Elementary Public	
5 to 9 years.		High school	
6 years		Conege	
10 to 14 years		Percent enrolled in school by age: 16 and 17 years	
15 to 19 years		18 and 19 years 20 and 21 years	
16 years 17 years		22 10 24 Years	
18 years		Percent 16 to 21 years not high school acadentes	
19 years 20 to 24 years.		and not enralled in school	
2ù years		YEARS OF SCHOOL COMPLETED	
25 to 34 years		Porsons, 25 years old and over.	
35 to 44 years		No school years completed	
55 to 59 years		5 to 7 years	
65 to 74 years		High school: 1 to 3 years	
RELATIONSHIP TO HEAD OF HOUSEHOLD		Callege: 1 to 3 years	
All garrens		4 years or more	
In households Head of household.		Percent high school graduates.	
Read of igmily		CHILDREN RVER BORN	
Primary individual		Women, 25 to 44 years ald over married. Children ever born.	
Other relative of head		Fer 1,000 women ever married.	
nu droab deausts		RESIDENCE IN 1965	
Persons per household		Parsons, S years old and ever, 19707.	
TYPE OF FAMILY AND NUMBER OF OWN CHROREN		Same house as in 1970. Different house	
All femilies		in central city of this SMSA	•
All families With own children under 18 years.		Outside this SMSA.	
Number of children		North and West	
With own children under 18 years.		Abrood	
Number of children Percent of total under 18 years		MEANS OF TEAMSPORTATION AND PLACE OF WORK	
Families with other mole hood.		All workers	
With own children under 18 years.  Number of children		Private outo Driver Passenger	
femilies with female head		Bus or streetcar	
With own children under 18 years. Number of children		Wolked to work	
Percent of tatal under 18 years		Ciner	
Persons under 18 years		Inside SAISA. A city central business district.	
		Balance of A city	
Male, 14 years old and ever		Balance of A County. 8 County	
Separated		C County	
Widowed Divarced.		E County. F County.	
female, 15 years ald and over		G County	
Single		H County	
Merred Separated.		I County	
Widowed Diverced	137	K County Outside SMSA Place of work not reported	13
	~ •		



## Table P-3. Labor Force Characteristics of the Population

### **Census Tracts**

EMPLOYMENT STAT	114	ı

EMPLOTMENT STATES
Itale, 16 years aid and over Labor force
Percent of tatal
Employed
Percent at civilian lagar farce
Nat in labor farce
Nat in labor farce
Other under 65 years
Male, 16 to 21 years old Nat enralled in school Nat high school graduates Unemployed or not in labor farce
Nat high school graduates
Unemployed or not in labor farce
Fomale, 16 years old and over Labor force Percen' af tatal Civilan labor farce Employed Unemployed Percent af civilian labor farce Nat in labor farce
Percent of total
Employed
Unemployed
Nat in labor farce
Married warren, husband present
in labar farce.
Marræd wamen, husbond present In labor farce. With awn children under 6 years. In labor farce.
OCCUPATION
Tetal employed, 16 years old and over
Tetal employed, 18 years old end over Professional, technical, and kindred warkers. Health warkers Teachers, elementary and secandary schools. Managers and administrators, except form. Solared Self-employed in retail trade.
Teachers, elementary and secondary schools
Managers and administrators, except form.
Self-employed in retail trade.
Sales warkers
Clerical and kindred warkers
Craftsmen, faremen, and kindred warkers
Mechanics and repairmen.
Sales warkers Retai trade Clerical and kindred warkers Crafismen, faremen, and kindred warkers Construction crafismen Mechanics and repowmen Operatives, except fronspart Transport equipment operatives
Laborers, except farm form workers Service workers Cleoning and food service workers Protective service workers Personal and hootily service workers
Farm warkers
Cleaning and faad service warkers.
Femole omployed, 18 years old and ever.  Professional, technical, and kindred warkers.  Teachers, elementary and secandary schools.  Managers and administrators, except form.  Sales warkers  Clerical and kindred workers.  Secretaries, stenagraphers, and typists.
Teachers, elementary and secondary schools.
Sales workers
Clerical and kindred workers
Operations including transport
Operatives, including transport Other blue-callor workers Form workers Service workers, except private hausehold Private hausehold workers
Service warkers, except private hausehold.
Private hausehald warkers
Total employed, 16 years old and over.  Construction  Monufacturing  Disable and
Monufocturing
Durable goods Transpartation. Communications, utilities, and sanitary services
Communications, utilities, and sanitary services
Whalesale trade
Finance, insurance, and real estate
Personal services
Health services
Finance, insurance, and real estate.  Business and repair services. Personal services. Health services. Educational services. Other professional and related services. Public administration. Other industries.
Other industries
CLASS OF WORKER
Total employed, 16 years old and over
Total amplayed, 18 years old and ever.  Private wage and solary warkers.  Government workers.  Local government workers.  Self-emplayed warkers.  Unanal family warkers.
Government workers
Self-emplayed warkers

## Table P-4. Income Characteristics of the Population

### **Census Tracts**

INCOME IN 1969 OF FAMILIES AND UNRELATED INDIVIDUALS

All femilies
tess than \$1,000
A3 (milles  A3 (milles  \$1,000 to \$1,999  \$2,000 to \$2,999  \$3,000 to \$3,999  \$4,000 to \$3,999  \$4,000 to \$4,999  \$5,000 to \$5,999  \$6,000 to \$6,999  \$7,000 to \$7,999  \$8,000 to \$8,999  \$7,000 to \$7,999  \$1,000 to \$1,1,999  \$10,000 to \$11,999  \$12,000 to \$14,999  \$12,000 to \$14,999  \$25,000 to \$4,999  \$25,000 to \$4,999  \$25,000 to \$4,999
\$3,000 to \$3,999
\$4,000 to \$4,999
\$6,000 ta \$6,999
\$7,000 ta \$7,999
\$8,000 to \$8,977
\$10,000 ta \$11,999
\$12,000 to \$14,999
\$15,000 to \$24,999
\$50,000 ar mare
Medion incame Mean income
Mean income
Families and unrelated individuals
Median income
Mean income
Unrelated individuals
Median income
Wedb income
TYPE OF INCOME IN 1969 OF FAMILIES
All formities
All families With wage or salary income
Mean wage or solary incame. With nanfarm Self-Employment income.
With nonform self-employment income.
Mean nanfarm self-emplayment income
Mean form self-employment income
With Social Security income.
Mean Sacial Security income. With public assistance or public welfare income
Mean public assistance or public welfare income
With other income.  Mean other income
RATIO DE SAMILY INCOME TO POVERTY LEVEL!
KATIO DE JAMILI INCOME TO LOSSELL SEAST.
Percent of families with incomes:
.50 to .74.
1.00 to 1.24
1.25 to 1.49
1 50 to 1.99
3 00 ar mare
tess man, 30 at poverty ever. 50 to 74. 75 to .99. 1.00 to 1.24. 1.25 to 1.49. 1.50 to 1.99. 2.00 to 2.99. 3.00 or more.
3.00 as wase
INCOME SEFOM LOCALLA FEAST.
INCOME SEFOM LOCALLA FEAST.
INCOME SEFOM LOCALLA FEAST.
Fem Bies Percent of all families Mean Comity income Mann income Mann income deficit
Fem Bies Percent of all families Mean Comity income Mann income Mann income deficit
Fem Bies Percent of all families Mean Comity income Mean family income Mean income deficit
Fem Bies Percent of all families Mean Comity income Mean family income Mean income deficit
Fem Bies  Percent of all families  Mean family income  Mean income deficit  Percent receiving public assistance income  Mich size of family  With related children under 18 years  Mean number of related children under 18 years  With related children under 0 years  With related children under 6 years  With related children under 6 years
Fem Bies  Percent of all families  Mean family income  Mean income deficit  Percent receiving public assistance income  Mich size of family  With related children under 18 years  Mean number of related children under 18 years  With related children under 0 years  With related children under 6 years  With related children under 6 years
Fee Nes  Percent of all families  Mean family income  Mean income deficit  Percent receiving public assistance income.  Mann size of family  With related children under 18 years  Mean number of related children under 18 years  Mean number of related children under of years  Mean number of related children under of years  Mean number of related children under of years  Mean number of related children under of years  Mean number of related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 18 years
Foe Nes  Percent of all families  Mean family income  Mean income deficit  Percent receiving public assistance income.  Mann size of family  With related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 6 years  Mean number of related children under 6 years  Mean number of related children under 6 years  Menn number of related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Mith related children under 6 years
Fee Nes  Percent of all families  Mean family income  Mean income deficit  Percent receiving public assistance income.  Mann size of family  With related children under 18 years  Mean number of related children under 18 years  Mean number of related children under of years  Mean number of related children under of years  Mean number of related children under of years  Mean number of related children under of years  Mean number of related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 18 years
For Res  Percent of all families  Mean family income  Mean income deficit  Percent receiving public assistance income.  Maan size of family  With related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 6 years  Mean number of related children under 6 years  Mean number of related children under 6 years  Mean number of related children under 6 years  Mean number of related children under 18 years  Mean number of related children under 18 years  With related children under 6 years  Percent in labor force  Alean number of related children under 6 years
For Res  Percent of all families  Mean family income  Mean income deficit  Percent receiving public assistance income.  Maan size of family  With related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 6 years  Mean number of related children under 6 years  Mean number of related children under 6 years  Mean number of related children under 6 years  Mean number of related children under 18 years  Mean number of related children under 18 years  With related children under 6 years  Percent in labor force  Alean number of related children under 6 years
For Res  Percent of all families  Mean family income  Mean income deficit  Percent receiving public assistance income.  Maan size of family  With related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 6 years  Mean number of related children under 6 years  Mean number of related children under 6 years  Mean number of related children under 6 years  Mean number of related children under 18 years  Mean number of related children under 18 years  With related children under 6 years  Percent in labor force  Alean number of related children under 6 years
For Res  Percent of all families  Mean family income  Mean income deficit  Percent receiving public assistance income.  Maan size of family  With related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 6 years  Mean number of related children under 6 years  Mean number of related children under 6 years  Mean number of related children under 6 years  Mean number of related children under 18 years  Mean number of related children under 18 years  With related children under 6 years  Percent in labor force  Alean number of related children under 6 years
For Ries  Percent of all families  Mean family income  Mean income deficit  Percent receiving public assistance income.  Mann size of family  With related children under 18 years  Mean number of related children under 18 years  With related children under 6 years  Mean number of related children under 6 years  Mean number of related children under 6 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Percent in labor farce  Mean number of related children under 6 years  Percent of 5 years and over  Civilian male heads under 5 years  Percent in labor farce.
Fee Nes  Percent of all families  Mean family income  Mean income deficit  Percent receiving public assistance income.  Man size of family  With related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 0 years  Mean number of related children under 0 years  Mean number of related children under 0 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Percent in labor farce  Mean number of related children under 6 years  Percent 55 years and over  Civitian male heads under 55 years  Percent in labor force  Wersterd laditions  Percent of all unrelated individuals
Fee Nes  Percent of all families  Mean family income  Mean income deficit  Percent receiving public assistance income.  Man size of family  With related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 0 years  Mean number of related children under 0 years  Mean number of related children under 0 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Percent in labor farce  Mean number of related children under 6 years  Percent 55 years and over  Civitian male heads under 55 years  Percent in labor force  Wersterd laditions  Percent of all unrelated individuals
Fee Nes  Percent of all families  Mean family income  Mean income deficit  Percent receiving public assistance income.  Man size of family  With related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 0 years  Mean number of related children under 0 years  Mean number of related children under 0 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Percent in labor farce  Mean number of related children under 6 years  Percent 55 years and over  Civitian male heads under 55 years  Percent in labor force  Wersterd laditions  Percent of all unrelated individuals
For Ries  Percent of all families  Mean family income  Mean income deficit  Percent receiving public assistance income.  Mann size of family  With related children under 18 years  Mean number of related children under 18 years  With related children under 6 years  Mean number of related children under 6 years  Mean number of related children under 6 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Percent in labor farce  Mean number of related children under 6 years  Percent of 5 years and over  Civilian male heads under 5 years  Percent in labor farce.
Fee Nes Percent of all families Mean family income Mean income deficit Percent receiving public assistance income. Mann size of family With related children under 18 years Mean number of related children under 18 years Mean number of related children under of years Mean number of related children under of years Mean number of related children under of years families with female head With related children under of years Mean number of related children under 18 years. With related children under of years Percent in labor farce Mean number of related children under of years Percent of years and over Civitian male heads under 65 years Percent of all unrelated individuals Mean income Monn income deficit Percent of years and over Percent of all unrelated individuals Mean income Percent of cerving public assistance income. Percent 65 years and over
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Femilies  Percent of all families  Mean family income  Mean income deficit  Percent everying public assistance income.  Mann size of family  With related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 6 years  Mean number of related children under 6 years  Mean number of related children under 6 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Percent of labor force  Rean number of related children under 6 years  Percent of years and over.  Civilian male heads under 65 years  Percent of all unrelated individuals  Mean income  Mean income  Mean income  Mean income  Mean income  Mean income  Percent of of years and over  Percent of Sy years and over  Percent of Sy years and over  Percent of Sy years and over  Percent of Sy years and over  Percent of Sy years and over  Percent of Sy years and over  Percent of Sy years and over  Percent of Sy years and over  Percent of all persons  Percent of all persons  Percent of all persons  Percent of all persons  Percent of all persons  Percent of all persons  Percent of all households  Owner accupied  Mean voice of unit.
Femilies  Percent of all families  Mean family income  Mean income deficit  Percent everying public assistance income.  Mann size of family  With related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 6 years  Mean number of related children under 6 years  Mean number of related children under 6 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Mean number of related children under 18 years  Percent of labor force  Rean number of related children under 6 years  Percent of years and over.  Civilian male heads under 65 years  Percent of all unrelated individuals  Mean income  Mean income  Mean income  Mean income  Mean income  Mean income  Percent of of years and over  Percent of Sy years and over  Percent of Sy years and over  Percent of Sy years and over  Percent of Sy years and over  Percent of Sy years and over  Percent of Sy years and over  Percent of Sy years and over  Percent of Sy years and over  Percent of all persons  Percent of all persons  Percent of all persons  Percent of all persons  Percent of all persons  Percent of all persons  Percent of all households  Owner accupied  Mean voice of unit.
Percent of all families.  Mean family income Mean income deficit Percent receiving public assistance income.  Mann size of family With related children under 18 years Mean number of related children under 18 years Mean number of related children under 6 years Mean number of related children under 6 years Mean number of related children under 6 years Families with female head With related children under 18 years Mean number of related children under 18 years Mean number of related children under 18 years Mean number of related children under 18 years Percent in lobor face. Alean number of related children under 6 years Percent 5 years and over Cruitian male heads under 55 years Percent of all unrelated individuals  Mean income Mean income Mean income deficit Percent of all unrelated individuals Percent of all persons Percent of Syears and over Percent of Syears and over Percent of Syears and over Percent of Syears and over Percent of Syears and over Percent of Syears and over Percent of la persons Percent receiving Social Security income Related children under 18 years Percent of la persons



### Published Census Tract Faport-Population Data-Continued

### Table P-5. General and Social Characteristics Table P-6. Economic Characteristics of of the Negro Population: 1970 the Negro Population: 1970 **Census Tracts With Census Tracts With** 400 or More Negro 400 or More Negro **Population** Population EMPLOYMENT STATUS AND OCCUPATION Mate, 16 years old and ever Lobor force Civilian labor force Employed Unemployed Not in labor force AGE BY SEX Mide, all ages Under 5 years 3 and 4 years 5 to 9 years 5 years 6 years 10 to 14 years 114 years 115 to 19 years 15 years 15 years 16 years 17 years 18 years 19 years 19 years 20 to 24 years 20 to 24 years 21 years 22 years 23 to 34 years 35 to 44 years 45 to 54 years 45 to 54 years 45 to 74 years 46 to 74 years 47 to 74 years 48 to 74 Not in labor force Labor force Civilian labor force Employed Unemployed Not in labor force Morried wamen in labor force, husband present With own children under 6 years. with own children under a years. Professional, technical, and kindred workers. Managers and administrators, except farm. Soles workers Clerkol and kindred workers. Certal and kindred workers. Operatives, except frontsport. Transport equipment operatives. Labarers, except form. Form workers Service workers, except private household. Private household workers. Private nousehold workers. Female employed, 16 years old and over Professional, technical, and kindred workers. Managers and administrators, except form. Sales workers. Clerical and kindred workers. Operatives, including transport. Other blue-collor workers. Form workers. Service workers, except private household. Private household workers. 5 years. 6 years. 10 to 14 years. 14 years. 15 to 19 years. 15 years. 16 years. 17 years. 18 years. 18 years. 19 years. FAMILY INCOME IN 1949 PAMILY INCOME IN 1949 Aff families Less than \$1,000 \$1,000 to \$1,999 \$2,000 to \$2,999 \$3,000 to \$3,999 \$4,000 to \$4,999 \$5,000 to \$5,999 \$5,000 to \$5,999 \$5,000 to \$7,999 \$8,000 to \$7,999 \$8,000 to \$7,999 \$9,000 to \$7,999 \$10,000 or more from the standard of the standar | E | 100 fs. | 19 years. | 20 to 24 years. | 20 years. | 20 years. | 20 years. | 20 years. | 21 years. | 25 to 34 years. | 25 to 34 years. | 25 to 34 years. | 25 to 34 years. | 25 to 34 years. | 26 to 34 years. | 26 to 34 years. | 26 to 34 years. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years and over. | 27 years an BELATIONSHIP TO HEAD OF HOUSEHOLD All persons All persees In household. Mead of household. Head of family. Primary individual Wife of head Other relative of head. Not related to head. In group quarters. Persons per household EATIO DF FAMILY INCOME TO POVERTY LEVEL Percent of families with incomes: Less than 30 of goverly level. .50 to .74. .75 to .99. 1.00 to 1.24. 1.25 to 1 49. 1.50 to 1.99. 2.00 or rore. IMCOME BELOW POVEETY LEVEL\* femilies. Percent of all families. Mean family income Mean incomerdeficit Percent receiving public assistance income. Mean size of family With related children under 18 years Mean number of related children under 28 years Mean number of related children under 6 years. Mean number of related children under 6 years. Mean number of related children under 18 years. Mean number of related children under 18 years. Mean number of related children under 18 years. With related children under 18 years. Percent in labor force. Mean number of related children under 6 years. Percent in labor force. Mean number of related children under 6 years. Pently beads. INCOME SEFOM SOASELA FEAST, TYPE OF HOUSEHOLD All bessehelds Male primary individual Female primary individual Husband-wife households Households with ather male head Households with female head SCHOOL EN EOLLMENT Porsens, 16 to 21 years old Not attending school. Not high school graduates Percent of total Percent in labor force Mean number of related children under 6 years Percent 65 years and over Civilian mole heads under 65 years Percent in labor force Usershired hidrideath Mean income Mean income Mean income deficit Percent receiving public assistance income Percent of 5 years and over Percent of 5 years and over Percent of 5 years and over Percent feceving Social Security income Percent receiving Social Security income Related children under 18 years Percent living with both parents Meanshelfs Percent of an households Owner accupied Mean grass rent Percent locking some or all plumbing focilities. YEARS OF SCHOOL COMPLETED Persent, 25 years eld ead ever No school years completed. Elementery, 1 to 4 years. 5 to 7 years 8 years. High school, 1 to 3 years. 4 years. College: 1 to 3 years. 4 years or more. Median school years completed. Percent high school graduates. EESIDENCE IN 1965 Persons, 5 years old and ever, 19781 Some house as in 1970. Different house: In cantral city of this SMSA. In other part of this SMSA. Outside this SMSA. North and West. South



ble P-7. General and Social Characteristics of Persons of Spanish Language: 1970	Table P-8. Economic Characteristics of Persons of Spanish Language: 1970
Census Tracts With 400 or More Persons	Census Tracts With 400 or More Persons
of Spanish Language	of Spanish Language EMPLOYMENT STATUS AND OCCUPATION
GE BY SEA.	EMPLOYMENT STATUS AND OCCUPATION  Male, 16 years old end ever
Mele, ell eges	Labor force
3 and 4 years	Civilion labor force Employed
to 9 years	Unemployed
6 years	Not in labor force
to 14 years	Labor force
14 years	Civilian labor farce
15 years	Employed
16 years	Not in labor force
18 years	Married women in labor force, husband present With own children under 6 years
19 years	Total employed, 16 years old and ever
20 years	Professional, technical and kindred workers
21 years	Managers and administrators, except form Sales workers
to 44 years	Clerical and kindred workers
to 54 years	Craftsmen, foremen, and kindred workers
to 59 years	Operatives, except fronsport
to 74 years	Laborers, except form
years and over	Form workers
Female, all egis.	Private household workers
der 5 years	Female employed, 16 years old and over
3 and 4 years to 9 years	Professional, technical, and kindred workers
5 vegrs	Managers and administrators, except form
6 years	Clerical and kindred workers
14 years	Operatives, including transport Other blue-collar workers.
to 19 years	Form workers
16 years	Form workers Service workers, except private household
17 years	Private household workers
18 years	All families
) to 24 years	Less than \$1,000
20 years	\$1,000 to \$1,999. \$2,000 to \$2,999.
5 to 34 years	\$3,000 to \$3,999
5 to 44 years	\$3,000 to \$3,999 \$4,000 to \$4,999 \$5,000 to \$5,999
5 to 54 years	\$6,000 to \$6,999.
0 to 64 years	\$7,000 to \$7,999
5 to 74 years	\$8,000 to \$8,999 \$9,000 to \$9,999
ELATIONSHIP TO HEAD OF HOUSEHOLD	\$10,000 or more. Median income: Fomilies.
	Median income: Families
All persons	RATIO OF FAMILY INCOME TO POVERTY LEVEL
households. Head of household.	Percent of families with incomes:
Head of fomily	Less than .50 of poverty level
Primary individual	.75 to .99.
Wife of head	1.00 to 1.24
Not related to head	1.25 to 1.49
group quarters	2.00 or more
YPE OF HOUSEHOLD	INCOME BELOW POVERTY LEVEL
	Females Percent of oll families
All heuseholds	Mean family income
emale primary individual	Mean income deficit Percent receiving public assistance income
usband-wife households	Mean size of family
ouseholds with female head	With related children under 18 years
CHOOL ENROLLMENT	With related children under 6 years
Persons, 16 to 21 years old	Mean number of related children under 6 years
of offending school,	Fomilies with female head
Nat high school graduates.	Mean number of related Children under 18 years.
Percent of total	With related children under 6 years
EARS OF SCHOOL COMPLETED	Percent in labor force
	family hoods
Persons, 25 years ald and ever	Percent 65 years and over
ementory: 1 to 4 years	Percent in labor force
5 to 7 years	Unreleted Individuals Percent of all unrelated individuals
igh school: 1 to 3 years	Mean income
4 years	Mean income deficit
ollege: 1 to 3 years	Percent receiving public assistance income Percent 65 years and over
ledion school years completed	Persons
ercent high school graduates	Percent of all persons
ESIDENCE IN 1965	Percent of years and over
<del>-</del>	Percent 65 years and over
Persons, 5 years eld end ever, 1970'	Related children under 18 years
ome house as in 1970	Households
In central aity of this SMSA.	Percent of all households
In other port of this SMSA	Owner occupied
North and West	Benter occupied.
South	Mean gross rent
Abrood	Barrage locking come or all physical facilities



## Published Census Tract Report-Housing Data—Continued

## Table H-1. Occupancy, Utilization, and Financial Characteristics of Housing Units

### Consus Tracts

All heusing units  Vacant—seasonal and migratory
All year-round housing units
TENURE, RACE, AND VACANCY STATUS
Owner occupied
White Negro Renter occupied
White
To love only a series of the s
For rent Vacant less than 2 months. Median rent asked
Median rent osked
LACKING SOME OR ALL PLUMBING FACILITIES
All units
Owner occupied
Renter occupied
Vocant year-round
For rent
COMPLETE KITCHEN FACILITIES AND ACCESS
Locking complete kitchen facilities
ROOMS
1 rcom 2 rooms
3 rooms 4 rooms
3 (DOM)
6 rooms 7 rooms 8 rooms
8 rooms 9 rooms or more
Median
All accupied having units
PERSONS
1 person
2 persons. 3 persons. 4 persons.
4 persons
6 persons or more
Median, all accupied units
Median, renter accupied units
Units with roomers, boarders, or lodgers
PERSONS PER ROOM
1.00 or less
7.31 or more
, , ,
VALUE
Specified aware occupied units*. Less then \$5,000 to \$7.499. \$7.500 to \$7.499. \$15.000 to \$19.999. \$15.000 to \$19.999.
\$5.000 to \$7.499. \$7.500 to \$9,999.
\$10.000 to \$14,999
320.URXI In \$24 999
\$25,000 to \$34,999. \$35,000 to \$49,999.
\$50.000 or more
CONTRACT RENT
Specified renter occupied units?
\$30 to \$39,
\$60 to \$79
\$100 to \$149 \$150 to \$149

Table H-2. Structural, Equipment, and Financial Characteristics of Housing Units

## Census Tracts

UNITS All year-round housing units	
UNITS IN YOUR-raund housing units  [ (include STRUCTURE	
1 (includes mabile home or trailer) .	
2 "Cludes mobile home or troiler) 3 ond 4 5 to 49 50 or more YEAR STRILLINGS MULT	
30 0-	
YEAR OLD THE STATE OF THE STATE	
YEAR STRUCTURE BUILT  1969 to Morch 1970 1960 to 1668 1950 to 1664 1940 to 1949 HEATING EQUIPMENT	
1965 to March 1970	
1950 10 1968	
1940 10 1950	
Han or 1949	•
Ment and	
HEATING EQUIPMENT	
Built oir for water	•
Oth Wastrie units	
meg or pipeless fund	
Steam or hot water. Floor electronic floor electronic floor of the transce. Other water riccumis furnace. Other water riccumis furnace.  8.4 SEMENT	
Ail un "ENT	
One long with becomed - ment	
All units with bosement posement  SELECTA  SELECTA	
THE CIED POLICEMI	
SELECTED EQUIPMENT With more than 1 bothroom With Duble water surphy With Duble water surphy With Duble water surphy Central initial states Room Conditioning Central initial All accupied howsing units YEAR	
With Dublic than I bothroom	
good countries and sales a	
Center unditioning.	•
VSIEM	
YEAR All occupied housing units	
1968 to Morch 1970.	
1965 to Morch 1970.	
1960 10 1967 1950 10 1967 1949 10 1964	
01 1050	
1968 to Morch 1970. 1960 to 1967 to 1970. 1950 to 1964. 1949 or 1959. AUTOMORUS AVAILABLE	
AUTOMOBILES AVAILABLE	
3	
3 or <sup>m</sup> ore	
ORDE	
OROSS RENT	
*ENT	
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141

### Published Census Tract Report-Housing Data-Continued

Table H-3. Occupancy, Utilization, and Financial Characteristics of Housing Units With Negro Head of Household:

Census Tracts With 400 or More Negro Population

All occapied housing units
TENURE AND PLUMBING
Owner occupied. With all plumbing facilities Renter occupied. With all plumbing facilities
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1.00 or less
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Specified renter occupied units:
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Structural, Equipment, and Characteristics of Housing Financial Negro Head of Household

Census Tracts With 400 or More Negro Population
All occupied housing units
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Table H-5. Characteristics of Housing Units With Household Head of Spanish Language
(Same data items as shown in Tables H-3 and H-4)



### WHERE TO FIND CENSUS REPORTS

Many public libraries obtain the principal census reports for their communities. If the branch or neighborhood library does not have them, the main library probably will. The city planning office, city government library, mayor's office, chamber of commerce, or similar public and private agencies also often have census reports on hand.

A community action group may discover that it has frequent need to refer to census reports. If so, copies are available at a reasonable cost. Department of Commerce field offices in 43 cities (see the list on top of page 20) stock many of the reports for their cities and surrounding areas, or orders may be sent directly to the U.S. Superintendent of Documents. Order forms may be obtained by writing to the Publications Services Division, Bureau of the Census, Washington, D.C. 20233.

### ADDITIONAL INFORMATION

A number of data products and services have been developed in connection with the 1970 census which are primarily of interest to census users who have substantial and frequent need for census data. Of greatest importance is the availability of 1970 census data on computer tape. The data are statistics, like those found in census

reports, for blocks, tracts, cities, and other areas. However, because of the compact nature of storing data on tape, much more data can be put on tape than can be published in reports, including data for some areas not found in reports, such as enumeration districts.

Anyone may purchase these tapes. There are many organizations, both public and private, which are buying census tapes and offering data services, such as preparing printouts and suggesting ways to apply the statistics. A public listing of these organizations, called Summary Tape Processing Centers, is maintained by the Census Bureau-see the "Request for Information" form below.

The Census Bureau has published a great deal of descriptive information about 1970 census programs. For example, the 2-volume 1970 Census Users' Guide is a comprehensive reference resource. Also, there are occasional pamphlets and bulletins (Data Access Descriptions and Census Users Bulletins), a monthly newsletter (Data User News), and a quarterly Bureau of the Census Catalog—see the "Request for Information" form below.

If you would like to discuss the use of census data in your community activities or have questions about Census Bureau products and services, contact the Data Access and Use Laboratory, Data User Services Division, Bureau of the Census, Washington, D.C. 20233.

### REQUEST FOR INFORMATION ABOUT THE '70 CENSUS

Data Access and Use Laboratory Data User Services Division Bureau of the Census Washington, D.C. 20233

> Please send me samples of the Census Bureau's monthly newsletter and occasional pamphlets, a list of Summary Tape Processing Centers, and more information on the 1970 census.

Name		
Organization		
Address	 	
City, State, & ZIP	 	



### U.S. DEPARTMENT OF COMMERCE DISTRICT OFFICES

Publications of the Bureau of the Census may be reviewed at the district offices listed below.

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Baltimore, Md. 21202, Room 415, U.S. Customhouse Birmingham, Ala. 35205, Suite 200, 908 South 20th St. Boston, Mass. 02116, 441 Stuart St. Buffalo, N.Y. 14202, 1312 Federal Bldg.

Charleston, W. Va. 25301, 500 Quarrier St. Cheyenne, Wyo. 82001, 2120 Capitol Ave. Chicago, III. 60603, 55 East Monroe St. Cincinnati, Ohio 45202, 550 Main St. Cleveland, Ohio 44114, 666 Euclid Ave. Columbia, S.C. 29204, 2611 Forest Dr.

Dallas, Tex. 75202, 1100 Commerce St.
Denver, Colo. 80202, Room 161, New Customhouse
Des Moines, Iowa 50309, 210 Walnut St.
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Greensboro, N.C. 27402, Room 203, Federal Bldg.

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Newark, N.J. 07102, 4th Floor, Gateway Bldg. New Orleans, La. 70130, 432 International Trade Mart New York, N.Y.10007, 26 Federal Plaza, Foley Sq. Omaha, Nabr. 68102, 1620 Dodga St.

Philadelphia, Pa. 19106, 9448 Federal Bldg. Phoenix, Ariz. 85004, 112 North Central Ave. Pittsburgh, Pa. 15222, 1000 Liberty Ave. Portland, Oreg. 97205, 921 S.W. Washington St.

Reno, Nev. 89502, 300 Booth St. Richmond, Va. 23240, 400 North 8th St.

St. Louis, Mo. 63105, 120 South Central Ave.
Salt Lake City, Utah 84111, 125 South State St.
San Francisco, Calif. 94102, 450 Golden Gate Ave.
San Juan, P.R. 00902, Room 100, Post Office Bldg.
Savannah, Ga. 31402, 125-29 Bull St.
Seattle, Wash. 98109, 1700 Westlake Ave. North

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### BUREAU OF THE CENSUS REGIONAL OFFICES

Atlanta, Ga. 30309, 1365 Peachtree St., N.E. Boston, Mass. 02116, 441 Stuart St. Charlotte, N.C. 28202, Suite 800, 230 S. Tryon St. Chicago, III. 60605, 536 S. Clark St. Room 1085 Dalles, Tex. 75202, 1100 Commerce St. Denver, Colo. 80225, 575 Union 8ldg. 8ox 25207 Detroit, Mich. 48226, 234 State St. Room 2100

Kansas City, Kans. 66101, One Gateway Center, 4th and State Streets Los Angeles, Calif. 90024, 11000 Wilshire Blvd. Philadelphia, Pa. 19106, 600 Arch St. Room 9244 New York, N.Y. 10007, 26 Federal Plaza, Room 4102 Seattle, Wash. 98109, 1700 Westlake Ave. North





## TWO NEW GUIDES TO RACIAL AND ETHNIC STATISTICS

### **DAD No. 40**

Data on Selected Racial Groups Available From the Bureau of the Census

### **DAD No. 41**

Data on the Spanish Ancestry Population Available From the 1970 Census of Population and Housing

### Guides to data available in printed reports, computer tapes, and special tabulations —

- On selected racial groups from the 1970 Census and Current Population Reports
- Includes these racial groups:

Black
American Indian
Japanese
Chinese
Filipino
Hawaiian and Comments
Eskimo and Ale

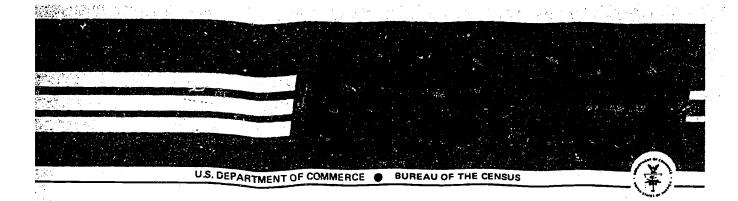
- On the Spanish ancestry population from the 1970 Census of Population and Housing
- Describes the Spanish ancestry population identifiers: Birth and parentage Spanish language Spanish surname Spanish language or surname Spanish origin Spanish heritage

To assist users in locating data for these groups in the printed reports, the DAD's feature-

4 Subject Guides to 1970 Census Population and Housing Characteristics for selected races 3 Indexes to Spanish Ancestry Data from the 1970 Census

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## 10 Good Reasons Why You Should Subscribe— To Data User News

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- 1. Continuous Reporting on Plans for 1980 Census
- 2. Notices of the Availability of New Publications From the 1972 Economic Censuses
- 3. Applications of Census Data
- 4. Announcements of Workshops and Conferences

- 5. New Computer Programs
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STREET ADDRESS	(Publications), Bureau of the Census, Washington, D.C. 20233 or any U.S. Department of
CITY STATE ZIP CODE	Commerce district office





BUREAU OF THE CENSUS

## A Census Portrait of

## MARYLAND

CP73-21 Issued January 1974

STATISTICS FROM A FEDERAL CENSUS, LIKE AN ARTIST'S PENCIL, SKETCH A PORTRAIT OF THE PEOPLE OF EACH STATE AND THE NATION AS SEEN AT ONE POINT IN HISTORY.

1970	O Maryland Po	pulation At A Glance	
Total	3,922,399	Males	1,916,321
Urban	3,003,935	Females	2,006,078
Urban fringe	1,683,160	Whites	3,194,888
(Suburban)		Blacks	699,479
Rural Farm	918,464 62,385	Spanish language	52,974

How many? Maryland's population in the 1970 census totaled 3,922,399, ranking it 18th among the States and District of Columbia. Its population density was 397 persons per square mile. The 1970 population was 77 percent urban and 23 percent rural.

The 1970 total was 27 percent greater than the 1960 population. About 437,000 of this population growth was due to natural increase (births minus deaths) during the decade. Maryland had a net gain of approximately 385,000 persons because of people moving into the State.

Baltimore, the State's largest city, had a 1970 population of 905,759, a decrease of 4 percent from 1960. The 1970 population of the Baltimore Standard Metropolitan Statistical Area was 2,070,670, a 15 percent gain over 1960.

Other places of 50,000 or more with their 1960-70 percentage growths are listed below. Despite their large populations, none is incorporated.

Dundalk	85,377	+ 4%	Bethesda	71,621	+27%
Towson	77,809	+308%	Wheaton	66,247	+21%
Silver Spring	77.496	+ 17%	Catonsville	54.812	+47%

Ethnic Groups. Major nationalities in Maryland's first and second generations from other countries included 59,680 from Germany (14,865 born there); 49,619 from Italy (9,707 born there); 46,332 from the U.S.S.R. (8,193 born there); 40,291 from the United Kingdom (11,243 born there); and 39,334 from Poland (6,763 born there). There were 52,974 persons of Spanish language.

For sale by Publications Distribution Section, Social and Economic Statistics Administration, Washington, D.C. 20233.

Price 10 cents a copy. A 25 percent discount for 100 or more copies mailed to the same address.



Racial Makeup. The white population totaled 3,194,888 in 1970. Other racial groups included 699,479 blacks (35 percent more than in 1960); 6,520 Chinese; 5,170 Filipinos; 4,239 American Indians; and 3,733 Japanese.

Age of the Population. The median age of the Maryland population was 27.1 years, compared with 28.1 years for the U.S. Of Maryland's 1970 population, 299,682 were 65 and older and 344,267 under 5 years. The total of school age, 5 to 17, was 1,037,225 and the college age group, 18 to 21, numbered 262,237. The remainder, 22 to 64, totaled 1,978,988.

Single, Married, Divorced. Among women age 14 and older, 337,025 had never married; 925,354 were married (54,124 of them separated); 164,326 widowed; and 49,062 divorced. Totals for men 14 and older were: 392,646 single; 906,860 married (37,073 of them separated); 36,331 widowed; and 31,050 divorced. There were 971,877 families in the State, 832,716 of them husband-wife families.

Income. Half of Maryland's families had above and half below an income  $\overline{0}$  of \$11,057 in 1969, ranking the State 5th in median family income (1969 income was reported in the 1970 census). The U.S. median was \$9,586. The Maryland median for white families was \$11,629; for its black families, it was \$7,696.

Nearly 8 percent of the State's families (74,849 families) were below the low-income or poverty line in 1969. The 1969 poverty level was \$3,743 for a nonfarm family of four.

Schooling. There were 1,168,116 persons in Maryland 3 to 34 years old enrolled in school or college at the time of the census: 24,651 were in nursery school; 737,363 in kindergarten or elementary school; 275,083 in high school; and 131,019 in college.

Of the 2,082,549 persons 25 or older in Maryland, 52 percent had completed at least 4 years of high school and 14 percent at least 4 years of college. The median number of school years finished by this age group was 12.1, the same as the national median. Among those in their working years (16 to 64), 31 percent of the men and 23 percent of the women with less than 15 years of schooling had had vocational training of some type.

Workers and Jobs. There were 1,035,924 men workers age 16 or older in 1970; 946,844 of them had civilian jobs and 62,818 were in the Armed Forces. Women workers totaled 619,771 of whom 591,922 had civilian jobs and 2,783 were in the Armed Forces.

There were 201,334 men working as craftsmen, foremen, and kindred workers (in skilled blue collar jobs); 185,966 as professional, technical, or kindred workers; and 111,704 as nonfarm managers and administrators; while operatives, except transport, totaled 91,428 (chiefly operators of equipment in manufacturing industries).



A total of 238,900 women were employed in clerical and kindred jobs; 105,027 in professional, technical, and kindred work; 82,710 in nonhousehold service work; 57,469 as nontransport operatives; and 43,642 in sales work.

There were 210,061 Federal employees, 56,067 State employees, and 129,680 local government employees at the time of the 1970 census.

Maryland Housing. Housing units for year-round use numbered 1,234,509 in 1970, a 35 percent increase over 1960. They had a median of 5.5 rooms per unit, and 69 percent were single family homes. Thirty percent of the units were built between 1960 and 1970.

A total of 1,175,073 units were occupied with an average of 3.2 persons per unit. Fifty-nine percent were occupied by the owners. Median value of owner-occupied homes was \$18,800 and renters paid a median of \$127 per month.

The presence of piped water, toilet, and bath for exclusive use of the household is an indication of housing quality. In 1970, only 4 percent of all year-round housing in Maryland lacked complete plumbing facilities, compared with 7 percent for the United States.

Ninety-seven percent of the households had television; 72 percent clothes washing machines; 41 percent clothes dryers; 27 percent dishwashers; 27 percent home food freezers; 37 percent two or more automobiles; and 4 percent owned a second home.

Farming in Maryland. Maryland's farms, like those of the country as a whole, are becoming fewer and larger. The 1969 Census of Agriculture counted 17,181 farms in the State, 17 percent fewer than in 1964. The average size of farms rose from 153 acres to 163 acres in the 5 years. Their 1969 average value was \$104,370; the average value per acre., \$640.

The 1970 farm population totaled 62,385, a 43 percent decrease from 1960.

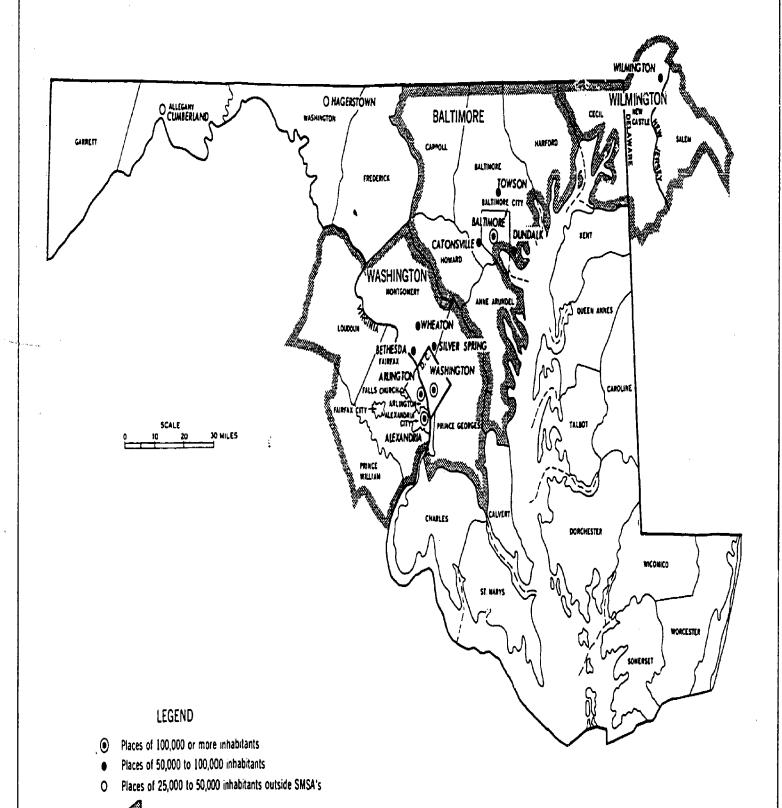
The market value of all agricultural products sold by Maryland farms was \$339.6 million in 1969. Livestock, poultry, and their products accounted for \$237.6 million; crops, including nursery products and hay, \$100.4 million; and forest products, \$1.6 million.

A map of Maryland on the back page shows the counties, standard metropolitan statistical areas, and selected places.

\* \* \* \* \*

Most figures are from Maryland reports: 1970 Population Census, Vol. I; 1970 Housing Census, Vol. I; 1969 Agriculture Census, Vol. I. Copies are in many libraries or may be purchased. Write to Publications Distribution Section, SESA, Washington, D.C. 20233 for order forms.







Standard Metropolitan
Statistical Areas (SMSA's)



## data access descriptions

)AD No. 33 Series CG-3) August 1973

THE CENSUS

**U.S. DEPARTMENT** OF COMMERCE Secial and Economic tistics Administration BUREAU OF





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DATA USER SERVICES OFFICE Robert B. Voight, Chief

### **ACKNOWLEDGMENTS**

Data Access Descriptions are developed in the Data User Services Office under the direction of Michael G. Garland, Chief, Data Access and Use Laboratory. Ann D. Casey, User Information Services, is responsible for general supervision. Editorial supervision was provided by Valerie McFarland.

This report was prepared by Gerald D'Donnell.

Any suggestions, comments, or inquiries from users of Data Access Descriptions will be appreciated by the Bureau. Letters should be addressed to the Director, Bureau of the Census, Washington, D.C. 20233.

For sale by Publications Distribution Section, Social and Economic Statistics Administration, Washington, D.C. 20233. Subscription price \$5.50 for 4 to 6 issues of Data Access Descriptions (issued occasionally), along with 12 monthly issues of Small-Area Data Notes. Single copies vary in price. Price this issue 50 cents.



### 1970 Census Geography: Concepts, Products, and Programs

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### INTRODUCTION

The objective of this Data Access Description is to explain the geographic aspects of the 1970 census. Special emphasis will be given to the census geographic products which assist users in their analysis of small-area data.

Geography played a crucial role in every stage of planning, enumerating, and tabulating the 1970 Census of Population and Housing. Identification of geographic areas was the basis for administrative control in taking the 1970 census and processing the returned questionnaires. Census tabulations were prepared for specific geographic areas—whether the entire United States or a city block. Without the ability to assign or relate data to specific areas, the data collected from a census would be of little value other than for furnishing national totals. Statistics which present characteristics for States, counties, cities, and smaller areas make the censuses important to most data users.

The geographic work for a census basically involves determining boundaries, coding geographic areas, and preparing maps. However, additional geographic work was required for the

1970 census in the development of mailing lists of residential addresses for the metropolitan areas which were enumerated by mail rather than by census takers. Work relating to geography resulted in several products, such as new types of census maps, geographic code schemes, and address coding guides, which are of value to census data users as well as the Bureau of the Census.

### 1970 CENSUS GEOGRAPHIC AREAS

In the 1970 census substantial improvements have been made in providing tabulations for small geographic areas. Although there is no precise definition of "small areas," for the purpose of this Data Access Description geographic areas at the State level and below are considered "smallareas." (Examples include standard metropolitan statistical areas (SMSA's), counties, cities, census tracts, and blocks.) Small-area census data are used by the Federal government in the development of national policies. State and local governments use small-area census data for planning and implementing many of their programs. Semipublic agencies, university faculties, and the business community also are interested in small-area census data.

Boundaries of the geographic areas for which the Bureau of the Census collected and tabulated 1970 census data were established in several Boundaries of political areas--States, congressional districts, counties, miner civil divisions, incorporated places, and city wards-are based on information received from the appropriate authorities. Boundaries of statistical areas are determined by groups with special interests, often with the advice and assistance of the Bureau of the Census. For example, the Office of Management and Budget of the Executive Office of the President, with the assistance of other Federal agencies, defines standard metropolitan statistical areas. Boundaries of functional or administrative areas are defined outside the Census Bureau by the appropriate agency, such as the ZIP code areas defined by the U.S. Postal Service. In addition, the Bureau of the Census established the boundaries of several sets of geographic areas for which it tabulated 1970 census data-urbanized areas, census county divisions, unincorporated places, census tracts (in cooperation with local census tract committees), enumeration districts, block groups, and blocks. Census county divisions and unincorporated



places are defined with local assistance at several levels of government.

To meet the processing and tabulation requirements of the 1970 census, numeric codes were used in lieu of names to identify areas for which census data were summarized. The geographic codes were derived primarily from a master coding scheme prepared by the Bureau, and they appear on the 1970 census summary tapes and related geographic products. Each level in the census geographic hierarchy, from the State down to the block, has an associated code scheme, with individual codes ranging in length from one to six digits.

In appendix A, definitions are presented for the key geographic areas for which 1970 census data are tabulated. The definitions specify the unique characteristics of the geographic area, the number of units of each type of area (example: 50 States, 3,141 counties), and the type of geographic code used to identify the area (example: minor civil divisions are assigned a 3-digit numeric code according to their alphabetic sequence within county). Figure 1 shows how most of the geographic areas relate to each other (e.g., census tracts are subdivisions of standard metropolitan statistical areas).

Data from the 1970 census have been tabulated for all of the geographic areas described in appendix A and are available in several different series of summary computer tapes and many printed reports derived from the tapes. It may be difficult for a user to determine where data for a given geographic area can be found. Figure 2 is designed to help reduce this problem by showing the geographic areas associated with each of the summary tape series and printed reports and microfilm derived from the tapes. For example, a user interested in data for census blocks can see that this information will be found on the Third Count Summary Tape and in the printed report series HC(3). General information on the summary tapes and printed reports can be found in Data Access Descriptions Nos. 18 and 27, respectively, which are available on request from the Data User Services Office, Bureau of the Census, Washington, D.C. 20233.

### GEOGRAPHIC REFERENCE PREJUCTS

A number of geographic reference products have emerged from the 1970 census. These products are essential to the effective use of small-area data. For example, census maps show the boundaries of each census tract, enumeration district, and block. Geographic code schemes are required to permit identification of

census geographic areas contained on the summary tapes. Address coding guides and geographic base (DIME) files provide a means of relating local data to census geographic areas. (DIME is an acronym for Dual Independent Map Encoding.) Descriptions of the various geographic reference products are presented below.

### Census Maps

Census maps are necessary for virtually all uses of small-area census data; they are needed in locating specific census geographic areas and in analyzing their areal relationships. There are basically five kinds of census maps which delineate small areas: The Metropolitan Map Series, county maps, place maps, county subdivision maps, and tract outline maps.

The Metropolitan MapSeries (MMS) generally covers the urbanized areas of standard metropolitan statistical areas and shows, in great detail, the location of place and MCD/CCD boundaries, census tracts, congressional districts, enumeration districts, and blocks, and identifies the features which form the boundaries of these areas. These maps are at a common scale of 1 inch = 2,000 feet, with portions of some sheets enlarged to 1 inch = 800 feet. There are approximately 200 map sets in the series (one or more urbanized areas may be in a map set) comprising approximately 3,200 map sheets (each sheet including an area of 5 by 7 miles); the number of sheets in a set range from 2 to 144. The Metropolitan Map Series covers a total area of approximately 110,000 square miles. This coverage includes about two-thirds of the Nation's population. The series is available as part of the Block Statistics reports for urbanized areas, series HC(3) of the 1970 census reports. Each report is accompanied by a set of metropolitan maps for the urbanized area concerned. An HC(3) report for a medium-size urbanized area can be purchased for less than \$5 from the Superiಜಿಎಟಿಎnt of Documents, U.S. Government Printing Office, Washington, D.C. 20402. The metropolitan maps contained in the HC(3) reports use color and shading to emphasize selected boundaries.

The county maps, which generally are reproductions of standard State highway department maps, show the boundaries of minor civil divisions or census county divisions, places, tracts, and enumeration districts for portions of counties not covered by the Metropolitan Map Series, as well as for all counties outside of SMSA's. It is important to note that the county maps show only a range of enumeration district (ED) numbers for places which contain more than one ED and do not identify the ED boundaries



within places--place maps are used for this purpose. County maps are generally at a scale of 1 inch = 2 miles. There are usually one or two map sheets for each county except for those counties larger in area. County maps are not published in any census reports. Copies may be obtained at a price of \$1 and up for each sheet from the Data User Services Office, Bureau of the Census, Washington, D.C. 20233.

Place maps are available for every incorporated and unincorporated place which was reported in the 1970 census but not included in the Metropolitan Map Series. These maps, which are usually reproductions of maps supplied to the Bureau of the Census by local agencies, identify streets and show boundaries for enumeration districts, tracts where applicable, and blocks if the place was under contract with the Bureau for preparation of block statistics. Place maps generally vary in scale from 1 inch = 400 feet to 1 inch = 1,500 feet. There is normally one map sheet for each place. Most place maps are not a part of any census report. They are sold individually by the Data User Services Office at a price of \$1.50 and up per map sheet, depending upon the size of the sheet. Place maps appear in the HC(3) reports for places participating in the contract block statistics program; however, these maps do not show ED's.

County subdivision maps of States show boundaries for counties and subdivisions of counties (minor civil divisions or census county divisions) as well as the location of all places which were recognized in the 1970 census. There is normally one map sheet for each State with the exception of a few States that have been combined on one sheet. The scale used for most of the county subdivision maps is 1 inch = 12 miles. The maps are priced at 20 cents per State and may be obtained from the U.S. Government Printing Office. Copies of the county subdivision maps on a smaller scale appear in sectionalized form in *Number of Inhabitants*, series PC(1)-A, of the 1970 census reports.

Tract outline maps show the boundaries of census tracts, counties, and all places with populations of 25,000 or more. Names of features which constitute tract boundaries are included on these maps except for very short segments. The scale of tract outline maps varies according to the size and complexity of the SMSA and, therefore, may range from 1 inch = 1/2 mile to 1 inch = 10 miles. Generally, there are two tract outline map sheets per SMSA. These maps are included as part of the Census Tract reports for SMSA's, series PHC(1) of the 1970 census reports. Most PHC(1) re-

ports cost less than \$2 and are available from the U.S. Government Printing Office.

In addition to the census maps already described in this section, there are two other kinds of maps published by the Bureau of the Census. These are the urbanized area maps and the United States Maps.

Urbanized area maps show the extent and components of the urbanized area by means of shading. Copies of these maps, at a scale of 1 inch = 4 miles, appear in Number of Inhabitants, series PC(1)-A, and in General Housing Characteristics, series HC(1)-A, reports, which can be obtained from the U.S. Government Printing Office. These maps can only be obtained by purchasing the reports. More detailed information on urbanized area boundaries can be found in the Metropolitan Map Series.

The United States Maps (the GE-50 map series) are statistical maps which show the geographic distribution, by county, of various social and economic data from the 1970 census as well as earlier censuses. Different color schemes are used to depict values of the data; county names and boundaries are easily seen through the color. Each map is a single sheet (generally 42" x 30" in size) at an approximate scale of 1 inch = 80 miles. Copies of these maps sell for 25 to 50 cents each. An order form listing the various maps in the GE-50 series is available upon request from the Publications Distribution Section, Social and Economic Statistics Administration, Washington, D.C. 20233.

To facilitate map acquisition, the Bureau of the Census has compiled an inventory of the Metropolitan Map Series, county maps, and place maps. The census map inventory lists the cost and the required number of map sheets for each State, county, and place for maps maintained and sold by the Bureau. Names and the relevant geographic codes for these areas are included. The inventory covers all 50 States and the District of Columbia. By checking the census map inventory for any State, county, or place, a person can quickly determine the required map sheets and their cost. The inventory is most useful when ordering place maps and county maps containing enumeration district and other census boundary designations that are not found in any 1970 census reports.

The U.S. Department of Commerce district offices and the Census Bureau and its regional Data Collection Centers have the census map inventory for the entire Nation on hand to assist users. The inventory can be purchased at a price of \$2 for individual States and \$75 for the complete set from the Data User Services Office.



Figure 1.—Census Geographic Areas POPULATION SIZE AREA STANDARD METROPOLITAN STATISTICAL AREA AND COMPONENT AREAS At least 50,000 (central city of 50,000+ population and the surrounding metropolitan county(s)) Central City -Urbanized Area (shaded area) Piace Minor Civil Division County CENSUS TRACT (small, homogeneous, relatively permanent area; all SMSA's are entirely tracted) Average 4,000 302 306 307 PINE PINE ST. 301 BLOCK GROUP OR ENUMERATION DISTRICT (subdivisions of census tracts, 308 Average 1,000 places, and minor civil divisions) 315 SPRUCE ST. **BLOCK** (identified in all urbanized areas Average 100 311 and some selected areas) LAUREL ST.

ERIC

Full Text Provided by ERIC

## Figure 2.—Geographic Areas Summarized in 1970 Census Data Products

		First	count		<u></u>	Secon	d count		Third	count		Fourt	h count		Fifth	count
Geographic aras	Summary tape	Microfilm	PC(1)-A <sup>1</sup>	HC(VI) <sup>1</sup>	Summery tapa	PC(1)-81	HC(1)-A1	PHC(1) <sup>t</sup>	Summery tape	HC(3) <sup>s</sup>	Summary tape <sup>2</sup>	PC(1)-C <sup>1</sup>	HC(1)81	PHC(1) <sup>1</sup>	Summery tape <sup>3</sup>	Microfilm <sup>3</sup>
Blocks									x	x					,	
Enumeration districts or blackgroups	4,	×					;								x	
Census tracts					1A			x	(8)		4			x	,	•
Minor civil divisions or census county divisions.	В	×	x		В	×					В				x	x
All places	В	x	x									1				
Places > 1,000 only 6					В	x	×									
Places > 2,500 only 4	,										C	x	×			
Places > 10,000 only 4				x					~.					,		
Counties	В	x	x	x	В	x	3.				c	x	x			×
Urban/rural parts of counties			x		B	x				,	С	x				
Standard metropolitan statistical areas	В	x		×	В	x	x	x			С	x	x			
Urbanized areas of SMSA's	8	x			В	x	x				С	x	x			
Components of SidA's					В			x			С					
Congressional districts	B	x														
State	В	x	x	x	B	x	x ·				С	x	· x			
ZIP codes															x ,	

<sup>&</sup>lt;sup>1</sup>Titles of these reports are contained in Data Access Description No. 27.



<sup>&</sup>lt;sup>2</sup>On the 4th and 6th Counts, population and housing data appear on separate files.

Tabulations appearing in the 5th Count (ZIP code summaries) also have been prepared for enumeration districts, block groups, MCD's/CCD's, and counties.

The 1st, 2nd, and 4th Counts have files designated A and B or A, B, and C.

<sup>&</sup>lt;sup>5</sup>Tract totals appear for only that part of the tract which is covered by block summaries.

<sup>\*</sup>Places include all incorporated places and unincorporated places of 5,000 or more in urbanized areas or of 1,000 or more elsewhere.

<sup>7</sup>Sixth Count tapes provide data for metropolitan counties, central cities, and other cities over 50,000 population. Sixth Count housing files also present data for norms of 50,000+.

# ture 2.—Geographic Areas Summarized in 1970 Census Data Products

	First								Second count			Third	Count		19/0 Census Data							
	Microfilm	PC(1)-A1	HC(VI)	Summary tape	PC(1)-B1	HC(1)-A1	PHC(1) <sup>3</sup>	Summery	HC(3)1	Summary		<u> </u>	<del></del>		count		Sixth count					
								tape	110(3)	taps <sup>2</sup>	PC(1)-C <sup>1</sup>	HC(1)-B1	PHC(1)*	Summary tape <sup>3</sup>	Microfilm <sup>3</sup>	Summery tape <sup>2</sup>	PC(I)-DI	HC(2)				
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	x										j											
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	×	×				.				B				×	x		İ					
•			1	В	x	x											- [					
		1								c												
			x								X	x										
	*	x	*	В	х	:			}	c	x	x										
	}	x		В	x							-			×	<sup>7</sup> x						
	x		x	В				i		C	×											
	*			В	x	x	x			c	x	x										
				В	^	X				c	x	x				<b>x</b>	×	×				
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	x	x .	x	В	x	x								.		-		x				
_									İ	c	*	x				x	x					

lation and housing data appear on separate files.





a Count (ZIP code summaries) also have been prepared for enumeration districts, block groups, MCD's/CCD's, and counties. it part of the tract which is covered by block summaries.

places and unincorporated places of 5,000 or more in urbanized areas or of 1,000 or more elsewhere.

metropolitan counties, central cities, and other cities over 50,000 population. Sixth Count housing files also present data for nonmetropolitan counties

Users who submit frequent census map orders or copy and distribute large quantities of these maps will find the inventory to be of value.

#### Geographic Code Schemes

All geographic areas are identified on the 1970 census computer tapes only by their numeric codes—names are not used. Users, therefore, require some form of a geographic code scheme to associate the codes for geographic areas with their area names. Codes and the corresponding names for census geographic areas are contained in the following Census Bureau products: The Master Enumeration District List (MEDList), the Geographic Area Code Index (GACI), and the Geographic Identification Code Scheme (GICS).

The Master Enumeration District List, or MEDList, is a listing of the names of political and statistical subdivisions and related geographic codes from the State down to the county subdivision and place level. It also provides codes for unnamed areas below the county subdivision level--tracts, enumeration districts (ED's), and block groups--as well as population and housing total counts for most areas. (See figure 3 for an example of the MEDList.) The MEDList is designed to serve two basic purposes: (1) Furnish area and place names corresponding to the geographic codes which are used on the 1970 census summary tapes and (2) provide official population and housing unit counts for enumeration districts, block groups, and other areas.

A special version of the MEDList containing the latitude and longitude coordinates for the estimated population center points for each of 242,000 enumeration districts and block groups has also been prepared by the Bureau of the Census. The center points, or centroids, were visually estimated from census maps. ordinate values were then assigned to the points by an electronic digitizer. The coordinates are expressed in decimal degrees carried to four The MEDList without coordinates is places. available for the United States on three reels of tape for \$210; the MEDList with coordinates is sold on a State-by-State basis (one tape reel for each State) at a cost of \$70 per reel. Both products are available from the Data User Services Office, Bureau of the Census.

An abbreviated version of the MEDList, called the Geographic Area Code Index (GACI), is a source of names and related geographic codes for States, counties, places, and county subdivisions (MCD's/CCD's). No area smaller than the county subdivision and place is referenced in the GACI. Population and housing unit counts do

not appear. The GACI is useful for persons not requiring all of the information included in the MEDList. The GACI for the entire United States is available from the Data User Services Office on one reel of tape for \$70 or on one reel of microfilm for \$8.

The 1970 Geographic Identification Code Scheme (GICS) is a four-volume guide to the geographic codes for the component parts (county subdivision and larger areas) of each State. Each volume reports on a different region of the country (Northeast, North Central, South, and West). The information published in the GICS is also available from the MEDList and GACI computer tapes. For each State within a region the GICS presents two tables. Table 1, arranged by counties within the State, shows the following codes, as appropriate, for counties, county subdivisions, and places: State, county, SMSA, MCD or CCD, place, place description, and place Table 2 presents alphabetically all the places within the State with their corresponding county, county subdivision, and place codes. A third table, shown once for each volume, presents SMSA and urbanized area codes for the entire United States. (See figure 4 for illustration of tables.) Copies of the GICS may be purchased from the U.S. Government Printing Office for the following prices: Northeast, \$1; North Central, \$1.75; South, \$1.50; and West, 60 cents.

Some of the codes included in the MEDList, GACI, and GICS are codes that have been standardized for use by all Federal agencies in the exchange of computer-readable information. The Federal standard codes in the Bureau products noted above include State, SMSA, county, and congressional district. (The Bureau of the Census includes this last code only in the MEDList). These codes are published by the National Bureau of Standards, U.S. Department of Commerce, in a series known as the Federal Information Processing Standards Publications (FIPS PUB) and are sold by the U.S. Government Printing Office. The titles and prices for these reports are:

FIPS PUB 5-1	State Codes	20 cents
FIPS PUB 6-1	County Codes	45 cents
FIPS PUB 8-2	SMSA Codes	30 cents
FIPS PUB 9	Congressional	
•	District Codes	10 cents

For some users, the FIPS PUB series might be more suitable as a source of geographic codes than the Census Bureau's geographic code schemes, especially if a user is interested in only one set of codes (such as codes for all counties in the Nation) rather than several sets of codes for each State and its component parts (SMSA, minor civil division, and place).



Figure 3.-MASTER ENUMERATION DISTRICT LIST (MEDList)

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	- 1	Fed. Std. County	County of	၁၁၁	MCD/CCD	Code	Desc.	Size	SCA	SMSA	Urbanized	Tracted area	Prefix	Code	SEA	ESR	CBD	Atea name	Rasic	Suffix	Bik. grp.	Code	Suffix	Urb/rurai	Waro	Cong. dist.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(0)	(10)	(11)	(12)	(13)	(14)	(15)	(16	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)		1	1.5
26 3	34	121	,	1														MUSKEGON								
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Note: Explanation of column heading abbreviations: Federal Standard County; County of Tabulation; Central County Code (CCC); Minor Civil Division (MCD)/Census County Division (CCD); Place Description; Standard Consolidated Area (SCA); Standard Metropolitan Statistical Area (SMSA); Universal Area Code; State Economic

Area (SEA); Economic Sub-Region (ESR); Central Busi (CBD); Block Group; Enumeration District (ED); Congressional District.

Figure 3.-MASTER ENUMERATION DISTRICT LIST (MEDList)

Frame No. 001 0

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		d area	area		niv. area					Tra	tf		ED					1970	counts
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532	20		5320	1	34062	06	050	1 1 1 1 1	White Hall TWP	0030 0036 0037 0038 0040	- 1		0404 0405 0406 0407		1 1 1 1 0 0		09 09 09 09	581 30 40 72 60 165 214	1930 90 125 150 130 625 810

heading abbreviations: Federal ation; Central County Code (CCC); sus County Division (CCD); Place d Area (SCA); Standard Metropoliversal Area Code; State Economic

Area (SEA); Economic Sub-Region (ESR); Central Business District (CBD); Block Group; Enumeration District (ED); Urban/Rural; Congressional District.



# Figure 4.—Illustrations of 1970 Geographic Identification Code Scheme (GICS) Tables

TABLE 1. COUNTIES, COUNTY SUBDIVISIONS AND PLACES

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		6	EOGR/	VHIC	COD	ES			-			G	EOGN	PHIC	(000	3			
STATE	COUNTY	YSWS	æ	354	O)#	PLACE	PLACE DESC.	PLACE SUZE	NAME	STATE	COUNTY	YSRS	ESR	435	Q)#	FLACE	PLACE DESC.	PLACE SIZE	NAME
	001 001 001 001 001		113 113 113 113 113 113 113	88888	005 005 010 010	0050 0390 0400	4 4	8 83	MILFORD-MIMERSVILLE DIV MILFORD	8222	013 013 013 013 013 013 013		5 5555555		810 913 913 929 929 925 925	0185 0445 0840 0985	4 4 4 4	88 es 88	DIACHESINE ANYTON DRV ANYTON DRV ANYTON ROOSEVELT DRV ROOSEVELT (PART) TARRORA DRV TARRORA EARRY
44444444	88 88 88 88 88 88 88 88 88 88 88 88 88		112 112 112 112 112 112 112 112 112 112	000000000000000000000000000000000000000	005 005 005 005 005 005 010 010 010	0045 0140 0210 0260 0295 1005 0175 0175	44444 44 4		BEAR RIVER DIV BLAR RIVER CORIMME ELWOOD FREIDING GABLANG TERMICHTON BENCHLAND DIV DEWEYVILLE HOMETVILLE BERHAMA CITY BENCHAMA CITY	222222	015 015 015 015 015 015 015 015		113 113 113 113 113	388888	888	0090 0140 0200 0385 0710 0215 0255 0325	444	8 82 88828	CASTLE BALL-MINITINGTON DIV CASTLE BALL CLEVEL BALL CLEVEL BALL CLEVEL BALL MANATHA I VART) MINITINGTON MANATHA I VART) MINITINGTON MANATHA I VART) MINITINGTON MANATHA I VART) MANATHA I VART) MANATHA I VART) MANATHA I VART MANATHA

## TABLE 2. ALPHABETIC LIST OF PLACE NAMES

UTAK

GEOGR	арніс С	ODES	NAME	GEOGR	APHIC (	ODES	
county	#C0	PLACE	MARKE	COUNTY	MCO	PLACE	NAME
049 013 975 005 949	006 003 010 020	0005 0010 0015 0020 0025	ALPHR ALTAMORT ALTON AMAIGA AMERICAN FORK	83 84 83 83 83	015 010 003 010 005	0410 0415 0420 0425 0430	IVINS JOSEPH JUNCTION KANAS KANAS
041 017 041 003 001	015 020 020 020 005 005	0030 0035 0040 0045 0050	ANNABELLA ANTIMORY AUBORA BEAR RIVER BEAVER	021 027 011 035 031	010 010 005 035 005	0435 0440 0445 0450 0460	KAMARRAVILE KANISH KANISTUE KEANISTUB KROGSTOB
055 035 037 017 011	010 005 003 005 010	0055 0040 0045 0072 0075	BCC WELL SINGHAM CAYON BLAIDING BOULDER BOULDER	041 033 053 011 027	835 835 835 835 835	0465 0470 0475 0480 0485	KOGSHAREM LAKETOWN LA VERKIN LAYTON LEANINGTON
003 017 015 007	015 020 005 005	0080 0085 0090 0095	BRIGHAM CITY CAMBONYILE CASTIL DALE CASTIL GATE	053 049 023 005	010 013 010 010	0490 0495 0500 0505 0510	LEEDS LIMI LEVAN LEWASTON

## TABLE 3. STANDARD METROPOLITAN STATISTICAL AREAS AND URBANIZED AREAS

GEOGRAP	HIC CODES	WAME	GEOGRA	HIC CODES	
SMSA	ŲA	NAME	SMSA	UA	MAME
0046 0080 9140 9140	0040 0080 0120 0140 0200	AMENE, TEX. ARRON, ONIO ALBANY, GA. ALBANY, SCHEWECTAD Y-TROY, N. Y. ALBANY, SCHEWECTAD Y-TROY, N. Y. ALBAUGUEROUE, N. MEX.	2920 2940 3000 3040 3080	2002 1004 2000	GALVESTON-TEKAS CITY, TEK. GARV-MAMMOND-LAST CHICAGO, IND. GRAND RAPPOSANCH. GREAT "ALLS, MORT. JRIEN JAY, WHS.
6740 6760 6720 6346 0400	0240 0296 0370 0400	ALIENTOWN-BETHEMENEASTON,PAH.J. ALTOOMA,PA. AMARILIO,TOX. AMANTES-SANTA ANA-GARDEN GROVE,CALIF. AMORESON,INO.	3120 3140 3200	3120 3140 3177	Grensbord, M.C. Greensbord, Winston-Salem.High Point, H.C. Greenvell, S.C. Harrton, Dordensbord, Greenvell, S.C. Harrton, Dordensbord, Greenvell, Greenvell, Greenvell, Greenvell, Greenvell, Greenvell, Greenvell, Greenvell
0440 0460 0460 0570	0440 0437 0480 0520	AMM ABBOR MICH. APPLETON, WIS. ASPERTUN-OSHKOSM, WIS. ASBETVELEJH C. ATLANTA, G.A.	3240 3280 3320	3730 3240 3260 3300 3320	Naringer-sam Bento, Tex. Narresquig-pa. Nartyogo. Com. High Poritae. C. Nomolulu Mawah
0540 0400	0540 0400 0479	ATLANTIC CITY,N.J. AUGUSTA,GAS.C. AUGUSTA,TR. AUGUN,TR.	3340 3400 3440	3340 3400 3440 3460	MOUSTON, TEX. MUNTING TON-ASHLAND, W. VAKYOHIO MUNTSVALE ALA. MOLAGAGE IN-

## **Address Coding Guides**

In conducting the 1970 Census of Population and Housing, two different enumeration methods were used: the mail-out/mail-back type of canvass, taken primarily in the large urban areas of the country, and the conventional house-to-house visit by enumerators in the remainder of the country.

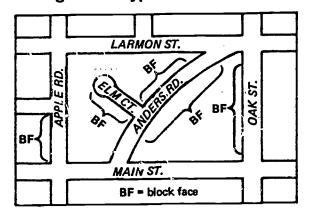
In 145 of the then 233 standard mercopolitan statistical areas and in certain adjoining areas the mail-out/mail-back procedure was used. Approximately 60 percent of the Nation's population were canvassed by mail rether than by an enumerator's visit. Householders were asked to complete the census questionnaire in the privacy of their own home and mail it back to a local Census Bureau office. The remainder of the country was enumerated by the conversional house-to-house canvassing procedure ch closely resembled enumeration methods the 1960 and earlier censuses. Census takeevery housing unit in their assigns obtained the required information at ... on the questionnaires. Census geographic codes for each household were determined and coded on the questionnaire by the enumerator.

In the 145SMSA's in which the mail-out/mail-back technique was used, a method of assigning specific census geographic codes to a mailing list address was needed. The solution decided upon called for the development of a master computer file for each area which would contain the information necessary to "geocode" the addresses. The file developed for this purpose was named the Address Coding Guide (ACG). The ACG, in essence, performed one of the functions of an enumerator, by providing the "census geography" of each address.

Address Coding Guides are simply computer listings which contain block face records for all streets within the city postal delivery area (which roughly corresponds to the urbanized area) of an SMSA. A block face is one side of a street between two intersections; a block face for a dead-end street is one side of a street from its beginning intersection to the dead end. Other features such as municipal boundaries, rivers, and railroad tracks are not included since there were no housing addresses for units associated with them. Figure 5 illustrates some typical black faces. Each ACG record identifies a single 海旋感 face by street name, a range of addresses, the block number, and tract, place, and other geographic codes.

Census data users have found the Address Coding Guide valuable as a reference source for

Figure 5.—Typical Block Faces



assigning census geographic codes to local records containing addresses. This geographic coding can be performed by using an address marching program (such as the Census Bureau's ADMATCH program described on page 12) which matches individual addresses contained in local record files to address ranges in the ACG. Once a local record has been linked to its appropriate ACG record, all desired census geographic codes are then assigned to the local record file. (This operation represents computerization of the manual process of looking up geographic codes in . a printed street index and posting appropriate codes to records, application forms, etc.) For example, crime incidence records may be coded to census tracts, which would permit a correlation study between crime and consus socioeconomic data for tracts. The ADMATCH program would match each individual address of crime occurrence to the appropriate address range in the ACG and, upon a match, assign the desired census tract code contained in the \*CG to the crime incidence record.

The ACG can be used in the assignment of codes other than census geographic codes. If local areas (i.e., police precincts, planning districts, neighborhoods) are defined in terms of blocks and/or tracts, codes for these local areas can be added to the ACG. (The addition of any local area codes to the ACG is the responsibility of local users.) The ADMATCH program will assign the local area codes to records containing addresses in the same manner that it assigns census geographic codes.

Address Coding Guides are available on computer tape (IBM-compatible format) at \$70 per tape reel from the Data User Services Office, Bureau of the Census. Most areas covered by the ACG are on one or two reels. The ACG's are also available so computer printed listings



on 11- by 14-inch paper iso pricing has been established for the primout version; however, the cost is normally two to three times that for tape versions.

## Geographic Base (DIME) Files

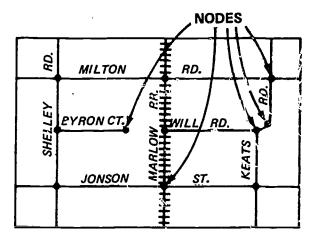
After preparation of the Address Coding Guides was well underway (and the 1970 census date was too near to permit a change in the system), an improved version of the ACG was developed. The improved ACG, which is known as a geographic base file, was developed by the Census Use Study (a small area data research group in the Census Bureau) using a technique called Dual Independent Map Encoding or DIME. The geographic bas: (DIME) file, commonly referred to as GL'/DIME, is characterized by: (1) An editing capability which improves the accuracy of the files and (2) an increased utility to local users as a result of added features.

The concept underlying the creation of the GBF/DIME files is derived from graph theory, Each street, river, railroad tract, municipal boundary, etc., that bounds a consumblock can be considered as one or more straight line segments; curved strests or other features can be divided into series of straight line segments. Where streets or other features intersect or change direction, node points are identified. Figure 6 illustrates street segments and nodes. While an Address Coding Guide is constructed on a block face basis, a GBF/DIME file is constructed on a street segment basis. Therefore, while each ACG record contains the appropriate census geographic codes for one side of a street between two intersections, each GBF/DIME segment record contains the appropriate codes for both sides of a street between two nodes. By uniquely identifying each segment (including segments that are not along streets) and cach node point, and their geographic relationships, a geographic description which can be checked by computer for accuracy is made possible.

The GBF/DIME concept also serves a further and equally important function. By digitizing the node points (that is, assigning x-y coordinates), graphic outputs either in the form of geographic data displays or map images can be produced by applying computer mapping techniques.

The construction of a GBF/DIME file involves the transcription by local agencies of geographic information (i.e., street patterns, address ranges, area identifiers) from metropolitan maps and other sources into a in a that can be read and manipulated by computer. Clerks enter the various types of geographic information on

Figure 6.—Street Segments and Nodes



worksheets which are then keypunched and entered into the computer. After the computer editing, appropriate correction, and insertion of coordinates, the GBF/DIME file is ready for use.

Essentially the same information is contained in both the ACG and GBF/DIME files: Street name, address ranges, block numbers, tract, place, and other geographic codes. The GBF/ DIME file has three additional codes: (1) The left-right orientation code separating the census geographic codes for areas on each side of the street segment, (2) the identification numbers of the node points at each end of the segment, and (3) the x-y coordinates of each node point expressed in State plane coordinates (measured in feet relative to the State plane grid system), latitude and longitude (measured in degrees and ten-thousandths of a degree based on distance from the equator), and map set miles (measured in miles and thousandths of a mile from an arbitrary point at the southwest corner of the Metropolitan Map Series sheets.) The GBF/ DIME file also contains block boundaries that do not follow streets; these are not contained in the ACG's. (See figure 7 for an example of a GBF/DIME file record.)

Originally, GBF/DIME files were created for 79 of the 88 nonmail SMSA's for use in assigning tract and block numbers to the work-place responses from the place of work question on the 1970 census questionnaire. The Census Bureau and other Federal and local agencies recognized that it would be desirable to add the GBF/DIME features to the already existing ACG's. Each of the 145 SMSA's included in the original ACG program was contacted and invited to participate in the development of a GBF/DIME file; 115 SMSA's agreed to do so. In total, 194 SMSA's (plus part of the San Juan, Puerto Rico



SMSA and the new SMSA of Appleton-Oshkosh, Wis.) participated in the Census Bureau program to develop such files. Of the remaining SMSA's, 32 participated only in the original ACS program and six did not participate in either the ACG or GBF/DIME programs. (See appendix B for a list of SMSA's by their ACG or GBF/DIME status.)

In addition to the geocoding capability described for the ACG's, there are other uses for the GBF/DIME files, as the following examples demonstrate. (1) Since a GBF/DIME file associates coordinates with computerized geographic records, it provides one of the essential elements for computer mapping. Regardless of the computer mapping system being used, spatial identifiera such as the coordinates found in the file are required. (2) A GBF/DIME file can be used in street network analysis. Street networks of varying degrees of detail are required for computerized study and design of routes for garbage trucks, ambulances, and other service vehicles. (3) Computer programs that are

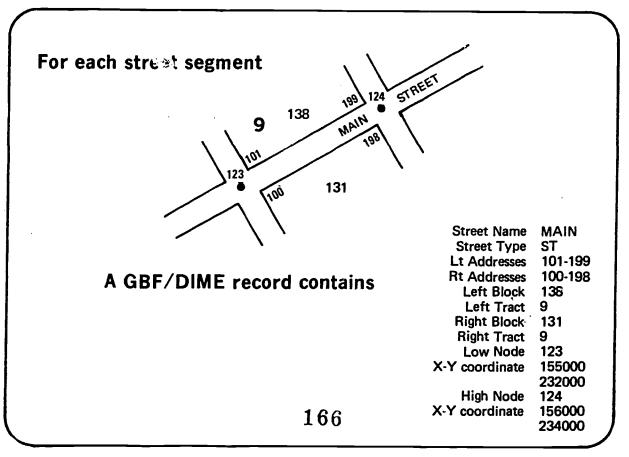
designed to allocate resources to facilities can also take advantage of a GBF/DIME file. For example, the file can be used in allocating people to community fallout shelters or children to schools, determining logical service areas for community health facilities, and evaluating alternative sites for new retail outlets.

The GBF/DIME files are available on computer tape (IBM-compatible format) at \$70 per tape reel, with most areas on one or two reels. These tape reels can be purchased from the Data User Services Office, Bureau of the Census. Printed listings of the files can also be obtained on a cost reimbursable basis--the cost is normally two to three times that for tape versions.

## The CUE Program for GBF/DIME File Management

The GBF/DIME files contain a large amount of geographic information. Unfortunately, they

Figure 7.—GBF/DIME File Record





have some errors in them and like the associated source maps (Metropolitan Map Series) from which the files were constructed, they are becoming out of date. Both of these products reflect local urban geography as it existed immediately prior to the 1970 census. To be of most use to local agencies and the Census Bureau, the files and appropriate maps must be updated as well as corrected. To accomplish this, the Bureau has established the CUE program, referring to the Correction, Update, and Extension of the GBF/DIME file.

The purposes of the CUE program are as follows:

- To make corrections as necessary to produce a complete and accurate GBF/DIME file and Metropolitan Map Series (MMS) for the SMSA's having an existing file.
- To extend the GBF/DIME files and MMS to cover the entire SMSA. (At present only the urban core of SMSA's are covered.)
- To establish GBF/DIME files and MMS for those SMSA's where GBF/ DIME files and MMS do not currently exist.
- To develop procedures by which each SMSA can systematically maintain current and accurate GBF/ DIME files and MMS series.

Parts of the CUE program are now operational and many local agencies are beginning to correct and update their GBF/DIME files using computer programs developed by the Census Bureau. (See p. 14 for descriptions of the FIXDIME and UPDIME computer programs.) Further information on the CUE program can be obtained from the Geography Division, Bureau of the Census, Washington, D.C. 20233.

## COMPUTER PROGRAMS FOR GEOGRAPHIC APPLICATIONS

In addition to the 1970 census geographic reference materials previously described, a number of computer programs for geographic applications, most of which pertain to effective use of the geographic base (DIME) files, are available from the Bureau of the Census. Descriptions of these computer programs are presented in this section. Figure 8 shows the relationship between many of these programs. The FIXDIME and UPDIME programs are not shown in figure 8 because they represent a different stage of application.

All of these computer programs are available from the Data User Services Office, Bureau of the Census, Washington, D.C. 20233. Unless otherwise stated, the programs are sold on computer tape for \$70.

DIME (Dual Independent Mar Encoding).--DIME is a computer program package designed to aid local users in the creation of GBF/DIME files for nonmetropolitar cities. The package consists of a clerical procedures manual and a set of computer programs for file creation.

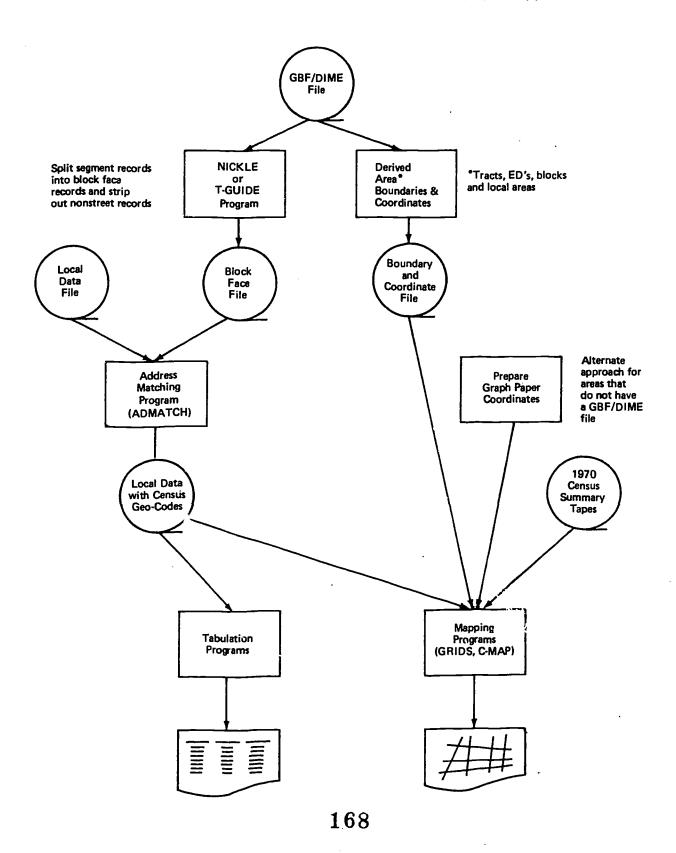
The manual supplies complete information on the clerical coding operation including personnel and space requirements, materials, training and supervising of coders, coding procedures, and problem resolutions. The set of computer programs converts the coded data to a master file for machine use, validates the completeness and accuracy of the clerical work, modifies the master file to correct errors and omissions, and inserts coordinates into the file.

The programs are written in ANSI standard FORTRAN IV for users of almost any computer system with a minimum core storage of 100K bytes.

ADMATCH (Address Matching) .-- ADMATCH is a package of computer programs and documentation designed to assist in the assignment of geographic codes to computerized data records containing street addresses. Geographic codes for areas such as census tracts and blocks can be readily assigned to records in local data files ADMATCH compares the using ADMATCH. individual street addresses of local data files to the address ranges in the ACG or GBF/DIME records and upon a match, attaches the desired geographic codes contained in these files to the local data records. Local data records on crime incidents, school dropouts, new construction, or other matters can then be aggregated to census geographic areas for study in relation to the census data available for these areas.

Users need not be restricted to studying only census geographic areas. By creating equivalency tables that relate census tracts or blocks to local areas such as health districts, traffic zones, and school districts, the codes for these local areas can be added to an ACG or GBF/DIME file. Then ADMATCH can be used to assign these local area codes to records in local files in the same manner that it assigns census geographic codes.

Figure 8.—Relationship of Computer-Programs for Geographic Applications





The ADMATCH program package is written in IBM System/360 Assembler Language. Separate versions are available for use under 1.6K Disk or Tape Operating Systems (DOS or TOS) and under the Operating System (OS). The minimum core storage requirement is 32K bytes, and a line printer and three magnetic tape or disk units are needed.

NICKLE.--The NICKLE program is designed to split the street segment records of the GBF/DIME file into block face records. (To use ADMATCH or any other type of computer matching program, individual block face records rather than street segment records are required.) The program reads the GBF/DIME file, drops the nonstreet records, and then splits the segment records, thus creating a record for each side of the street (block face) much like records in the Address Coding Guide. The block face records may then be used for input to the ADMATCH program.

NICKLE is written for the IBM 360/40 (DOS) in COBOL. A program listing and record layout for the resulting NICKLE file can be obtained at no cost.

T-GUIDE,--The T-GUIDE program was developed to produce a street index at the census tract level from a GBF/DIME file. The index produced from applying T-GUIDE consists of all streets within each census tract included in the GBF/DIME file, indicating low and high address ranges for each side of the street. The program reads the file, drops all nonstreet records (such as railroad tracts, streams, etc.), splits the street segment records, thus creating a record for each side of the block, and then collapses the address ranges of the block side record along the length of the street within each census tract. This results in an approximate 60-percent reduction in the size of the GBI /DIME files and thereby allows for manual, as well as speedier mechanical, geocoding of census tracts to local data records.

The T-GUIDE program is written for the IBM 360/40 (DOS) in COBOL. A program listing and record layout for the resulting T-GUIDE file can be obtained at no cost.

FIXDIME.--The FIXDIME program was developed in conjunction with the Bureau's CUE program. FIXDIME enables local agencies to perform correction operations upon GBF/DIME files. The program deletes erroneous records, makes corrections in existing records, and adds

new records. All items in the files, with the exception of coordinate values, may be corrected.

The FIXDIME program is written in COBOL Level D for the IBM 360 system under DOS.

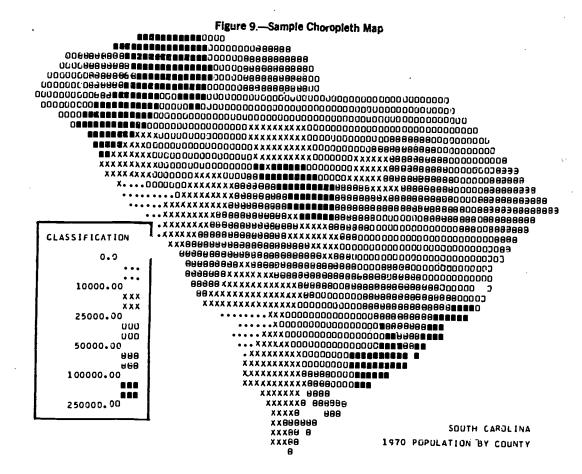
UPDIME.—Once the GBF/DIME files have been corrected using FIXDIME, the updating process of the CUE program can begin. As with the correction process, updating the files can only be carried out by the local agencies. To assist the local agencies in this effort, the Bureau has prepared a FORTRAN IV program called UPDIME. UPDIME makes possible the addition of new street segments to the file as well as the x-y coordinates for the new segments. It also contains a block chaining edit which detects the structural defects (e.g., missing street segments) in the GBF/DIME file. The UPDIME program is expected to be available in mid-1974.

GRIDS.--The Grid Related Information Display System (GRIDS) is a generalized computer graphics system capable of performing a wide variety of mapping tasks. It produces density, shading, and value maps within a grid pattern. A routine supplied with the system allows GBF/DIME file street networks to be printed displaying segments, city and census tract boundaries, and nodes. GRIDS is written in ASA Basic FORTRAN IV and will run on any computer system with a suitable FORTRAN compiler and sufficient storage, regardless of computer word size or operating system. GRIDS will operate on a machine as small as an IBM System/360 Model 30 computer with 32K bytes of storage.

C-MAP (Choropleth Mapping).--C-MAP is a simplified FORTRAN computer mapping program distributed by the Census Bureau to users who have small computers. Data for geographic areas (i.e., States, counties, census tracts) are printed on the map according to a classification of their statistical values. The user specifies the number and limits of the statistical classes and their perspective printer characters. Shading is achieved by overprinting two or more printer characters. (See figure 9 for a sample choropleth map.)

Punchcards are presently the input medium; however, the program can be modified for computer tape or disk input. A program listing and the procedures for preparing the necessary punchcards for the input process are available at no cost.





#### REFERENCE MATERIALS

Several series of publications issued by the Bureau of the Census provide additional information on the Bureau's geographic programs and activities and keep data users informed of new developments, applications, and products. These publication series are described below.

The results of extensive research conducted by the Bureau's Census Use Study are presented in a series of reports covering such topics as geographic base (DIME) file development, and address matching. An order form listing the various Census Use Study report topics can be obtained from the Publications Distribution Section, Social and Economic Statistics Administration, Washington, D.C. 20233.

The publication series GE-40, Census Tract Papers, makes available to all census data users the papers presented at the Census Tract Conferences held periodically to discuss the problems and uses of census tract and related small-area data. Another series of publications, the GE-60 series, Computerized Geographic

Coding, presents the proceedings of several conferences which were devoted to the local uses of ACG and GBF/DIME files. This series provides insight as to what local agencies are doing or plan to do with their files. Order forms for both publication series are available from the Publications Distribution Section.

The 1970 Census Users' Guide is a two-part general reference manual. Part I contains information on census content, data products, geographic materials, and version of printed reports and summer, tapes. Part II contains information specifically relating to the use of summary tapes. The Guide can be purchased from the U.S. Government Printing Office at the following prices: Part I, \$2.10; Part II, \$3.70; Parts I and II, \$5.80.

The monthly newsletter, Small-Area Data Notes, highlights Bureau of the Census activities, products, and services in the field of small-area census data. It provides information on new publications, the release of data in both printed reports and summary tapes, upcoming surveys



and censuses, developments in census geography, and local applications of census data. Small-Area Data Notes is available as part of a subscription package with Data Access Descriptions for \$5.50 per year. Orders should be sent to the Publications Distribution Section.

## ACQUISITION OF GEOGRAPHIC REFERENCE PRODUCTS AND COMPUTER PROGRAMS

Information on how to acquire the geographic reference products, computer programs, and reference materials discussed in this Data Access Description is included in the descriptions of these materials within the text. All geographic products contained on computer tape sell for \$70 per reel. This price is based on the

cost of reproducing copies, plus the cost of the tape reels, the technical documentation, and the shipping and handling charges.

#### **FURTHER INFORMATION**

If further information is desired concerning the matters presented in this publication, address inquiries to:

> Director Bureau of the Census Washington, D.C. 20233

(Please refer to *Data Access Description* No. 33, Census Geography Series, CG-3.)



### **APPENDIXES**

## **APPENDIX A**

## CENSUS GEOGRAPHIC AREAS

This Appendix describes the various geographic areas and associated codes contained in the 1970 census tabulations.

States--States are the major political units of the United States. The State codes are 2-digit numbers assigned to the alphabetically arranged 50 States and the District of Columbia.

Counties -- Counties are the primary political and administrative divisions of the States. The only major exceptions are Louisiana, where the divisions are called parishes, and Alaska where 29 census divisions have been created as county equivalents for statistical purposes. There are a number of cities which are independent of any county organization and, because they constitute primary divisions within their States, are accorded the same treatment as counties in the preparation of census tabulations. (NOTE: The District of Columbia and the independent cities within the States of Maryland, Missouri, Nevada, and Virginia are all identified as county equivalents.) A total of 3,141 counties and county equivalents were recognized in the 1970 census. A 3-digit numeric code, unique within a State, has been assigned to each of these counties and county equivalents according to their alphabetic sequence.

Minor Civil Divisions (MCD's)—These are primary political and administrative subdivisions of counties in 29 States. The most common type of MCD is the township but there are also towns, precincts, magisterial districts, gores, etc. In the 1970 census there were 28,130 minor civil divisions. Each MCD is assigned a 3-digit numeric code according to the alphantic sequence of these units within the county.

Census County Divisions (CCD's)—These are statistical subdivisions of counties in 21 States where minor civil divisions are not suitable for presenting census data. In these States the MCD's are either too small, have lost nearly all meaning locally, or have frequent boundary changes. Over 7,000 CCD's have been established as relatively permanent statistical areas by the Bureau of the Census in cooperation with State and local authorities. CCD's, like MCD's, are assigned unique

3-digit numeric codes according to their alphabetic sequence within the county. The States containing CCD's are: Alabama, Arizona, California, Colorado, Delaware, Florida, Georgia, Hawaii, Idaho, Kentucky, Montana, New Mexico, North Dakota, Oklahoma, Oregon, South Carolina, Tennessee, Texas, Utah, Washington, and Wyoming.

Places -- There are two types of places recognized in census tabulations-incorporated and unincorporated. Incorporated places are political units incorporated as cities, towns, villages, or boroughs, regardless of size, v. ... th the following exceptions: Towns in New England, New York, and Wisconsin and the boroughs in Alaska are not recognized as places; rather, they are considered to be MCD's. Most incorporated places are subdivisions of minor civil divisions (or census county divisions). Some incorporated places, however, are coextensive with their MCD's or CCD's, while others cross MCD and county lines. In 1970, incorporated places numbered approximately 18,700.

Unincorporated places are closely settled population centers without legally defined corporate limits and having a population of at least 1,000. Each has a definite residential nucleus, and boundaries are drawn by the Bureau of the Census to include, insofar as possible, all the densely settled area. Most of these places were established by State agencies or local census tract committees in cooperation with the Bureau. Over 2,100 unincorporated places were recognized for the 1970 census.

A 4-digit numeric code has been assigned to identify each incorporated and unincorporated place uniquely within each State according to alphabetic sequence. For purposes of classification, places are also assigned place description and place size codes. The place description code is a 1digit number which describes each type of place on the summary tapes. The codes are: 1 - central city of a standard metropolitan statistical area only, 2 - central city of an urbanized area only, 3 - central city of an SMSA and an urbanized area, 4 - other incorporated place, 5 - unincorporated place, and 7 - not a place (i.e., land area not classifiable in any of groups 1 through 5). Code 6 is not used. The place size code is a 2-digit number which identifies the size group (of 16 groups) of a place based on the



1970 census population count. The size codes are:

under 200 200 to 499 10 02 500 to 999 03 1,000 to 1,499 04 1,500 to 1,999 05 2,000 to 2,499 06 2,500 to 4,999 07 5,000 to 9,999 08 10,000 to 19,999 09 20,000 to 24,999 10 25,000 to 49,999 11 50,000 to 99,999 12 100,000 to 249,999 250,000 to 499,999 13 14 500,000 to 999,999 15 1,000,000 or more

Wards--Wards are political subdivisions of many cities and other incorporated places used for voting and representation purposes. Population totals for nearly 4,500 wards have been published for cities with 10,000 or more persons. Each ward is assigned a 2-digit code number uniquely within the city. Usually the ward code is the same as the ward number by which it is identified for local purposes.

Congressional Districts--These political areas are defined by State legislatures or the courts for the purpose of electing congressmen to the U.S. House of Representatives and are subject to change based on population census counts. Forty-one States revised their congressional district boundaries in 1971 and 1972 as a result of the 1970 census. The number of congressional districts is fixed by low at 435. A 2-digit numeric code, which corresponds to the congressional district number assigned in State legislation, is used to identify these areas.

Standard Metropolitan Statistical Areas (SMSA's)--As reported in the 1970 census, standard metropolitan statistical areas consist of a county or group of contiguous counties (except in the New England States) containing 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(s) containing the central city(s), contiguous counties are included in an SMSA if, according to certain criteria, they are metropolitan in character and are socially and economically integrated with the central city. There is no limit to the number of contiguous counties included in the SMSA as long as they are integrated with.

the central city; nor is an SMSA limited to a single State--boundaries may cross State lines.

In the New England States, SMSA's consist of groups of towns and cities instead of counties. The title of an SMSA identifies the central city or cities. SMSA's are defined by the Office of Management and Budget.

The 1970 census data were tabulated for a total of 247 SMSA's. A 4-digit numeric code is assigned to each SMSA. The sequence of these codes reflects the alphabetic sequence of all SMSA's in the country. A map of the United States delineating SMSA's recognized in the 1970 census appears at the end of this appendix. NOTE: Additional SMSA's were created during the period of 1971-1973; the total number is presently 267.

Urbanized Areas -- An urbanized area consists of a central city (or "twin cities") of 50,000 inhabitants or more plus the surrounding closely settled incorporated and unincorporated areas which meet specific criteria of population size or density. Urbanized areas differ from SMSA's in that rural portions of the counties composing an SMSA are excluded, as are those places which are urban in nature but separated by rural territory from the densely populated area surrounding the central city. There is generally one urbanized area in each SMSA. Because urbanized areas are defined on the basis of time population distribution at the time of a census, their boundaries tend to change in each census. There are 252 urbanized areas defined in the 1970 census. A 4-digit numeric code is assigned to each urbanized area in the country. With a few exceptions, each urbanized area is identical in name and code with the SMSA with which it is associated.

ZIP Code Areas--These are special areas that have been established by the U.S. Postal Service to facilitate the delivery of mail. ZIP code areas do not coincide with census areas and change according to postal requirements. Their boundaries do not necessarily follow clearly identifiable physical features. Since ZIP code areas were developed within the last decade, the 1970 census is the first census to provide data for these areas. ZIP code areas are identified by 5-digit codes. The first three digits indicate a major city or sectional distribution center; the last two digits signify a specific post office's delivery area within the

center. There are 788 3-digit areas and about 39,000 5-digit areas in the United States.

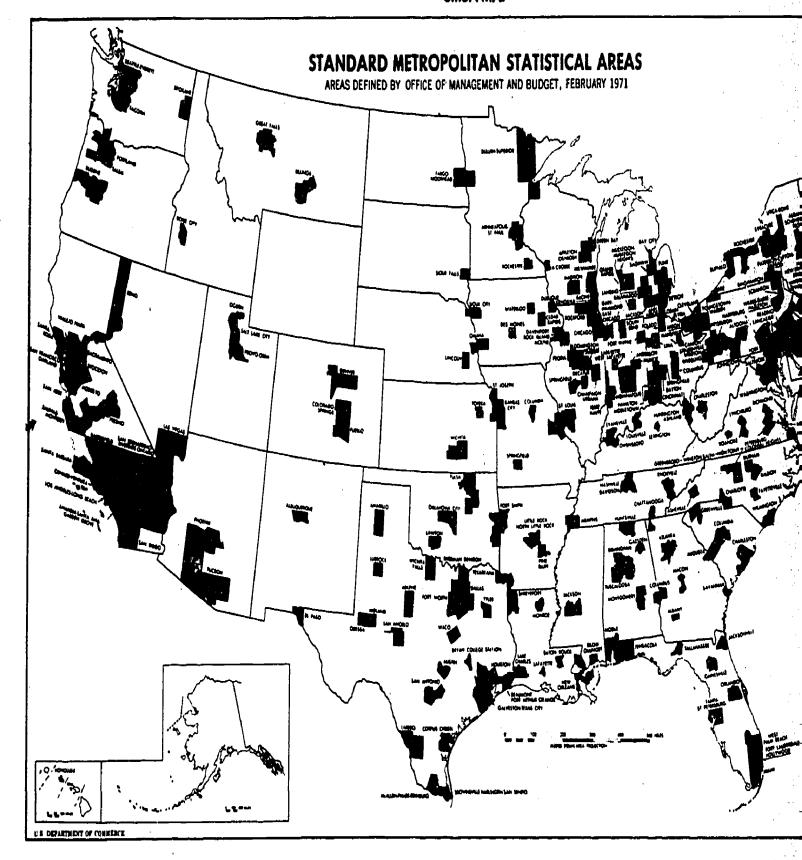
Census Tracts-Tracts are statistical subdivisions most of which are within SMSA's. There are also tracts in a limited number of areas outside of SMSA's. Tract boundaries are determined by a local committee, subject to approval by the Bureau of the Census; they do not cross county lines. Tracts were designed initially to be relatively homogeneous with respect to population characteristics, economic status, and living conditions. The typical tract has yout 4,000 to 5,000 residents. All SMSA's ... ized at the time of the 1970 census were simpletely tracted and include about 32, racts. Over 100 counties, cities, or parts of counties outside SMSA's are also tracted and include about 2,300 census tracts. Each tract is identified by a 6-digit number which also serves as the tract code. The first four digits identify the basic tract number. Generally, the last two digits are used to identify two or more tracts formed from what was originally a single tract. The census tract code is always unique within county, usually unique within SMSA, and in a few instances, unique within State.

Enumeration Districts (ED's) -- These are small areas defined by the Census Bureau, which have an average population of about 800. ED's are newly defined with each census for use as administrative units in the control of census operations. They never cross the boundary of a city, township, or other area (except city blocks) for which census data are Some census tabulations are prepared for ED's; in the 1970 census, there are approximately 142,000 ED's for which data have been tabulated. In the larger metropolitan areas, where the census was taken by mail rather than by enumerators, block groups were used as tabulation units in place of ED's. Each ED is assigned a 4-digit code unique within the county. In addition, a one-letter suffix may appear, relating to ED's which have been split.

Block Groups -- Block groups are tabulation units, defined by the Census Bureau, which are used only in the census-by-mail areas. The designation "block group" was new in A block group is a combination of contiguous city blocks and generally has a population of about 1,000. They are subdivisions of census tracts and are defined without regard to the boundaries of political or administrative areas, such as cities or minor civil divisions. Block groups that crossed one or more of these boundaries were split in tabulation and the resulting parts are also tabulated separately. For the purpose of providing small-area census data, block groups are the equivalent of enumeration districts in the built-up portions of the census-by-mail areas. The estimated total number of block groups is 100,000. Each block group is identified by a 1-digit numeric code which is unique within a census tract and is determined by the first digit of the 3-digit block number. For example: Block group "1" would contain any block in range 101-199, block group "2" in range 201-299,

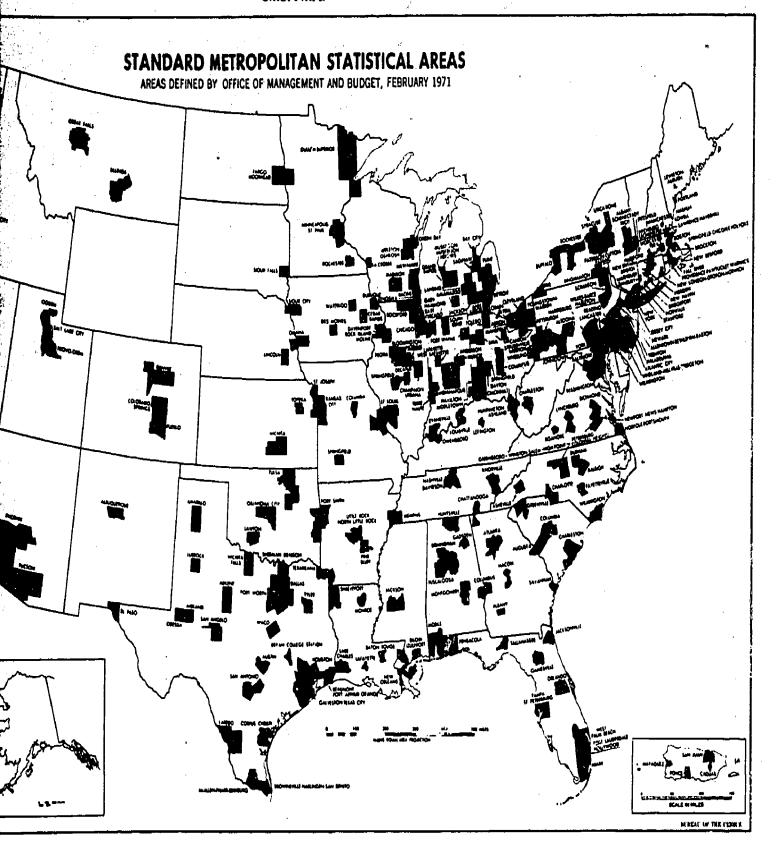
Blocks--Blocks are usually well defined pieces of land bounded by streets or roads. However, they may be irregular in shape and may be partially bounded by railroad tracks, streams, or other nonstreet features. Blocks do not cross census tract boundaries but may cross other boundaries such as city limits. Statistics for blocks are tabulated for all SMSA cities of 50,000 or more (for SMSA's existing at the time of the census) and the urbanized areas of these cities. The Bureau also collected and tabulated data for blocks on a contract basis in over 900 areas outside urbanized areas. (For a list of these contract block areas, see Data Access Description No. 15, available on request from Data User Services Office. A total of approximately 1,700,000 blocks were identified for the 1970 census tabulations. A 3-digit numeric code is assigned to each block; this code is unique within census tract.

## SMSA MAP











#### APPENDIX B

#### LIST OF AREAS WITH ACG OR GBF/DIME **FILES**

The following list is presented by SMSA name and shows, by means of a code identification whether the area has an ACG or GBF/DIME file. Included in the list are those SMSA's which do not have either file. The codes are as follows: 1

(	Code Status
	1 SMSA hasGBF/DIME file
	2 SMSA has ACG file
*, "_	3 SMSA has neither ACG nor GBF/DIME file.
CODE	SMSA TITLE
1	Abilene, Tex.
1	
1	Albany, Ga.
2	Albany-Schenectady-Troy, N.Y.
	Albuquerque, N. Mex.
1	Allentown-Bethlehcz-Easton, PaN.J.
1	
	Amarillo, Tex.
1	
2	Anderson, Ind.
1	Amn Arbor, Mich.
	Asheville, N.C.
	Atlanta, Ga.
2	
1	Augusta, GaS.C.
1	Austin, Tex.
1	
1	
1	Baton   Rouge, La.
1	Bay City, Mich.
1	Beaumont-Port Arthur-Orange, Tex.
	Billings, Kent.
	Biloxi-Gulfport, Miss.
	Binghamton, N.YPa.
1	Birmingham, Ala.
2	Bloomington-Normal, Ill.
1	Boise City, Idaho
	Boston, Mass.
2	Eridgeport, Conn.
1	Brockton, Mass.
1,	The list is based on SNSA's as they existed

at the time of the 1970 census (April 1, 1970). The area of Appleton-Oshkosh, Wisconsin, which was not an SMSA at the time of the 1970 census, does have a CBF/DIME file. Although not on the list it has since been designated an SMSA.

#### CODE SMSA TITLE--Con.

- 1 Brownsville-Harlingen-San Benito, Tex.
- Buffalo, N.Y.
- Canton, Ohio
- 1 Cedar Rapids, Iowa
- Champaign-Urbana, Ill.
- 1 Charleston, S.C. 1 Charleston, W. Va.
- Charlotte, N.C. 1
- Chattanooga, Tenn.-Ga.
- 1 Chicago, Ill.
- Cincinnati, Chio-Ky.-Ind. Cleveland, Chio
- 1 Colorado Springs, Colo.
- 1 Columbia, S.C.
- 1 Columbus, Ga.-Ala.
- 1 Columbus, Onio
- Corpus Christi, Tex.
- 1 Dallac, Tex.
- 1 Davenport-Rock Island & oline, Iowa-Ill.
- 1 Dayton, Chic
- 2 Decatur, Ill.
  1 Denver, Colo.
- 1 Des Moines, Iowa
- 1 Detroit, Mich. 1 Dubuque, Iowa
- Duluth-Superior, Minc.-Wis.
- 1 Durham, N.C.
- El Paso, Tex.
- Erie, Pa.
- 1 Bugene, Oreg.
- 1 Evansville, Ind.-Ky.
- 1 Fall River, Mass.-R.I.
- Fargo-Moorhead, N. Dak.-Minn.
- 1 Fzyetteville, N.C.
- 1 Fitchburg-Leominster, Mass.
- Flint, Mich.
- 1 Fort Lauderdale-Hollywood, Fla.
- Fort Suith, Ark.-Okla.
- 1 Fort Wayne, Ind. 1 Fort Worth, Tex.
- Fresno, Calif.
- Gadsden, Ala.
- 1 Galveston-Texas City, Tex.
- 1 Gary-Hammond-Bast Chicago, Ind.
- Grand Rapids, Mich. 2
- 1 Great Falls, Mont.
- Green Bay, Wis.
- 2 Greensboro-Winston-Salem-High Point, N.C.
- Greenville, S.C. 1
- Hamilton-Middletown, Chio
- 2 Harrisburg, Pa.
- 1 Hartford, Conn. 1 Honolulu, Hawaii
- 1 Houston, Tex.
- 1 Huntington-Ashland, W. Va.-Ky.-Chio

SMSA TITLE--Con. CODE SMSA TITLE--Con. CODE 2 Newark, N.J. 1 Huntsville, Ala. 1 Indianapolis, Ind. 1 Newport News-Hampton, Va. 2 Jackson, Mich. 1 Jackson, Miss. 2 Norfolk-Portsmouth, Va. 2 Norwalk, Conn. 1 Jacksonville, Fla. 1 Odessa, Tex. 2 Jersey City, N.J. Ogden, Utain 1 Johnstown, Pa. 1 Oklahoma City, Okla. 1 Kalamazoo, Mich. 1 Omaha, Nebr.-Iowa 2 Orlando, Fla. 1 Oxnard-Ventura, Calif. 1 Kansas City, Mo.-Kans. 1 Kenosha, Wis. 1 Knoxville, Tenn. 3 Lafayette, La. 2 Paterson-Clifton-Passaic, N.J. 2 Pensacola, Fla. 3 Lafayette-West Lafayette, Ind. 1 Peoria, III. 3 Lake Charles, La. 1 Philadelphia, Pa.-N.J. 2 Lancaster, Pa. 2 Phoenix, Ariz. 1 Lansing, Mich. 1 Pine Bluff, Ark. l Pittsburgh, Pa. l Pittsfield, Mass. 1 Laredo, Tex. 1 Las Vegas, Nev. 1 Lawrence-Haverhill, Mass.-N.H. 3 Ponce, P.R. 1 Lawton, Okla. 1 Portland, Wine 1 Lewiston-Auburn, Maine 1 Portland, Creg.-Wash. 1 Lexington, Ky. 1 Providence-Pawtucket-Warwick, R.I.-Mass. 1 Lima, Ohio 1 Provo-Orem, Utah 1 Lincoln, Nebr. 1 Pueblo, Colo. 1 Little Rock-North Little Rock, Ark. 1 Racine, Wis. 1 Lorain-Elyria, Ohio 1 Raleigh, N.C. 1 Los Angeles-Long Beach, Calif. 1 Reading Pa. 1 Louisville, Ky.-Ind. 1 Lowell, Mass. 1 Reno, Nev. 2 Richmond, Va. 1 Lubbock, Tex. 1 Roanoke, Va. 1 Lynchburg, Va. 1 Rochester, N.Y. 1 Macon, Ga. 1 Rockford, Ill. 1 Madison, Wis. 1 Sacramento, Calif. 1 Manchester, N.H. 1 Unginaw, Mich. 2 Mansfield, Chio 1 St. Joseph, Mo. 1 St. Louis, Mo.-Ill. 3 Mayaguez, P.R. 1 McAllen-Pharr-Edinburg, Tex. 1 Salem, Oreg. Memphis, Tenn.-Ark.
 Meriden, Conn.
 Miami, Fla. 1 Salinas-Monterey, Calif. 1 Salt Lake City, Utah 1 San Angelo, Tex. 1 Midland, Tex. San Antonio, Texa 13 San Bernardiw - Poverside-Ontario, Calif. 1 Milwaukee, Wis. 1 Minneapolis-St. Paul, Minn. 1 San Diego, Caliba 1 Mobile, Ala. 1 Monroe, La. 1 San Francisco-Cakland, Calif. 1 San Jose, Calif. 1 Montgomery, Ala. 1 San Juan, P.R. 1 Muncie, Ind.
2 Muskegon-Muskegon Heights, Mich. Muncie, Ind. Santa Barbara, Calif. 1 Savannah, Ga. 2 Nashville, Tenn. 1 Scranton, Pa. 1 New Bedford, Mass. 1 Seattle-Everett, Wash. 1 New Britain, Conn. 1 Sherman-Denison, Tex. 1 Shreveport, La. 2 New Haten, Conn. 1 Sioux City, Iowa-Nebr. 1 Sioux Falls, S. Dak. 2 New London-Groton-Norwich, Conn. 1 New Orleans, La. 12 New York, N.Y. 1 South Bend, Ind.

Only Nassau and Suffo'k counties have a GBF/ DIME file.

<sup>&</sup>lt;sup>3</sup>Only San Bernardino County has a GBF/DIME file.

CODE SMSA TITLE -- Con. CODE SMSA TITLE--Con. 1 Spokane, Wash. Tyler, Tex. Utica-Rome, N.Y. 1 2 Springfield, Ill. Springfield, Mo.
1 Springfield, Chio
1 Springfield-Chicopee-Holyoke, Mass.-Conn. 1 Vallejo-Napa, Calif. 2 Vineland-Millville-Bridgeton, N.J. 1 Waco, Tex. 2 Stamford, Conn. 1 Steubenville-Weirton, Ohio-W. Va. 1 Washington, D.C.-Md.-Va. 1 Stockton, Calif. 2 Syracuse, N.Y. 2 Waterbury, Conn. 1 Waterloo, Iowa 1 Tacoma, Wash. 1 West Palm Beach, Fla. 1 Wheeling, W. va.-Chio l Tallahassee, Fla. 1 Tampa-St. Petersburg, Fla. 1 Terre Haute, Ind. 1 Wichita, Kans. Texarkana, Tex.-Ark. 1 Wichita Falls, Tex. 1 Toledo, Ohio-Mich. 1 Wilkes-Barre-Hazleton, Pa. 1 Wilmington, Del.-N.J.-Md. 1 Topeka, Kans. 3 Wilmington, N.C. 1 Trenton, N.J. 1 Tucson, Ariz. 1 Worcester, Mass. 1 Tulsa, Okla. 1 York, Pa. 1 Youngstown-Warren, Chio 1 Tuscaloosa, Ala.

#### PUBLICATIONS OF DATA ACCESS DESCRIPTIONS

DAD number	Date of	Series number	Title	Current status
3	December 1967	CT-1	General Information About Summary Tapes	Sec No. 18
4	February 1968	PA-1	Policy Governing Access to Census Sureau Unpublished Data and Special Services	See No. 21
6	April 1968	CT-2	First Count Summary Tapes From the 1970 Censuses of Population and Housing	Ses No. 13
7	July 1968	CEP-1	Items Contained in the 1970 Censuses of Population and Housing	See No. 14
8	August 1969	CT-3	Second Count Summary Tapes From the 1970 Census of Population and Housing	See No. 26
9	August 1969	CT-4	Third Count (Block) Summary Tapes From the 1970 Census of Population and Housing	See No. 25
10	December 1969	CEP-2	Availability of Place of Work Data in the 1970 Census	See No. 20
11	December 1969	CEP-3	Inclusion of Transient Persons in the 1970 Decennial Census	Current
12	December 1969	CG-1	1970 Census Geography	Current
13	March 1970	CT-2 (ev.)	First Count Summary Tapes From the 1970 Census of Population and Housing	Current
14	March 1970	CEP-1(Rev.)	Items Contained in the 1970 Census of Population and Housing	Current
15	April 1970	CG-2	Contract Block Statistics Program	Current
16	' at . 1 1976	CT-5	Fourth Count Summary Tspes From the 1970 Census of Population and Housing	See No. 22
<b>:</b> :	.970	CEP-4	Printed Reports From the 1970 Census of Population and Housing	See No. 27
19	June 1970	← -1(Rev.)	General Information About Summary Tapes	Current
19	August 1970	CEP-5	Printed Reports From the 1970 Census Housing, Volume II	Current
20	Movember 1970	CEP-2(Rev.)	Availability of Place of Work Data in the 1970 Census	Current
21	Secumber 1970	PA-1(Rev.)	Census Bureau Unpublished Data and Special Services: Policy and Delineation	Current
23	March 1971	CT-5(Rev.)	Fourth Count Summary Ta, ws From the 1970 Census of Population and Housing	Current
23	Marci. 1971	CT-6	Fifth Count (ZIP Code) Summary Tapes From the 1970 Census of Population and Housing	Current
24	Жаў 1971	CT-8	Public Use Samples of Basic Records From the 1060 and 1970 Censuses	Current
25	July 1971	CT-4(Rev.)	Third Count (Floor) Stammary Tapes From the	Current
26	Physmale 1972	CT-3(Rev.)	Securic Count Summary From From the 1970 Some sc. Population and Housing	Current
27	January 1972	CEP-4(Rev.)	Printed Reports From the 1970 Census of Population and Housing	Current
.38	May 1972	CFP-6	Delineation of Problem Housin, Areas	Curment
79	й .y 1972	CEP-7	Low-Income Data From the 1970 Census	Current
36	Sugnst 1972	CT··7	Sixth Count Summary Tapes From the 1970 Census of Population and Housing	Current
21	November 1972	ECFR-1	Printed Reports Issued by the Eureau of the Census for the Economic, Governments, and Agriculture Censuses	Current
.28	May 1973	CEF ?	Subject Reports From the 1970 Crasus of Population and Housing	Current
33	July 1973	CG-3	1970 Census Geography: Concepts, Products, and Programs	Current







# Ta Access Description

Collection, Evaluation, and Processing Series, CEP-1 (Rev.)

DAD No. 14 March 1970

U.S. DEPARTMENT OF COMMERCE/Bureau of the Census

## Items Contained in the 1970 Census of Population and Housing

#### Introduction

This Data Access Description (CEP-1 Revised) presents in final form all items to be included in the 1970 Census of Population and Housing. Changes which have been made in the 1970 census questionnaire since the original CEP-1 was released in July 1968 are reflected in this document. Data users should note, in particular, that sampling fractions have been changed from 25, 20, and 5 percent to 20, 15, and 5 percent and that a new 5-perc sample question on Spanish origin or descent has been addod.

In add ion, this Data Access Description provides historical background on the continuity of the items included in the 1970 census, suggests key reasons for their inclusion, and indicates the questions asked of only a sample of the population.

## Legal Basis of Questions on the Census

The law (Title 13. U.S. Code) requires that a person answer census questions to the best of his knowledge. The same law also provides that all information given to the Census Bureau must be held in confidence and may be used only for statistical purposes.

The Bureau may release data in the form of statistical tabulations, and no reports nor any statistics may be released which might disclose information about any individual or household.

## The Use of Samples in the Census in Relation to People and Housin, Units

#### PEOPLE

Relatively few questions are asked of all individuals. These few items on relationship to household head, sex race, age, and marital status permit the accurate count of persons in each area as required by the Constitution for a determination of representation to Congress. These items, called "complete-count" or "100percent" census items, are the basic facts about people which are used to establish identity so as to insure against double-counting. The completecount cabulations provide totals of these items (age, race, sex, relationship to household head, and marital status) for the geographic subdivisions of the counties of each State.

All other items about people are obtained from samples. Sampling permits the collection of data about an area which accurately reflect the characteristics of the persons in the area at a much lower cost than obtaining data from all persons. Sample cases are weighted to reflect the sampling percentages. In a tabulation based on the 20-percent sample, for example, all cases have weights which average 5, that is, all figures re multiplied by approximately 5, so the Figures will be estimates for all the people. area instead of just 20 percent of deat. T us, for a particular area, the presence of me physician in the sample would be tabulated to yield an est mate of five physicians for the area. These characteristics of sample tabulations make identification of particular individuals impossible.

Data Access Descriptions are intended as introductions to means of access to Census Bureau data for persons with data requirements not fully met by the printed reports



There will be a 15-percent sample and a 5-percent sample in the 1970 census, and certain questions common to both samples will result in a 20-percent sample. (The size of the area for which the data will be tabulated is an important influence in dete mining whether a question is asked of everyone or of a sample of the people.) Information required for apportionment purposes and that which is needed for city blocks is collected on a 100-percent basis; that which is to be tabulated for areas as small as census tracts and most counties is to be on a 15- or 20-percent sample basis. The 5-percent sample will provide statistics for larger cities, standard metropolitan statistical areas, larger counties, and for States.

#### **HOUSING UNITS**

The basic unit in census sampling is the housing unit. Therefore, the sample percentages (20, 15, and 5) are the same for housing units as for people. For example, in a household where each person answers 15-percent sample questions, 15-percent sample housing information is also obtained. For the complete count, there are more housing unit questions than population questions because of the need for housing data on a city block basis where a sample would not be reliable because of the small number of cases. Housing block data are essential to public and private housing programs, renewal, city planning, and other work related to the physical characteristics of our environment.

## 1970 Census Subject Items Compared With 1960 Content

The sample percentages for population and housing items included in the 1970 census in comparison with the items in the 1960 census are shown below. Each item is discussed on the page indicated.

Population Items	1960	1970	Page
Relationship to head of household	100 100 100 100	100 100 100 100 100	7 7 7 7 8
State or country of birth.  Years of school completed.  No ber of children ever born.  Employment status.  Hours worked last week.  Weeks worked last year.  Last year in which worked.  Occupation, industry, and class of worker.  Activity 5 years ago.	25 25 25 25 25 25 25 25 25	20 20 20 20 20 20 20 20 20	883999993
Income last year: Wage and salary income Sel tag owners income Other last ene	25 25 25	20 120 220	10 5 6
Contery of pirth parents.  Mother was a first this house.  Years in a confirmation of pears ago.  Sencel or college enrollment (public or private).  Veteran status.  Place of work.  Means of transportation to work.	25 25 25 25 25 25 25 25	15 15 15 15 15 15 15 415	10 10 11 6 11 11 6
Mexican or Spanish origin or descent. Citizenship. Year of immigration. When married. Vocational trail completed. Presence and during of disability. Occupation-industry 9 mars ago.	25 - -	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	4 4 7 4 5 4

Single item in 1960; two-way separation in 1970 by farm and nonfarm income.



<sup>~</sup>Single rem in 196 : three-way separation in 1970 by social security, public welfare, and all other receipts.

This item is also in the 5-percent sample but limited to State of residence 5 years ago.

Street address included in 1970.

In 1960, whether matried more than once and date of first marriage; in 1970, also includes whether first marriage ended by death of spouse.

## 1970 Census Subject Items Compared With 1960 Content-Continued

Housing Items	1960	1970	Page
Number of units at this address. Telephone. Access to unit. Kitchen or cooking facilities. Complete kitchen facilities. Condition of housing unit. Rooms. Water supply Flush toilet. Bathtub or shower. Basement. Tenure. Commercial establishment on property Value. Contract rent. Vacancy status. Months vacant.	25 100 100 100 100 100 100 100 100 100 10	6100 7100 100 100 100 100 100 100 100 100	5 11 15 5 15 11 12 12 12 12 12 12 12 13 13
Components of gross rent.  Heating equipme.  Tear structure i it.  Number of units in structure and whether a trailer.  Farm residence (acreage and sales of farm products).  Land used for farming.	25 25 25 20 25 25	20 20 20 20 20	13 13 13 14 14 16
Source of water. Sewage disposal. Bathrooms. Air conditioning. Automobiles.	20 20 20 5 20	15 15 15 15	14 14 14 14 14
Stories, elevator in structure.  Fuelheating, cooking, water heating.  Beirooms.  Clotnes washing machine.  Clothes dryer.  Dishwasher.  Home food freezer.  Television.  Radic.  Second home.	20 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	5555555555	15 15 5 5 5 7 15 5

<sup>&</sup>lt;sup>6</sup> To be collected primarily for co-age check purpose. Required on 100-percent for field a llowup purposes.

# 1970 Census Items Not Included in the 1960 Census

The items planned as additions for 1970 are listed below. Some of these appeared in years prior to 1960.

#### POPULATION ITEMS

Activity 5 Years Ago (20 percent). For this new item respondents will be asked what they were doing 5 years ago--were they in the Armed Forces, working at a civilian job or going to college. Of those who report in the 20-percent sample that they were working 5 years

ago, one in four will be asked to state the occupation and industry in which they were employed, thus providing a 5-percent sample for that item.

A major purpose of these questions is to measure employment and job mobility in the five years prior to the census. The aim is to obtain information on gross changes, in contrast to the standard data which provide measures of net changes between two censuses. This question will also be useful in distinguishing streams of migration based on movement into and out of the Armed Forces, to and from college, and into and out of the labor force.



37. In April 1965, was this person— (Fill three circles)

a. Working at a job or business (full or part-time)?

O Yes O No

b. In the Armed Forces?
O Yes O No

c. Attending college?
O Yes O No

Occupation-Industry 5 Years Ago (5 percent). This item will permi an understanding of the dynamics of manpower allocation and economic opportunity. For the first time analysts can compute meaningful out-migration rates by socioeconomic status and function in the labor force. For  $d\epsilon_{\mu\nu}$  essed areas, such information will be invaluable in delineating the "push" in migration; for growing areas, in measuring the "tull" and identifying the sources of recruitment. These data will give proportant insight into the actual efficiency of progration as a means of facilitating occupational mobility. This item will also permit analysis of gross as well as net changes in the employment situation of s, ecified population groups such as Negroes, older persons, women, etc.

	If "Yes" for "Working at a job or business" in question 37 tescribe this persua's chief activity or business in April 1965.	
	. " lat kind of business or industry was this?	
b	. What kind of work was he doing (occupation)?	<b>-</b>
r	a he—	
	An employee of a private company or government agency Self-employed or an unpaid family worker	

Mexican or Spanish Origin or Descent (5 percent). This new item will furnish data needed for a more complete understanding of the composition of our population. It may lead to methodological refinement indetermining membership in our Spanish-American population.

13 b. Is this person's origin	or des	cent- (Fill one rircle)
O Mexican	0	Central or South American
<ul> <li>Puerto Rican</li> </ul>	O	Other Spanish
O Cuban .	,	No, none of these

(Item 13a is discussed to page 8.)

Citizenship (5 percent). A question on citizenship was included in 1820, 1830, and every census from 1890 to 1950 (and in 1870, data were

collected on male citizens 21 years of age and over). Because over 5 million immigrants have come to the United States in a 20-year interval, there is a need for basic data on citizenship and the characteristics of aliens.

Information on citizens is useful in the measurement of the extent to which people entitled to vote actually do so and of the assimilation of various categories of the foreign born by naturalization.

For persons born in a foreign country— is this person naturalized?						
O	Yes, naturalized					
5	No, alien					
0	Born abroad of American parents					

Year of Immigration (5 percent). A question on year of immigration was included in each census from 1890 to 1930. It permits the classification of the foreign born as long-term residents or recent arrivals. Those concerned with immigration legislation may evaluate effects of previous legislations by comparing the characteristics of immigration before and after the law became effective. There is now particular intense in the effect of the labor force provision in the imagration Act of 1965.

16 b. When did he come to the United States to stay?					
			1950 to 54		
0	1960 to 64	10	1945 to 49	$\circ$	1915 to 24
0	1955 to 59	10	1935 to 44	Э	Before 1915

Vocational Training Completed (5 percent). This information is needed to assist the Federal, State, and local government agencies in locating new vocational training facilities and assessing the potential market for various training programs. A comparison of the incomes and work experience of persons with and without vocational training, for specific occupations, will provide a rough measure of the financial return from an investment in vocational training.

		ool; as apprentice; in school trades; technical institute;
	F O Yes	O No- Skip 10 28
b. Y	What was his main field o	vocational training? Fill one circle
	O Business, office work	κ.
	<ul> <li>Nursing, other health</li> </ul>	i tiekds
	O Trades and crafts ()	nechanic, electrician beautician, etc.)
	O Engineering or science	ce technician; draftsman
	<ul> <li>Agriculture or home</li> </ul>	economics .
	Other field— Speaft -	7



Presence and Duration of Disability (5 percent). A question on disability was asked in 1880 and 1890, and one on duration of disability was also asked in 1890, but they have not been included in a census in the 20th century. Questions on this subject will show whether the person has a serious health condition which limits the amount or kind of work he can do, and how long it has lasted. The data will meet an urgent need by government and volunteer agencies for a factual basis on which to make an efficient allocation of billions of dollars annually for the assistance of disabled persons.

28a.	Does this person have a health or physical condition which limits the <u>kind</u> or <u>amount</u> of work he can do at a job!  If 65 years old or over, skip to question 29.						
	O Yes						
	O No						
b.	Does his health or physical condition keep him from holding any job at all?						
	O Yes O No						
C.	If "Yes" in a or b— How I in his ability to work?	ong ha	s he been limited				
	Less than 6 months	122	3 to 4 years				
	6 to 11 months	Ċ	5 to 9 years				
	1 to 2 years	$(\cdot)$	10 years or more				

#### HOUSING ITEMS

Number of Units at this Address (100 percent). The primary purpose of this item is to help enumerators find housing units which might otherwise be missed in certain types of multi-unit structures.

_	w many living quarters, occupied and vacant, are this address?
. )	One
13	2 apartments or living quarters
$\mathcal{O}$	3 apartments or living quarters
٠.	4 apartments or living quarters
1,	5 , artments or living quarters
$\circ$	6 apartments or living quarters
: 1	7 apartments or living quarters
,	8 apartments or living quarters
	9 apartments or living quarters
	10 or more apartments or living quarters
	This is a mobile home or trailer

Complete Kirchen Facilities (100 percent). Complete kitchen facilities are defined as including a range or stove, a mechanical refrigerator, and a sink connected to piped water. This question is used as a component, together with mode of access, in defining a separate housing unit.

<u>H3.</u>	Do you have complete kitchen facilities?
	Complete kitchen facilities are a sink with piped
	water, a range or cook stove, and a refrigerator.

- Yes, for this household only
- Yes, but also used by another household
- No complete kitchen facilities for this household

Ciothes Washing Machine, Clothes Dryer, Dishwasher, and Home Food Freezer (5 percent). The dishwasher item is new for 1970. Taken together, these appliances indicate levels of living. In addition, information on these items shows the need for water and sewage facilities and provides the data needed for the efficient planning of new utility lines and the modernization of existing facilities.

27a.	Do you	have a clothes washing machine?
	17	Yes, automatic or semi-automatic
	()	Yes, wringer or separate spinner
	0	No
b.	Do you	have a clothes dryer?
	· • •	Yes, electrically heated
	0	Yes, gas heated
	• • • •	No
c.	Do you	have a dish wher (built-in or portable)?
	ِ ن	Yes : No
ď.	Do you i	have a home food freezer which is separate from your rator?
	0	Yes O No

Second Home (Spercent). "Second" or "vacation" homes are becoming an increasingly large part of the housing inventory. Second homes are of a great variety ranging from rust cabins to high-rise condominiums. The data are needed by Federal agencies, the Nation's home builders, and financial institutions to determine the effect of this incremental housing demand on planning and program requirements.

H30.				-	household) own a second h you occupy sometime durin	
	0	Yes	0	No		

# 1960 Census Items To Be Expanded in the 1970 Census

The Census Bureau plans to expand the following 1960 items:

Income Last Year--Self-Employment Income (20 percent). his was a single item in 1960.



In 1970 there will be a two-way separation by farm and nonfarm income.

40 <b>b.</b>	How much did he earn in 1969 from his own nonfarm business, professional practice, or partnership? (Net after business expenses. If business loss money, write "Loss" above amount.)	\$
e.	How much did he earn in 1969 from his own farm? (Net after operating expenses, Include earnings at a tenant farmer or therectopper, If farm lost money, write "Lost" above amount.)	\$u0  (Dollars only)  OR O None

(Item 40c in discussed on page 10.)

Income item in 1960, there will be a threfinely separation by social security, public welfare, and all other receipts in 1970. The expansion in income detail for the 1970 census will provide new information on the levels and patterns of income of farmers and the composition and characteristics of families receiving public assistance payments.

41.	Income other than earnings in 1969. Fil if exact amount is not known, give best estimate,	•
	How much did this person recove in 1969 from Social Security or Railroad Retirement?	(Dollars only) OR O None
b.	How much did he receive in 1969 from public assistance or welfars, 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 (Dollari only) OR None
c.	How much did i.e receive in 1969 from all other sources?  Include interest, dividends, veterant payments, also st, and other regular payments.  (See instruction sheet.)	\$ .00 (Dollari only) OR None

Place of Residence 5 Years Ago (15 and 5 percent). This question was asked in 1940 and 1960; in 1950 there was a question on place of residence the preceding year. In 1970 this item, in complete detail, will be asked of the 15-percent sample. In addition, this item will be asked in modified form, limited in detail to State of residence 5 years ago, of the 5-percent sample. Inclusion of this question will enable more accurate analyses of the relationship between occupational and geographic mobility.

### 15-percent sample:

19a.	Did he live in this house on April 1, 1965? If in college or Armed Forces in April 1965, report place of residence these.
F	O Born April 1965 or later ( Skip to 20 O No, different house
<b>b</b> .	Where did he live on April 1, 1965?
	(1) State, foreign country, U.S. possession, etc.
	(2) County
	(3) Inside the limits of a city, town, village, etc.?
	O Yes O. No
	(4) If "Yes," name of city. town, village, etc.

#### 5-percent sample:

36.	In April 1965, what State did this person live in?		
	O This St		
	OR		
	(Name of State or foreign country; or Puerto Rico, etc.)		

Place of Work (15 percent). For 1970 this item will be expanded to include street addresses. Expansion of this item will allow provision of place of work data for traffic zones, census tracts, and other segments of metropolitan areas. Such information is essential to persons planning highway construction and to urban planners generally.

_	There did he work <u>last week?</u> be worked in more than one place, print where he worked most last week.  the stavels about in his work or if the place does not have a numbered address, see instruction thees.
(	1) Address (Number and street name)
(	Name of city,     town, village, etc.
	3) Inside the limits of this city, town, village, etc.?  G Yes G No
(4	4) County
(!	(6) ZIP Code

(Items 29a and b are discussed on page 9 and 29d on page 11.)

When Married (5 percent). Data on whether married more than once and date of first marriage were collected in 1910 and in each census since 1940. In 1970 these same questions and an additional one on how the first marriage of remarried persons was terminated will be asked of a 5-percent sample of the population. These data will be used to measure the permanence of marriage in our society.

	——— Ÿ ———	
When did he get married?	When did he get married for the first time?	
Mouth Year	Mouth Yea	

Television (5 percent). Data on television were collected in the 1950 and 1960 censuses. For 1970, the item has been expanded to obtain data on UHF-equipped television. The inquiry on television is of particular concern to the Federal Communications Commission.

H28a. [	To you have a television set? Count only sets in working order.
	Yes, one set Yes, two or more sets No
	If "Yes"— Is any set equipped to receive UHF broadcasts, hat is, channels 14 to 83?
	Yes No

## Items Appearing in 1960 and 1970

Although minor changes may have been made in the wording of the 1970 census questions for the following items, they appear in essentially the same form as in the 1960 census.

### POPULATION ITEMS

Relationship to Head of Household (100 percent). This information has been collected in each census since 1880.

		HOW IS EACH PERSON RELATED TO THE HEAD OF THIS HOUSEHOLD?			
	Fill one circle.	7 A schaubett			
	1	If "Other relative of head," <u>also</u> give exact relationship, for example, mother-in-law, brother, niece, grandson, etc.			
	If "Other not related to hea partner, maid, etc.	If "Other not related to head," <u>also</u> give exact relationship, for example, partner, maid, etc.			
İ	- Head of household	Roomer, boarder, lodger			
1	→ Wife of head	<ul> <li>Patient or inmate</li> </ul>			
	7. Son or daughter of fitted Other relative of head Print exact resistionship	Other not related to head—Prins			
L	·				

Color or Race (100 percent). Collected in each census since 1790. For Alaska, the racial categories Aleut and Eskimo are substituted for Hawaiian and Korean,

į	
an)," <u>also</u> give	tribe.
ve race.	
Japanese	· Hawaiian
Chinese Filipino	<ul> <li>○ Korean</li> <li>Other— Print race</li> </ul>
	can)," <u>also</u> give ve race. Japanese Chinese

Sex and Age (month and year of birth) (100 percent). Collected in each census since 1790.

3. SEX	
Pill one circle	
Male	ĺ
Female	

DATE OF BIRTH				
6. Month of birth	7. Year of birth			
Fill one circle	Pill one circle for first three numbers	Fill one circle for lass number		
ے an. Mar.		- : -		
C Apr. June	○ 188- ○ 194-	02 07		
July-Sept				
Oct. Dec.	0 191 0 197	04 ( 09		
	6. Month of birth  Fill one circle  Jan. Mar.  Apr. June  July-Sept.	6. Month of birth  Fill one circle for first three numbers    Jan. Mar.   186   192   193   188   194   194   195   195   195   196		

Marital Status (100 percent). Collected in each census since 1880.

8. WHAY IS
EACH
PERSON'S
MARITAL
STATUS?
Fill one
circle

Now married
Widowed
Divorced
Separated
Never
married

State or Country of Birth (20 percent). Collected in each census since 1850. The information on State of birth is used in measuring the streams of internal migration from certain regions of the country to other regions, for example, Negroes from the South to the big cities of the North and West.

The Government finds information on country of birth essential in formulating immigration policy and in considering immigration laws. The information is also used by organizations concerned with the welfare of various ethnic groups and provides a measure of assimilation when the population, classified by nativity and country of origin, is tabulated by such characteristics as fertility, education, or occupation.

13a. Where was this person born? If born in hospital, give State or country where worther lived. If born outside U.S., see instruction sheet: distinguish Northers, Ireland from Ireland (Eire).

State

OR
(Name of State or love gn country; or Puerto Rico, Guam, etc.)

(Item 13b is discussed on page 4.)

Years of School Completed (20 percent). Collected in each census since 1940. The educational level of the population is an important measure of the quality of the manpower pool. Education exerts a major influence in the social and economic condition of the individual. It also indicates the output of the educational system. Statistics on almost every item in the census are tabulated by education (as well as age, color, and sex) because of the information these crossclassifications provide on the relationship between successful completion of various levels of schooling and eventual success in other types of life adjustment.

21. What is the highest grade (or year) of regular school he has ever attended? Fill one circle. If now attending, mark grade he is in. O Never attended school- Skip to 23 O Nursery school O Kindergarten Elementary through high school (grade or year) 1 2 3 4 5 6 7 8 9 10 11 12 000000 00 0000 College (academic year) 1 2 3 4 5 6 or more 000000 Did he finish the highest grade (or year) he attended? O Now attending this grade (or year) O Finished this grade (or year) O Did not finish this grade (or year)

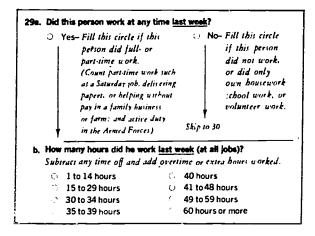
Number of Children Ever Born (20 percent). Collected in most censuses since 1890. This item is the only source of census data on the entire number of children a family has had, including any who may have already left home or Statistics on children ever born are unique in providing significant information on the current and future trends of population growth through births and how the composition of the population is changing through differences in fertility of various population groups. Such data are used for projecting the age of the future population. In turn, these projections are needed by Federal, State, and local governments and private industry for the planning of various short- and long-range projects. "

25. If this is a girl or a woman.—
How many bables has she ever
had, not counting stimbirths?
Do not count her stepchildren
or children she has adopted,

9 10 11 12 or
more

Employment Status, Hours Worked Last Week, Weeks Worked Last Year, Last Year in which Worked (20 percent). Although elements of this subject were collected as early as 1820 in the census, the forerunner of the group of questions as they appear today began with the 1880 census. The census is the only source that provides data on employment, unemployment, hours worked, weeks worked, and other work activity characteristics for States, cities, and counties. These data are extensively used in developing and administering manpower training, welfare, education, and other government programs both on a national and local level. The data are widely used in State and local labor market analyses in determining the manpower resources and skills available in an area. The census data provide a much more detailed and comprehensive description of the Nation's work force and its labor reserve than is possible in the monthly data on the labor force.

QUESTIONS 29 THROUGH 41 ARE FOR ALL PERSONS BORN BEFORE APRIL 1936 INCLUDING HOUSEWIVES, STUDENTS, OR DISABLED PERSONS AS WELL AS PART-TIME OR FULL-TIME WORKERS



(Items 29c and 29d are discussed on pages 6 and 11 respectively.)

30.	Does this person have a job or business from which he was temporarily absent or on layoff <u>last week?</u>
	Yes, on layoff
	<ul> <li>Yes, on vacation, temporary illness, labor dispute, etc.</li> </ul>
	⊙ No

la. Has he been looking for work during the past 4 weeks?			
<u>ر</u> م	Yes U No Skip 16 32		
b. Was	there any reason why he could not take a job last week?		
0	Yes, already has a job		
	Yes, because of this person's temporary illness		
J.	Yes, for Wher reasons (in school, etc.)		
	1941, could have taken a job		

32.	2. When the he last work at all, even for a few days?			
	○ In 1970			

(From question 32, for the 5 percent sample, skip to 36; for the 15 percent sample, skip to 37.)

39a. Last year (1969),	did this person work at	ंत्रे, even fer a few days?
	O Yes O Nom	Stip to 41
	did he work in 1948 of	* Miles or part-time?
•	O 13 weeks or less	40 to 47 weeks
(	O 14 to 26 week:	48 to 49 weeks
•	O 27 to 39 might	○ 50 to 52 weeks

Occupation, Industry, and Class of Worker (20 percent). Data on occupation have been collected in each census since 1850; industry in 1820, 1840, and each census state 1910; and class of worker in each census since 1910. The census is the only source providing data that includes all economically active persons, including such groups as self-employed, unpaid family workers, and private household workers. For States and local areas, tabulations by detailed occupation provide the only information we have on the occupational skills of the labor force. These data are used to formulate economic development programs, to provide data to government and private firms in locating facilities and new plants, as well as for the various manpower programs. The detailed listings of industry and occupation tabulated by other demographic and economic characteristics such as education and income are used in planning manpower training and utilization programs.

#### 33-35. Current or most recent jole activity

D. reibe 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.

33. a.	Industry  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)		
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)			
c.	Is this mainly- (Fill one circle) .		
	Manufacturing 💮 Retail trade		
	Wholesale trade Other (agriculture, construction, service, government, etc.,		

(From question 33, for the 5 percent sample, skip to 36; for the 15 percent sample, skip to 37.)

	Occupation What kind of work was he doing?
	(For example: TV repairman, sewing machine perator, spray painter, and engineer, faim operator, faem band, junior high English teacher)
b.	What were his most important activities or duties?
	(For example: Types, keeps account books, ples, sells cars, operates penning press, cleans buildings, finishes concrete)

35.	Was this person- (Fill one circle)	
	Employee of private company, business, or	
	individual, for wages, salary, or commissions	0
	Federal government employee	0
	State government employee	. '
	Local government employee (rity county, etc.)	$\cap$
	Self-employed in own business,	
	professional practice, or farm—	
	Own business not incorporated	32
	Own business incorporated	C.
	Working without pay in family business or farm	v.

Income Last Year--Wage and Salary Income (20 percent). Collected in each census since 1940. This question and the five others on

self-employment and other income are used to determine the income levels of specific areas measured by the census. Several Federal programs are now based directly on these data. For example, under the Economic Opportunity Act of 1964, and the Elementary and Secondary Education Act of 1965, Federal funds are distributed to States and counties in accordance with formulas that include census income as a basic element.

Census income information (earnings and income other than earnings) is the only source which provides income size distribution data for small areas and the only source which relates such data to social and economic characteristics such as residence, sex, color, education, family type, employment status, industry, occupation, type of income received, and others. It is one of the best indicators of the economic welfare of the population. This information is used widely by businessmen to conduct marketing studies, city planners to formulate urban development and transportation plans, government officials to develop social programs for low income families, and economists to construct State and regional development plans.

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.)			
a.	How much did this person earn in 1969 in wages, salary, commissions, bonuses, or tips from all jobs?  (Refere deductions for executionals, due, or other tient)	\$ .00 (Dollars only) OR None		

(Items 40b and c are discussed on page 6.)

Country of Birth of Parents (15 percent). Collected in each census since 1870.

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14. What country was his father born in?

United States
OR

(Name of foreign country, or Laceto Rico, Guam, etc.)
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15. What country was his mother both in?

○ United State.

OR

(Name of foreign country, or Puerto Rico Guant, etc.)
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Mother Tongue (15 percent). Collected in each census since 1910 (except 1950). In 1960 only persons born putside the United States were asked to respect to this question. Among other

