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AND HOUSING CENSUS TABULATIONS

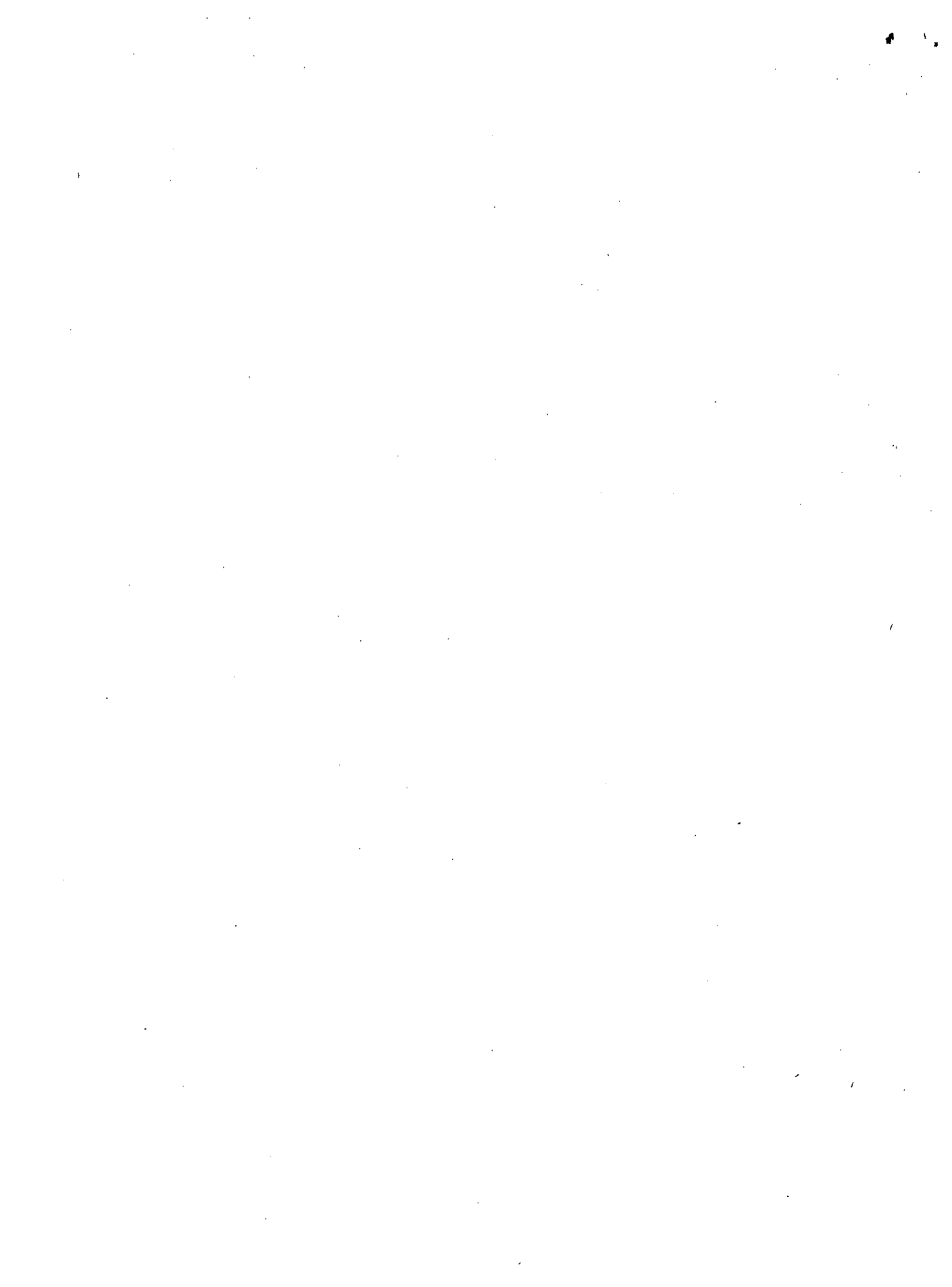
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CONTENT AND USE OF POPULATION AND HOUSING
CENSUS TABULATIONS

by

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The subject of this seminar is "Preparation and Use of Population and Housing Census Tabulations". The United Nations publications "Principles and Recommendations for the 1970 Population Census" and "Principles and Recommendations for the 1970 Housing Census" ^{1/} contain outlines on the various recommended tabulations. They also contain some discussion of the use that may be made of each tabulation. The tabulations outlined in this publication as well as in the corresponding one by the Inter-American Statistical Institute place major emphasis on cross tabulations for states and other major areas. The publications of the 1970 Census of Population and Housing of the United States also include quite detailed cross tabulations for each of the 50 states and the larger cities and standard metropolitan statistical areas. The use of the tabulations is often implied by their content. The tabulation of school attendance, educational attainment, and literacy by detailed age implies that these tabulations will be used to analyze the educational status of the population in various areas.

A substantial amount of tabulations also are prepared for the 5,400 thickly settled urban places of 2,500 inhabitants or more, and for the 3,100 countries into which the entire country is divided. There is also a very great interest in the structure of the metropolitan areas. This interest is met by tabulations by census tracts. These census tracts are small homogeneous areas with an average population of 4,000 into which the metropolitan areas are divided. Corresponding tabulations are prepared for the 31,000 minor civil divisions into which the entire country is divided. Because of the interest in even greater areas detail, somewhat limited tabulations have been prepared by the separate city blocks in the thickly settled portion of the metropolitan areas. The U.S. Bureau of the Census found that there was a tremendous demand for much more data for 1970 than it published for 1960. Because of this demand, the publication programme has been expanded to 200,000 pages as compared to the 130,000 pages of 1960. Even this expansion is not sufficient to meet the demand for data. It was determined that it would be feasible to expand the tabulation programme for the 1970 census but not feasible to increase the publication programme beyond the 200,000 pages. Therefore it was decided to prepare the tabulations and to make them available at cost on computer tape to the users. A complete set of these summary tapes consists of more than 2,000 tape reels. The tabulation programme includes:

1. 248 data items for the 1,500,000 city blocks in the thickly settled portion of metropolitan areas.

^{1/} United Nations Publications Nº 67.XVII.3 and 67.XVII.4.

2. 1230 data items for the 250,000 block groups and enumeration districts.

3. 16,000 data items for the 34,500 census tracts in metropolitan areas and the 31,000 minor civil divisions that cover the entire United States.

4. More than 200,000 data items for the central cities and counties of metropolitan areas, other cities and counties of 50,000 inhabitants or more and the remainder of each state.

The users of these summary tapes are able to extract the specific information that they want for the required area. They are also able to consolidate the data into special areas comprised of smaller areas. For example the data for block groups and enumeration areas are being consolidated into school districts. The user also is able to select areas with specified characteristics and to perform various statistical manipulations of the data by areas. In addition to the published data, the U.S. Bureau of the Census prepares special tabulations on request for other government agencies and other analysts. There is a constant and continuing demand for these tabulations for a wide range of areas.

Many users have requested copies of the basic record tapes of the census so that they could prepare their own special tabulations. Because of the rules concerning confidentiality it was decided that these tapes could not be made available in their original form. It was also determined that a sample of the records could be released if the detailed geographic identification was removed from the record and that a sample of not more than one per cent of the total population was selected. Some potential users wanted a file that identified metropolitan areas. Others wanted the separate states and still others were interested in tabulations by size of place. It was decided that it might be possible to identify separate small areas and perhaps even the separate persons in the areas if all three criteria were followed for a single data file. Therefore, three separate 1 per cent files have been prepared with only one type of area identified in each file. Some of the census questions were asked of only 5 per cent of the population. Other questions were asked of a different 15 per cent sample. Since some of the users were interested in each of these sets of questions, separate files of each of the three geographic types were prepared for each of the two groups of questions. Of course each file also contains the data obtained for all persons and of persons in the 20 per cent sample. Thus the U.S. Census Bureau is making available six 1 per cent Public Use Samples, each contained on 30 tape reels.

The U.S. Bureau has conducted a number of special supplementary surveys relating to subgroups of the population - such as persons in selected occupations or in a designated age or racial group. A sample of such persons is selected from the group as identified in the census schedules. Also the census information is used as a sampling frame for many sample surveys such as the monthly Current Population Survey.

We now come to the basic question - How much of the practices of the United States are applicable to the Latin American countries? On the question of content of publication, the U.S. Census might suggest certain useful cross tabulating of the data. I believe that its emphasis on data for small areas is of special importance. The planning groups are interested in the structure and composition of the metropolitan areas. They wish to know the type of housing in the small component parts of the area. There is interest in the school attendance and educational attainment in the areas. In the U.S., the smallest component part is the city block. In order to prepare tabulations for these city blocks it is necessary to have an accurate identification of the block in which each housing unit is located. This may be especially difficult since the assignment for one enumerator may comprise several blocks and the block identification may be inaccurate. Therefore it may not be feasible to prepare accurate tabulations by city blocks. The small area easiest to identify is the separate work unit or enumeration area assigned to each enumerator. Of course, it is necessary to have maps to define the area but such maps are also required for the enumeration process in the United States.

The larger component areas are Census Tracts. These are component areas of the metropolitan areas. Each area contain an average of about 4,000 inhabitants. An effort is made to retain the area boundaries from census to census so that trends of change may be studied. The enumeration areas are also defined that an enumeration area is entirely within a census tract.

The summary tape operation is not practicable in most other countries. There is seldom a sufficient number of users with compatible computers and the ability to use the tapes to good advantage.

The U.S. approach which is most applicable is that of special tabulations and Public Use Samples. It should be recognized that the census contains a broad range of facts that will throw light on many problems. These extend from literacy, school attendance, education, migration, underemployment, and adequacy of housing. Special tabulation can be prepared with little effort through the use of the CENTS tabulation

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method or other software packages. The computer time is relatively small, especially when a sample of the total census is available. In some countries such a sample was selected as an advance sample. In other countries, the more detailed questions were asked on only a sample of the population. Even when a sample is not available it can be obtained by extracting the records for a sample of the housing units and their occupants. Some of these special tabulations might be prepared by the statistics office. In addition analysts in other government offices and at local universities could prepare the tabulations from samples of the basic record tape.

It is possible to conduct supplementary surveys of groups identified in the census. The usefulness of this activity is restricted by the mobility of the population. A significant portion of the selected group might have moved by the time the sample can be selected and the survey initiated. This factor does not decrease the value of the census as a sampling frame for a survey of the general population. The census is extremely valuable for this purpose and may be used even years after the census has been conducted.

In summary I should like to emphasize the fact that a population and housing census should be considered as an important and valuable tool for research. Its value is not restricted to that of the data contained in the bound volumes produced from the basic tabulations.