American Samoa Census: Report from the Field

One of the world’s most recent censuses took place in American Samoa over a period of two weeks centered on the night of 25 September. American Samoa government officials decided to conduct a special census this year to collect needed demographic data for use in educational and public health planning. They were also interested in gathering information about local customs, agricultural activities, and social organization. These local topics had not been sufficiently covered by the 1970 United States decennial census which included American Samoa.

American Samoa is part of the Samoan chain, which it shares with Western Samoa. These Polynesian islands are about 2,300 miles southwest of Hawaii. The largest island is Tutuila, wherePago Pago, the capital, is located on a deeply indented bay surrounded by steep, spectacular mountains. Tutuila occupies about 52 square miles of a total land area in American Samoa of 76 square miles. Also included are the Manu’a group of three small islands (Tau, Ofu, and Olosega), Aunuu, Swains Island, and Rose’s Island, the last inhabited only by birds.

EWPI Providing Assistance

The Government of American Samoa requested assistance from the East-West Population Institute in organizing the census, training personnel, and analyzing data. Dr. Petir Pirie, Assistant Director for Graduate Study, is coordinating Institute efforts; earlier this year he met with government officials to determine the kinds of information they wanted to obtain from the census and the tabulations that would be produced. He also discussed mapping procedures and ways of obtaining and training enumerators. Other preliminary steps included designing a schedule, writing an instruction booklet for enumerators, and developing procedures for the computer editing of raw data.

Mr. Michael J. Levin, EWPI Staff Researcher who assisted with the data analysis of the 1973 Census of the Trust Territory of the Pacific Islands, went to Pago Pago 15 August to help with the preparations for the census. He is working closely with Miss Evelyn Gebauer, statistician in the Development Planning Office. Census coordinator in American Samoa is Chief Nikalao Pula, who was Director of Education before his retirement.

Enumerators

Levin was responsible for training the enumerators, who were male and female teachers recruited from the Board of Education. Four major census districts were established, and these were subdivided into 95 enumeration districts. Each enumerator was responsible for recording individual and household data for about 300 individuals. One problem, said Levin, was arranging for all the enumerators to attend training sessions. In some cases Levin had to travel to other islands and either train the enumerators there or enumerate the population himself. A letter from Levin told of traveling 18 hours each way by ship to Swains Island, an atoll of the Tokelau group about 200 miles north of Pago Pago. He made the trip with the dentist who occasionally visits the island. While the dentist extracted more than 30 teeth, Levin enumerated the 33 inhabitants. Levin also made a trip to Manu’a to train the seven enumerators there.

Working Materials for Enumerators

In addition to the census schedules, each enumerator carried with him other materials to assist with later coding. A list of occupational categories was prepared to assist in classifying workers. Because Samoans, especially older people, are sometimes casual about reckoning their ages, Levin trained the enumerators to use special techniques to ascertain a person’s...
relative age. Each enumerator was given a list of important events—hurricanes, World War II, and other events that everyone remembers—and the dates of each. The enumerator was then trained to draw out of an informant the relationship between these important events and some datable event in the person’s life.

Publicity

Levin’s duties included a modest publicity campaign. He wrote articles for several local newspapers, and radio stations carried public affairs spot announcements. “But we should have had television coverage,” said Levin. “Some people don’t read newspapers, and many don’t have radios. But everyone has access to television and watches it frequently.” The entire educational system in American Samoa is built around the use of television. This innovative method was introduced in 1965, and television is a part of everyone’s daily life.

Rain and Unemployment

Anyone who has read Somerset Maugham’s short story “Rain” remembers his description of the incessant rain in Pago Pago. “Pago Pago is the rainiest place in the Pacific,” his character Mrs. Davidson said. “You see, the hills, and that bay, they attract the water.” Maugham continues: “(the rain) was like a deluge from heaven, and it rattled on the roof of corrugated iron with a steady persistence that was maddening. It seemed to have a fury of its own. And sometimes you felt that you must scream if it did not stop, and then suddenly you felt powerless, as though your bones had suddenly become soft; and you were miserable and hopeless.”

This summer it was different. Skies were bright blue, the sun shone, and less than three inches of rain fell compared with a normal summer of 27 inches. The island’s two tuna canneries, which use between 500,000 and 800,000 gallons of water a day, were forced to shut down operations early in September, throwing about a quarter of American Samoa’s total labor force out of work.

Because there were a number of questions about employment on the census schedule, officials were concerned about the sudden change in the employment status of many of the

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US CENSUS BUREAU TO HOLD PUBLIC MEETINGS ON 1980 CENSUS

Although it is slightly more than five years until the date of the next United States census—1 April 1980—the US Bureau of the Census is now in the early stages of planning for the 20th Decennial Census. The necessary goals are to finalize the content of the 1980 questionnaire by April 1977 and to conduct a “dress rehearsal” of the questionnaire in the spring of 1978.

With these goals in mind, the Bureau is making an extensive effort to elicit suggestions for the 1980 Census of Population and Housing from a wide range of users and potential users of decennial census data. Although there are limits to what and how much information can be collected and tabulated, the Bureau believes that it is very important to obtain and review the recommendations of as many users and potential users as possible in planning the decennial census. To that end, a number of open public meetings are being arranged and conducted by local organizations across the country with the cooperation of the US Census Bureau.

The Bureau is especially interested in obtaining local comments and recommendations because of its desire to make the census results more useful to the leaders and citizens of these communities. Following the 1970 census, communities themselves pointed out the significance of the census data and their usefulness at the local level by making thousands of requests for information for a variety of community planning and action programs. Aside from the billions of dollars in Federal funds that are allocated to local governments on the basis of census figures, community leaders and private citizens often asked for census statistics for such purposes as estimating the need for adult education services, locating sites for daycare centers, planning highway routes, and designing public health programs.

Local chapters of the American Statistical Association, chambers of commerce, councils of governments, and other professional, civic, and business organizations will act as sponsors of the meetings. Local organizations are being encouraged to arrange meetings and to plan the agenda around local needs and interests. The Bureau will send two or three staff members to each meeting to speak briefly about current census planning efforts, answer questions, and bring the local comments and recommendations back to the Bureau. Because the emphasis is on eliciting local ideas, however, Bureau participation in the actual proceedings is kept to a low level.

The first meeting was held 30 October in New Orleans, Louisiana, cosponsored by the Economic Development Council of the New Orleans Area, the Division of Business and Economic Research at the University of New Orleans, the New Orleans Department of Commerce District Office, and the Louisiana chapter of the American Statistical Association.

Approximately 60 cities have been selected as tentative sites for local public meetings. Planned meetings will be publicized in newspapers and other media in the communities where they are held. Another set of local meetings may be conducted later in the decade to obtain further recommendations when the outlines of the 1980 census program are more firmly established.
enumerations...

REPUBLIC OF CHINA

- The plan for the 1976 Census of Population and Housing of the Republic of China has been prepared and approved by the Executive Yuan. A special working group for the census will be responsible for program guidelines, a census implementation plan, procedures for selecting samples, enumeration, and data processing.

- In order to meet census and other statistical needs, the National Standard Classifications on Industry, Occupation, and Education will be revised. A special committee began work on the revisions in September.

- A study of the population projections in rural areas of Taiwan is now being prepared by the Joint Commission on Rural Reconstruction.

- Mr. Tze Hwa Fan, a staff member at the Department of Population, Ministry of Interior, is currently working on detailed life tables for Taiwan using data from the 1966 census. Mr. Fan was a participant in the East-West Population's Third Summer Seminar in Population in 1972.

- Mr. Shui-liang Tung, Chief of the Department of Labor Statistics at the Bureau, has joined the Institute as a degree student. Mr. Tung arrived in Honolulu in August to begin work on a master's degree in economics at the University of Hawaii. His advisor is Dr. Dennis Chao, EWPRI Research Associate and Assistant Professor of Economics at the University.

- Mr. Tun-Yih Lu, Senior Statistician at the Bureau of Statistics, is now also Executive Secretary of the Committee on National Income and Economic Forecasting. This committee, which includes the manpower section, is responsible for providing the information on which the budget for economic development is based.

The government is stressing economic development in the next five years and planned to publish an economic planning model in October. The Executive Yuan is also beginning to draft a report on manpower demand and supply for the next five years.

THE PHILIPPINES

- The National Census and Statistics Office (NCSO) is the new name of the census organization in the Philippines. Formerly known as the Bureau of the Census and Statistics under the Department of Trade and Tourism, the office is now under the National Economic and Development Authority. Dr. Tito A. Milares is Acting Executive Director and Assistant Director General of Statistics.

- A new Population Research Division with about 30 staff members is being established in the NCSO with funds provided by the Philippine government and the UN. Dr. Yun Kim is acting as UN consultant for the new division. Dr. Kim, Associate Professor of Sociology at Utah State University, earned his Ph.D. in Demography at Australian National University.

Objectives for the new division include: an evaluation of the accuracy and completeness of all demographic statistics collected by NCSO; research to improve data collection instruments; additional training and research for NCSO personnel, particularly in the population area; and preparation of several census research monographs about topics such as detailed population projections, the school population and teacher needs, the Philippine labor force, fertility trends and differentials, mortality trends and life tables, and marriage and the family.

BANGLADESH

- The Housing and Establishment Census was taken in Bangladesh 17–30 November 1973. Editing and coding were completed in August, and staff members of the Data Processing Centre (DPC) in the Census Commission are processing the sampled schedules. They are also engaged in drawing a sample from the population census registers and editing and coding the sampled schedules of the population census. To complete the latter task more quickly, DPC staff have been working in two shifts since 1 August.

Machine processing of these various data will be done on ninety MDS encoders and two converters that have been imported from abroad. UNFPA is sharing the cost of US$364,996. Operational staff of DPC began a training course 20 August to learn to use these machines.

- Most of the tables from the Retrospective Survey of Fertility and Mortality (RSFM) should be ready by the end of the year. Editing, coding, and transcription of RSFM schedules were completed in August by the Survey and Sampling Division of the Bangladesh Census Commission. Data from the survey, which was conducted in April, are being processed in the United Kingdom.

- Mr. Saffiullah Majumder, Joint Census Commissioner, returned home from the United States after completing ten weeks of training in postenumeration census management at the International Statistical Programs Center under the sponsorship of USAID.

- Mr. Md. Amir Hossain, a statistical investigator in the Bangladesh Census Commission, is in India for a year's training in demography and research at the International Institute for Population Studies at Deonar-Bombay, under the auspices of the UN Economic and Social Commission for Asia and the Pacific (ESCAP, formerly ECAFE).

MALAYSIA

- The Department of Statistics has initiated a Statistical Newsletter to give greater publicity to the work of the department and the services it provides. The Census Division will contribute information about available data, publications released, and ways in which the public and interested governmental agencies may use census data.

- Malaysia is hosting a six-week regional training course on the analysis of migration data obtained in the 1970–71 round of censuses. Participants from more than a dozen countries are attending the ESCAP-sponsored course, which began 1 November. Malaysia's delegate is Mr. Harbans Singh of the Census and Demography Division. He has been involved with work on migration data from the 1970 Population Census.

THAILAND

- During the World Population Conference in Bucharest, members of ESCAP delegations held 13 informal meetings to review the developments taking place at the conference and to consolidate the regional position. They were especially interested in the World Population Plan of Action and the proposals made for that plan by representatives at the Regional Consultation held in Bangkok in May. Delegates recommended that a post-World Population Conference Consultation be organized jointly under the auspices of the United Nations, UNFPA, and ESCAP to consider a regional population strategy for development and a program of action. The consultation is scheduled for the second week of January 1975 in Bangkok.
WORKSHOP ON MEASURING SOCIOECONOMIC STATUS SCHEDULED AT POPULATION INSTITUTE

James Palmore Coordinating, Charles Nam Consulting for December Conference

The East-West Population Institute will sponsor a Workshop on Measuring Socioeconomic Status (SES) to be held at the East-West Center in Honolulu 9–13 December. Approximately 15 prominent population scientists from Asia and the United States will meet to discuss the use of socioeconomic measures as social indicators and the relationship of socioeconomic status to demographic behavior. They will also be concerned with ways to obtain SES information from census and other demographic data sources and methods and techniques for measuring SES, including data tabulations and analysis.

The conference is designed to comply with the recommendations made and approved by participants in the Third Population Census Tabulation Workshop-Conference held at the East-West Center in March of this year. The group recommended that technical seminars be held on the measurement of socioeconomic status, urbanization, and internal migration. These seminars could experiment with alternative measures in countries with suitable data and prepare background documents for the next EWPI Census Workshop-Conference in 1975.

Seated left to right at a planning meeting for the SES Workshop are Dr. Charles B. Nam, Dr. James A. Palmore, and Dr. Lee-Jay Cho. Not wishing his attire to indicate his socioeconomic status, Dr. Nam joined his EWPI colleagues in donning an Aloha shirt for the session.

Dr. James A. Palmore, EWPI Assistant Director for Research and Professor of Sociology, University of Hawaii, is coordinator of the conference. Acting as consultant is Dr. Charles B. Nam, Director of the Population and Manpower Research Center at Florida State University’s Institute for Social Research. Dr. Nam, whose work on socioeconomic measurement has been widely recognized, presented a paper at the Census Workshop-Conference in March in which he identified some of the problems associated with SES as a variable in census analysis. He said:

Socioeconomic status is one of the most frequently used but least well-defined concepts in demographic re-

search. It is clear to most students of population change that demographic developments are intimately linked with social and economic development, and that the demographic behavior of individuals is highly associated with their social condition. Yet there is no agreement as to what the dimensions of socioeconomic status are, how they are interrelated, and what indicators should be used to measure them.

Dr. Nam spent a week in September at the Population Institute, discussing plans for the conference with Dr. Palmore and Dr. Lee-Jay Cho, EWPI Director. Interviewed during his visit, Nam said that population specialists have paid a great deal of attention to refinements in the measurement of basic demographic components—fertility, mortality, and migration—but they have not been very concerned with measurement of socioeconomic status. He considers this lack of concern regrettable, because so much demographic theory and research involve analysis of differences in population structures and processes among various groups in society. “Unless we describe these groups in meaningful ways,” he pointed out, “we will have failed to indicate the real dynamics of population change.”

Workshop Topics

The forthcoming workshop will cover a number of subjects in the realm of socioeconomic data collection and analysis. Topics will include conceptual issues, the availability and nature of appropriate demographic data, the development of social indicators, problems of occupation classification, strategies for analyzing socioeconomic changes, and the measurement of areal patterns of socioeconomic status. Conferences will also discuss ways in which SES data can be made comparable, both intranationally and internationally.

Dr. Nam said that experimentation with SES measurement has been carried out in a number of countries, and participants at the workshop will report their own experiences with such efforts. Dr. Nam expects that the meeting “will generate a greater appreciation for more careful socioeconomic measurement and corresponding attention by census and survey officials to needs in this area.”

Participants

Representatives have been invited from Thailand, Malaysia, Singapore, India, and the Republic of Korea. U.S. participants include Mr. Sam Baum, International Statistical Programs Center, U.S. Bureau of the Census; Dr. David Featherman, Associate Professor of Sociology, University of Wisconsin; Dr. Abbott Ferriss, Professor of Sociology, Emory University; Dr. Donald Trieman, Associate Professor of Sociology, Columbia University; and Dr. David Sly, Professor of Sociology, Florida State University.

Also attending will be EWPI interns from Gadjah Mada University in Indonesia and the National Statistical Office in Thailand who are engaged in census research.

Proceedings

Dr. Palmore said that the country reports and a summary of discussions would be published after the conference. Recommendations regarding SES indices and measurement are expected to be presented at the Fourth Population Census Tabulation Workshop-Conference next April.
PROTECTING CONFIDENTIALITY IN CENSUS TABULATIONS

How to Tell Everything about Everybody While Telling Nothing about Anybody

by Edmund M. Murphy

"To say what you mean is to be found out."

— Oscar Wilde

The very idea of keeping census information confidential presents a paradox. The census has become associated in the public mind and especially in the scholarly mind with the publication of vast and detailed tables. Indeed, the publication of these gray volumes has been offered, by some curious twist of logic, to the public as a reward for cooperating with the census. Why then be worried about disclosure of information when the gathering and subsequent disclosure is a definition of a census?

The resolution to this paradox is related to that hoary injunction to the humorist that he must attack armies, not individuals. Even though census officials are, in fact, embarrassed by the amount of information one can glean about national armies by a clever reading of census publications, the principle, rephrased, is the same. The census should present information about groups of people, not about individuals.

Until the recent flurry of public interest and private concern over privacy, a flurry sparked largely by exaggerated claims of omniscience by hawksers of expensive electronic gadgetry, few were concerned by the fact that census tabulations could be a source of gossip as well as data. For years census tables had revealed such goodies as the exact income of the only rich man in a small area, the race of the only family whose complexion was of a different hue, the number of cars the only engineer in a small town owned, and the fascinating fact that there was a divorced living in the village and, if there were only one, most of his or her personal characteristics. These disclosures were rare and scattered but they did exist and nobody cared. Today many do care. The availability of tables for very small areas on magnetic tape file has rightfully deepened the concern.

An illustration of how one may be found out in an innocent census table is perhaps in order. Consider the following tabulations from a typical small Canadian community:

### Table 39: Occupational Distribution

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common drudge</td>
<td>4,379</td>
</tr>
<tr>
<td>Car thief</td>
<td>0</td>
</tr>
<tr>
<td>Demographer</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4,380</td>
</tr>
</tbody>
</table>

### Table 2: Income Distribution

<table>
<thead>
<tr>
<th>Income</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 999</td>
<td>4,379</td>
</tr>
<tr>
<td>1,000 to 49,999</td>
<td>0</td>
</tr>
<tr>
<td>50,000 to 51,999</td>
<td>1</td>
</tr>
<tr>
<td>52,000 and over</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4,380</td>
</tr>
</tbody>
</table>

Think of the excitement when these tables hit the streets:

"I had no idea there was a demographer living here; I bet it's that woman in the tweed jacket."

"I knew she was rich, but 50,000!"

"So, you phoney, you aren't the car thief you claimed to be!"

"So, that rich lady is a demographer, and look how much she makes; there must be real money in dirty books!"

And all of this without the richest source of such tabular tidbits—the cross-tabulation. Consider the typical cross tab for the same typical community:

### Table 73: Marital Status by Occupation

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Occupation</th>
<th>Common drudge</th>
<th>Car thief</th>
<th>Demographer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Ever married</td>
<td>4,378</td>
<td>0</td>
<td>0</td>
<td>4,378</td>
<td></td>
</tr>
<tr>
<td>Divorced, etc.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4,379</td>
<td>0</td>
<td>1</td>
<td>4,380</td>
<td></td>
</tr>
</tbody>
</table>

"I knew they weren't really married."

"And to think that she is actually divorced, etc."

Publication of tables such as these may increase the sales of census small area series, but it may also decrease the amount of accurate data supplied the census. A public notion that one should tell the census only what he tells his neighbors is not a healthy starting point for data collection.

In the sequel several ingenious means for avoiding these difficulties will be discovered. In addition, we shall see how one of the more elegant of these solutions was negated by unreflecting educators who introduced subtraction into the common curriculum.

Mike Murphy contemplates the next installment of his article for the newsletter. The recipient of a Ph.D. in Sociology from the University of Chicago in 1966, Murphy worked with the Population Institute at the University of the Philippines and the Economic Research Centre at the University of Singapore. Later he joined the faculty of the University of Pennsylvania. Now a resident of Canada, Murphy has held governmental positions at both the national and provincial levels. He is currently Director of the Research Projects Group in the Manpower and Immigration section of Statistics Canada.
POPULATION MAPS OF JAPAN: 1970 POPULATION CENSUS

by Tadatoshi Sakai

At the Census Workshop-Conference at the East-West Center in March, Japan's representatives, Mr. Sadanori Nagayama and Mr. Tadatoshi Sakai, showed participants samples of the map series produced from data from Japan's 1970 Population Census. They suggested that the next Census Conference devote a session to a discussion of maps as a way of presenting census data. At our request, Mr. Sakai sent the following description of the 24 population maps published by Japan's Bureau of Statistics. He also provided an Appendix, "Preparation of the Population Distribution Map by Landforms," which gives detailed information about the design, method of preparation, and problems of Map 1 in the series. Copies of the Appendix may be obtained without charge from the Census Newsletter Editor, East-West Population Institute, Honolulu, Hawaii 96822. The maps may be purchased from the Bureau of Statistics, Office of the Prime Minister, 95 Wazakamitsucho, Shinjuku, Tokyo 162, Japan.

Since the 1950 Population Census of Japan, various kinds of population maps based on minor administrative divisions (shi, ku, machi, and mura) have been included as parts of the publications of the population census returns. On the basis of the 1970 Population Census returns, the population maps listed below were published by Japan's Bureau of Statistics. Maps were printed in Japanese and English.

Population Distribution by Landforms (map 1)

Base map. The base map covers the whole country in three sheets (each sheet is 788mm x 1091mm) and was prepared on the basis of International Maps of 1:1,000,000 made by the Geographical Survey Institute, Ministry of Construction.

On the base map are contours, boundaries of shi, ku, machi, and mura of prefectures (as of 1 October 1970), national railways, main highways, place names of cities having 100,000 inhabitants or more, and other information.

Presentation of Population Distribution. A population cluster with 1,000 inhabitants or more was shown as a round shape colored gray. The diameter of the round shape was proportional to the size of the population cluster as follows:

<table>
<thead>
<tr>
<th>Size of Population</th>
<th>Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000 — 4,999 persons</td>
<td>1.0 mm</td>
</tr>
<tr>
<td>5,000 — 24,999 persons</td>
<td>1.6 mm</td>
</tr>
<tr>
<td>25,000 — 49,999 persons</td>
<td>2.3 mm</td>
</tr>
<tr>
<td>50,000 — 99,999 persons</td>
<td>3.3 mm</td>
</tr>
</tbody>
</table>

Each round shape was located at the center of the population cluster. Population clusters with 100,000 or more inhabitants, together with their contiguous small clusters, were presented in their original shapes.

Population other than the clusters mentioned above was shown by gray-colored dots 0.4 mm in diameter. The number of dots was equivalent to the quotient obtained by dividing by 500 population other than that of the cluster within the same shi, ku, machi, and mura.

Dots were distributed with reference to topographical maps of a scale of 1:200,000 or 1:50,000 prepared by the Geographical Survey Institute. Enumeration district maps of the 1970 Census were also used.

Population Density (map 2)

Base map. The base map covers the whole country in one sheet (788mm x 1091mm) on the scale of 1:1,500,000. On the map are boundaries of shi, ku, machi, and mura, and prefectures as of 1 October 1970. Maps numbered 2 through 21, 23, and 24 of the 1970 Population Maps of Japan used the same base map.

Presentation of Population Density. Population density per square kilometer for each shi, ku, machi, and mura was classified into nine categories: fewer than 50 persons, 60—99, 100—199, 200—299, 300—499, 500—699, 700—999, 1,000—1,999, and 2,000 or more. Categories were presented in different tones of brown by the choropleth method.

The terms shi, ku, machi, and mura refer to administrative subdivisions of Japan. Shi is an incorporated municipality, generally with a population of more than 30,000 inhabitants. Machi refers to an administrative unit with fewer powers and a less complex organization than a shi, more powers and a more complex organization than a mura. The machi includes both a central settlement and the surrounding agricultural area; it is usually larger and more "urban" in character than the mura. A mura is the most agricultural and rural of the administrative units into which Japan is divided. A mura often includes several buraku, or village settlements. A ku is an administrative area or ward within the seven largest cities of Japan: Tokyo, Osaka, Nagoya, Yokohama, Kyoto, Kobe, and Kitakyushu. Definitions are from the glossary of The Population of Japan, by Irene B. Tauber (Princeton University Press, 1958).

Rate of Population Change (map 3)

These maps consist of three sheets colored by the choropleth method. The first sheet shows the rate of population change from 1955 to 1960. The second and third show the rates of change from 1960 to 1965 and from 1965 to 1970 respectively. Boundaries of shi, ku, machi, and mura are shown as of 1 October 1970, and the population in 1965, 1960, and 1965 for each subdivision has been readjusted on the basis of the boundaries as of 1 October 1970.

Percent Working Age Population (map 4)

"Percent working age population" means the percentage of the total population in the age group 15 to 64 and is computed according to the following formula:

\[
\text{Population aged 15 to 64} \times 100.0 \\
\text{Total population}
\]

The percentage for each municipality was classified into four categories: under 80.0%, 80.0—64.9%, 65.0—69.9%, and 70.0% and over. Categories were presented by the choropleth method.

Ratio of Aged Population (map 5)

"Ratio of aged population" means the ratio of persons aged 65 and over to those aged 0 to 14. The following method is used to find the ratio:

\[
\text{Population aged 65 and over} \times 100.0 \\
\text{Population aged 0 to 14}
\]
Percent Population Moved after 1965 (map 6)

"Percent population moved after 1965" means the percentage of the total population who moved to their present residences after January 1965.

Number of Persons per Household (map 7)

"Number of persons per household" means the average number of ordinary household members per ordinary household.

Percent Family Nuclei (map 8)

"Percent family nuclei" means the percentage of total ordinary households that are nuclear-family households. The percentage is computed by using the following formula:

\[
\text{The number of the family nuclei} \times 100.0
\]

Ordinary households were classified, according to the relationship among household members, into three categories: households with relatives, households with nonrelatives, and one-person households. Households with relatives consist of the family nuclei and other relatives and are further divided into 13 minor groups. The minor classifications are based on the relationship between the couple of the youngest generation and other related household members, regardless of the presence of unrelated household members. Households with nonrelatives consist of the head of a household and others not related to him.

Percent Employed Households (map 9)

"Percent employed households" means percentage of total ordinary households that are employed households. The following formula is used:

\[
\text{The number of employed households} \times 100.0
\]

Percent Agricultural Household (map 10)

"Percent agricultural household" means the percentage of total households that are agricultural workers' households.

The 1970 Population Census, households were classified into economic types according to the labor force status, industry, and employment status of the head of the household and the related household members. The three basic groups were agricultural workers' households, mixed households, and nonagricultural workers' households. A total of ten smaller groups were recognized within these three basic groups. Other groups were households without a worker and households whose economic type did not belong in any other category.

Number of Dwelling Rooms per Household (map 11)

"Number of dwelling rooms per household" means the average number of dwelling rooms per ordinary household living in a dwelling house. Living quarters were classified for the 1970 Population Census into the following two types:

- Dwelling houses. A dwelling house is defined as a durable structure or a structurally separated part of a structure built or renovated in a manner suitable for the separate home life of a family. For instance, a detached private house, or each apartment of an apartment house that is completely partitioned and built for a separate family, is included in this type. Also included are dwelling houses with a store or workshop attached to them.

- Dormitory and others. A dormitory or a boarding house is defined as a building built or renovated as a residence for a group of unmarried students or workers. Others include all living quarters other than the dwelling house, dormitory, and boarding house, such as hospital, school, hotel, office, factory, and bureau. A temporary hut, such as emergency tent or barracks, is also included in this category.

Number of Tatami per Household Member (map 12)

"Number of tatami per household member" refers to the floor space available to each household member living in a dwelling house.

Tatami are mats that are used to cover the floor area of a room from wall to wall. The size of tatami varies slightly from one region to another, but generally they are 3 feet by 6 feet. Rooms are designed so that the floor space will accommodate a number of standard-sized tatami. Thus, in Japan the people do not speak of a room as so many square feet but as being a 3-tatami room, 6-tatami room, and so forth.

Percent Owned Houses (map 13)

"Percent owned houses" shows the percentage of total ordinary households living in dwelling houses owned by themselves. Tenure of dwelling houses is classified into the following five categories:

- Owned house refers to a dwelling house, including an apartment, owned by a household living in it. The owned house category includes a house that has not yet been registered or a house purchased in installments and not yet paid up.

- Publicly owned refers to a rented house or apartment managed by prefectural or municipal governments, Japan Housing Corporation, Public Corporation for Housing Supply, Housing Association, and so forth, excluding an issued house.

- Privately owned refers to a house rented by the household living in it, other than a rented house or apartment that is publicly owned.

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Mr. Sadanori Nagayama, Chief of the Tabulation Division of Japan's Bureau of Statistics (left), is shown here with Dr. Sam Suharto, Director of the Data Processing Center, Central Bureau of Statistics, Indonesia. The pair were photographed at the March Census Conference at the East-West Center in Honolulu.
Issued house refers to a dwelling house owned by a company, private organization, or the government and issued to the employee and his household for the convenience of his service or as a partial payment of his wages. It makes no difference whether rent is actually paid or not.

Rented room refers to a rented room in a part of a dwelling house (that is, owned, rented, or issued) occupied by another household.

Percent Persons Completed Elementary School (map 14)
The percentage is computed as follows:
\[
\text{Persons whose highest schooling career was elementary school or junior high school} \times \frac{100}{\text{Population 15 years old and over}}
\]

Percent Persons Completed Junior College or University (map 15)
The following method is used to find the percentage of junior college or university graduates:
\[
\text{Persons completed junior college or university} \times \frac{100}{\text{Population 15 years old and over}}
\]

Percent Workers Employed in Primary Industries (map 16)
Primary industries include agriculture, forestry and hunting, and fishing and aquaculture. The following formula is used to find the percentage of workers in primary industries:
\[
\text{Workers employed in agriculture, forestry and hunting, and fishing and aquaculture by place of work} \times \frac{100}{\text{Employed persons 15 years old and over by place of work}}
\]

Percent Workers Employed in Secondary Industries (map 17)
Mining, construction, and manufacturing are considered secondary industries and the percentage of workers in these industries is found as follows:
\[
\text{Workers employed in mining, construction, and manufacturing by place of work} \times \frac{100}{\text{Employed persons 15 years old and over by place of work}}
\]

Percent Workers Employed in Tertiary Industries (map 18)
The percentage of workers employed in tertiary industries is found as follows:
\[
\text{Workers employed in wholesale and retail trade, finance and insurance, real estate, transportation and communication, electricity, gas, and water, services, and government, by place of work} \times \frac{100}{\text{Employed persons 15 years old and over by place of work}}
\]

Percent Workers in Production and Transport Occupations (map 19)
The percentage of production and transport workers is found as follows:
\[
\text{Workers in mining and quarrying occupations, workers in transport and communications occupations, and craftsmen, production process workers, and laborers} \times \frac{100}{\text{Employed persons 15 years old and over}}
\]

Percent Workers in Sales and Service Occupations (map 20)
The percentage of workers in sales and service occupations is computed as follows:
\[
\text{Sales workers, protective service workers,} \times \frac{100}{\text{Employed persons 15 years old and over}}
\]

Percent Workers in Clerical, Technical, and Managerial Occupations (map 21)
The percentage of workers in clerical, technical, and managerial occupations is figured according to the following formula:
\[
\text{Clerical and related workers, professional and technical workers, and managers and officials} \times \frac{100}{\text{Employed persons 15 years old and over}}
\]

Workers and Students Commuting to Large Cities (map 22)
The number of workers and students commuting to 36 cities with 300,000 or more inhabitants by the 1970 Population Census was shown in this atlas. Square shapes were used to indicate each municipality that was usual place of the workers and students. Square shapes colored green for the 1960 Census and red for the 1970 Census were shown.

The number of commuting workers and students in the 1960 Census was readjusted according to the boundaries of 1 October 1970. A side length (mm) of the square shape was drawn by the following formula:
\[
1.5 \times \sqrt{\frac{\text{the number of the commuting workers and students}}{100}}
\]

The atlas consists of 21 sheets. Boundary maps of shi, ku, machi, and mura on the scale of 1:500,000 were used as base maps.

Distribution of Commuting Persons by Means of Transportation (map 23)
Commuting persons are defined as those employed or attending school who are 15 years old and over. Three categories of transportation were shown by percentage for each municipality. Different colors represented the three categories: railway, subway, streetcar, and bus; on foot; and owned car, motorcycle, bicycle, and other means.

Ratio of Day- and Night-Time Population (map 24)
The ratio is computed as follows:
\[
\frac{\text{Population for place of work or schooling}}{\text{Population for usual place of residence}} \times 100
\]

Mr. Tadatoshi Sakai (left) is Deputy Chief of the Population Census Section in the Bureau of Statistics, Tokyo. As Japan’s correspondent for the census newsletter, he contributed the accompanying article about population census maps of Japan.
NOTES ON WORLD PLAN OF ACTION

A World Population Plan of Action, containing recommendations and guidelines aimed at a "better quality of life and rapid socioeconomic development" for all people, was adopted by the UN World Population Conference held in Bucharest, Romania, 19–30 August 1974. Delegates from 136 countries attended the conference, which was convened by the Economic and Social Council.

The 108-paragraph Plan of Action is intended to "help coordinate population trends and the trends of economic and social development." The Plan contained recommendations and statements of principles on population and social-economic policies, promotion of the status of women, the family, improvement of health services, urbanization, internal and international migration, research, and education. Among the recommendations and statements are:

Countries that consider their birth rates "detrimental to their national purposes" are invited to consider "setting quantitative goals and implementing policies that may lead to the attainment of such goals by 1985."

If the birth rate in developing countries as a whole is to be reduced from the present 38 per thousand to 30 per thousand by 1985, "substantial national efforts" supported by adequate international assistance would be required.

The mortality level, particularly among children, in all regions should be reduced to the maximum extent, with the goal of a world average life expectancy of 62 years by 1985 and 74 by 2000. This would require, by the end of the century, an increase of 11 years for Latin America, 17 years for Asia, and 28 years for Africa.

The Plan "recognizes the variety of national goals with regard to fertility and does not recommend any family-size norm." At the same time it recommends that countries should:

"Encourage appropriate education concerning responsible parenthood and make available to persons who so desire advice and means of achieving it;"

"Respect and ensure, regardless of their overall demographic goals, the right of persons to determine, in a free, informed, and responsible manner, the number and spacing of their children;"

"Systematically and periodically assess their population problems and needs so as to promote informed, rational, and dynamic decision making in matters of population and development;"

More developed countries "and other countries able to assist" are urged to increase their assistance to developing countries. The Plan calls for continuous monitoring of population trends by the United Nations and periodic review and appraisal of progress towards goals of the Plan.

Several provisions of the original draft Plan of Action, which a number of delegations viewed as implying targets for reducing growth rates, were the subject of debate as well as intensive negotiations in the Working Group and its informal subgroups. The Working Group on the Plan of Action thus deleted or modified various statements in the original draft plan, while adding to the final version a greater stress on links between population trends and economic and social factors.

For example, the original draft recommended that governments make available "the means to practice family planning effectively" not later than 1985. The 1985 target date was deleted from the final text.

Also deleted were references to the fact that a majority of the world's people live in countries wishing to reduce present fertility levels and favoring small family-size norms. On the other hand, new provisions were added relating to respect for human life, the family as the basic unit of society, and the right of women to equal participation in educational, social, economic, cultural, and political life.

This article was contributed by Mrs. Amanda Walee, Director of the Population Survey Division of Thailand's National Statistical Office. Excerpts quoted are from United Nations Center for Economic and Social Information Note OPI/ CESI Note/263.

AUSTRALIAN FIELD TEST:
Preliminary Impressions

Newsletter correspondent Tony Hart sent some preliminary results of the field test held in July in Sydney and in a rural center 200 miles west of Sydney. Three schedule types were tested: a booklet similar to the 1971 Australian schedule, a sheet with room for information about eight individuals, and a computer-readable schedule. "The computer-readable schedule, which uses optical mark reading techniques, was surprisingly well filled in," said Hart. "The booklet used in the 1971 Census performed adequately, but the sheet schedule for eight persons suffered a response rate that was significantly lower than that of the other two schedules."

A number of new questions were included in the field test. According to Hart, "most of the new questions tested performed well, including an income question." He said that inclusion of an income inquiry seemed to have no discernible effect on overall response. "The two experimental collection systems, both using sealed envelopes but with one requiring no surname of respondents, were not successful," he continued. "They did not improve either response levels or quality and to our detriment resulted in an unacceptably high proportion of respondents' taking advantage of the sealed envelope and returning completely blank schedules."

"We propose to hold a second smaller test in Sydney in November," continued Hart. "We have not yet completely rejected the sheet type schedule, and a totally revised format is to be tried. Questions on the booklet that required some wording will also be tested. In addition a new schedule that incorporates most of the advantages of the booklet and sheet will be tested. It is very similar in format to that tested recently in the United Kingdom."

Census Branch Reorganization

Hart's letter also contained news of a reorganization of the Census Branch of the Australian Bureau of Statistics (ABS). "After a number of years in the pipeline," he wrote, "the Population Census Branch has been restructured. It remains part of the ABS but is now divided into two sections. These sections, each under a Director of Census, are the Field and Processing Organisation Section and the Evaluation and User Service Section." The former, under the directorship of Ken G. Crawford, is responsible for the census field and processing systems, both the actual operation and methodological research as well as all Census Branch liaison with the ABS computer group. The Evaluation and User Service is headed by Tony Hart and has under its wing all user contact and dissemination service, the development and implementation of evaluation procedures, and all general Branch coordination operations.
OWN-CHILDREN METHOD OF FERTILITY ESTIMATION SUBJECT OF EWPI WORKSHOP

Statisticians and computer programmers from six Asian countries will gather for a month-long workshop on the own-children method of fertility estimation beginning 11 November at the East-West Population Institute. Coordinated by Dr. Lee-Jay Cho, EWPI Director, and Dr. Robert Retherford, Assistant Director for Professional Development, the workshop will advance own-children research in several Asian countries. According to Dr. Retherford, one of the principal aims of the workshop is to further the development and application of a general computer package that will be easily adaptable to censuses in different countries. Eventually a handbook on the own-children method of fertility estimation will be prepared to facilitate the use of the technique in any country that wishes to use it.

Participants
Participants have been invited from Bangladesh, Indonesia, the Republic of Korea, Pakistan, the Philippines, and Thailand. Also attending will be Mr. Eduardo Arriaga and Mr. Michael Hewett from the US Bureau of the Census. The Economic Commission for Africa (ECA) is sending a representative, Mr. Patrick Ohyemaechi Odaike.

Mr. Howard Brunsman, former Chief of the Population Division of the US Census Bureau, is a consultant for the development of the computer package. Mr. Brunsman is the developer of CENTS and COCENTS, program languages used for processing census data. Also acting as consultant for the conference is Ms. Ann Midkiff, former EWPI data analyst now associated with the Regional Medical Program of Hawaii. Dr. Griffith Feeney, EWPI Research Associate, will join in the workshop, as will members of the Institute’s data processing staff, Ms. Minja Kim Choe, Ms. Victoria Ho, Ms. Judith Tom, and Ms. Carol Carlson.

Agenda
Programmers will arrive 10 November and will spend two weeks reviewing the own-children method and package design. They will participate in the statisticians’ workshop 25–27 November and will then, with the assistance of the EWPI data processing staff, begin adapting the general own-children package to their own countries’ computer systems. Statisticians arrive 24 November for the three-day workshop, during which they will develop guidelines for the application of the method to their own countries, including considerations of cost and tabulation plan. Representatives of participating countries will bring with them a sample census tape with housing and population information for a small area, along with necessary documentation.

The Own-Children Method
In a recent paper Drs. Retherford and Cho described the own-children method as a census- or survey-based reverse-survival technique that provides estimates of age-specific fertility rates for years prior to enumeration. Typically the technique is applied to census data, and rates are calculated for each year since the previous decennial census. The technique and its application to data from the United States, the Republic of Korea, and Malaysia have been elaborated in a series of publications dating back to 1965.

The authors explain that the method has some distinct advantages as a means of obtaining age-specific fertility rates for prior years. Usually it does not require additional data collection if applied to an existing census or survey; only a limited recoding of existing information is necessary. The fertility measures obtained, like those from other census- or survey-based techniques, can be tabulated for the full range of socioeconomic characteristics available from the interview questionnaire, a possibility that does not exist in the case of vital statistics-derived measures.

"Therefore," continues the Retherford-Cho paper, "own-children derived fertility measures provide an excellent data base for the study of differential fertility and, when data are available for more than one census or survey, for the study of the factors influencing the trend in fertility. The technique is especially useful in countries with inadequate vital registration."

Several papers and reprints describing the own-children method and its application are available without charge to newsletter readers. Requests should be addressed to Newsletter Editor, East-West Population Institute, East-West Center, 1777 East-West Road, Honolulu, Hawaii 96822.

Making plans for the Own-Children Workshop are (left to right) Dr. Robert Retherford, Ms. Victoria Ho, Mr. Howard Brunsman, Dr. Lee-Jay Cho, and Ms. Ann Midkiff.
It has become obvious to your reviewer that keeping up with the output of new census publications from Asia and the Pacific is a full-time occupation. It is possible that some new publications, despite the help of our correspondents from different countries, will escape my attention. Once again, I would like to ask anyone who knows of new census items that could be brought to the attention of others to please advise the newsletter editor.

Census Data from the Philippines
The first series of publications I would like to mention comes from the Bureau of the Census and Statistics (now called the National Census and Statistics Office), Manila, Philippines. The 1970 Population and Housing Census of the Philippines was conducted 8 May 1970, and the final provincial reports—67 in all—will be out by the end of December. Each report contains statistics collected for the whole province, as well as those for the urban and rural areas, municipalities, and barrios. Information in each report includes number of inhabitants, age, sex, marital status, and other demographic characteristics. Data on literacy, school attendance, migration, fertility, labor force, and other social and economic conditions are also provided. The basic demographic information was collected for every individual, but sampling was utilized in the compilation of household data on literacy, migration, fertility, and economic activity.

In addition to the 67 provincial reports, a final National Summary will be published by the end of 1974. There will also be special reports on education and employment, mother tongue spoken, and housing characteristics. Another series published by the Philippine census organization is the Technical Papers. Written by staff members, these reports analyze various demographic methods or explain aspects of Philippine population growth. The latest to appear is Technical Paper number 5, The Growth of Urban Population in the Philippines and its Perspective, by Dr. Tito A. Mijares and Francisco V. Nazaret. This study, in the words of its authors, "represents a modest effort to analyze and present in historical perspective the different urban-rural definitions and concepts as applied to the census of the Philippines since 1939." The authors describe present-day urban areas in the Philippines and provide a methodology for projecting the urban population to the year 2000.

Details about the availability and prices of these publications may be obtained by writing directly to the National Census and Statistics Office, Magsaysay Blvd., Manila.

New from Malaysia
Three new publications from Malaysia should be mentioned here. The first is the Revised Inter-Censal Population Estimates, Malaysia, which appeared in June 1974. It gives the revised statistics on population change, the annual growth rates, births, deaths, and rate of natural increase for the period 1957–70 in the case of Peninsular Malaysia, and 1960–70 for Sabah and Sarawak. Three series of estimates are given: the initial estimates made after the 1957 census and two revisions. The first revision adjusts the initial intercensal estimates to the 1970 enumerated population. A second revision, the Postenumeration Survey estimates, adjusts the intercensal population estimate to the 1970 Census of Population with corrections for underenumeration. The three sets of estimates are then compared and evaluated. Data are presented in tables and graphs. The study was carried out by the staff of the Census and Demography Division under the direction of Ms. D.K. Fernandez. It may be purchased from the Department of Statistics for US$3.00.

Two new Research papers are also available: Housing Needs in Peninsular Malaysia 1970–1990 (Research paper no. 6), and Housing Quality and Current Housing Needs in Peninsular Malaysia, 1970 (Research paper no. 7). The cost of each is US$3.00. For information write to the Department of Statistics, Jalan Young, Kuala Lumpur, Malaysia.

Indian Census Centenary
In 1972, India celebrated its first hundred years of census taking and civil registration. To mark the occasion a conference was held in October 1972, and a number of special publications have been issued by the Office of the Registrar General and Census Commissioner. At the same time, the results of the 1971 Census have been appearing at a fast pace. Those interested in getting a complete listing of these publications may write to the Office of the Registrar General, India, Ministry of Home Affairs, 2-A Mansingh Road, New Delhi 110011, India. A new price list is available each year which gives prices (plus postage) in rupees, British pounds, and U.S. dollars. All orders must be prepaid, but several forms of payment are suggested. Some of the Centenary volumes include: Indian Census in Perspective, Indian Census through a Hundred Years, Intercensal Growth of Population, Civil Registration System in India: A Perspective, and the comprehensive...
American Samoa Census (continued from page 2)

islanders. Finally it was decided to treat workers whose usual jobs were in the canneries as if they were still employed there.

Checkers and Coders

Students enrolled in business courses at American Samoa’s Community College were hired to code and check the data on the census forms. Each student is working about 20 hours per week, and Levin expects the coding and checking process to be completed by late November. Data will then be punched onto cards, and the IBM Systems 3 computer at American Samoa’s Computer Center in Utulei will check the data. Coders and checkers will receive computer printouts, and they will try to correct errors and resolve discrepancies in the data. Preliminary results should be available within a month.

Lordly Limerick

Lord Caradon, former British Permanent Representative to the United Nations, put his opinion of demographers into verse at the World Population Conference in Bucharest. Published in the Planet, the daily newspaper of the conference, and reprinted in the Times of London, Lord Caradon’s limerick was brought to our attention by Dr. Scott Matsumoto of the East-West Population Institute:

To be a demographer’s friend
Is really no use in the end
For he’s given his heart
To a graph and a chart
And he sleeps with a nice-looking trend.

CITY SQUATTERS: BANGLADESH

The urgent task of solving the problem of housing for and rehabilitation of displaced and homeless persons squatting in the major cities of Bangladesh is getting attention from the Ministry of Public Works and Urban Development, Government of the People’s Republic of Bangladesh. A three-member United Nations team visited Bangladesh in late 1973 and helped to prepare a project based on the policies of the government, as enunciated in its first Five-Year Plan.

The government’s Urban Development Directorate, in collaboration with the Centre for Urban Studies, University of Dacca, will conduct a survey of the urban squatters in three major cities—Dacca, Chittagong, and Khulna. The survey will be completed in four months. Field operations will require three months; analysis and preparation of the report should take one month.

The project advisory committee includes the Census Commissioner; Chairman of the Department of Geography, University of Dacca; a representative of the Urban Development Directorate; and the Director of the Centre for Urban Studies. Survey procedures were discussed at a meeting of the advisory committee in August

THE ASIAN AND PACIFIC CENSUS NEWSLETTER is a quarterly publication of the East-West Population Institute, supported by a grant to the Institute from the Agency for International Development. It is available without charge to governmental agencies, private institutions, and interested individuals. News items and comments are welcomed and should be addressed to: Census Newsletter Editor, East-West Population Institute, 1777 East-West Road, Honolulu, Hawaii 96822.

THE EAST-WEST CENTER is a national educational institution established in Hawaii by the United States Congress in 1960. Formally known as “The Center for Cultural and Technical Interchange Between East and West,” the federally-funded Center is administered in cooperation with the University of Hawaii. Its mandated goal is “to promote better relations between the United States and the nations of Asia and the Pacific through cooperative study, training, and research.”

Each year about 1,500 men and women from the United States and more than 40 countries in the Asia-Pacific area exchange ideas and cultural insights in programs conducted by a multinational East-West Center staff and dealing with problems of mutual East-West concern. Participants are supported by federal scholarships and grants, supplemented by contributions from Asian and Pacific governments, private foundations, and other agencies.

Center programs are conducted by the East-West Communication Institute, the East-West Culture Learning Institute, the East-West Food Institute, the East-West Population Institute, and the East-West Technology and Development Institute. Open Grants are awarded to provide scope for educational and research innovation.

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