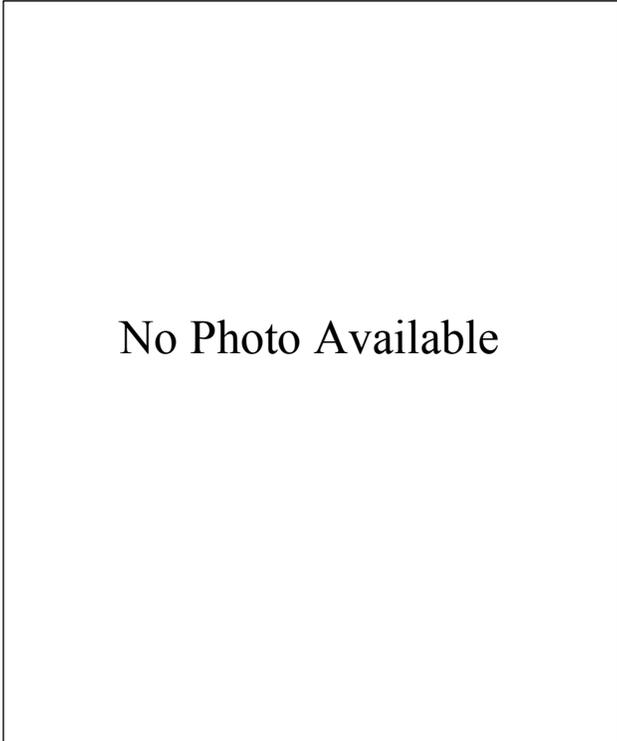


# **DEMOGRAPHIC DESTINIES**

## **Interviews with Presidents of the Population Association of America**

### **Interviews Referencing Margaret J. Hagood PAA President in 1954-55**



No Photo Available

This series of interviews with Past PAA Presidents was initiated by Anders Lunde  
(PAA Historian, 1973 to 1982)

And continued by Jean van der Tak (PAA Historian, 1982 to 1994)

And then by John R. Weeks (PAA Historian, 1994 to present)

With the collaboration of the following members of the PAA History Committee:  
David Heer (2004 to 2007), Paul Demeny (2004 to 2012), Dennis Hodgson (2004 to  
present), Deborah McFarlane (2004 to 2018), Karen Hardee (2010 to present), Emily  
Merchant (2016 to present), and Win Brown (2018 to present)

## MARGARET J. HAGOOD

We do not have an interview with Margaret Jarman Hagood, who was the 18th PAA President (1954-55). However, as Andy Lunde and Jean van der Tak (VDT) were interviewing other past presidents, they regularly asked questions about those early presidents whom they had been unable to interview. Below are the excerpted comments about Margaret Hagood.

### CAREER HIGHLIGHTS

Margaret Jarman Hagood was born in Georgia in 1907. Her undergraduate education was interrupted by her marriage to a dental student, and then the birth of her only child, a daughter. That marriage ended fairly quickly in divorce and in 1929 she earned a B.A. at Queens College, Charlotte, NC, where her father, a mathematician, had become vice-president. She then earned an M.A. at Emory University, Atlanta, GA, in 1930, after which she taught mathematics at a private school for girls near Washington, DC, for a few years. In the mid-1930s she went to the University of North Carolina, Chapel Hill. There she obtained her Ph.D. in Sociology in 1937, under the direction of her father's childhood neighbor, Howard Odum. From 1937 to 1942, she was a research associate at Odum's UNC Institute for Research in Social Science. During this time she published an important volume, Statistics for Sociologists. World War II took her to the U.S. Department of Agriculture, where she became Chief of the Farm Population Branch of the Economic and Statistical Analysis Division. She remained there until she retired in 1962. She died of a heart attack in 1963 while visiting one of her brothers in San Diego, California.

### From Andy Lunde's interview with Clyde Kiser in 1973:

**LUNDE:** What was the early Association like in terms of its meetings and atmosphere and all that? For years the members met at Princeton. The first meeting I went to, when Kingsley Davis was at Columbia, was at Princeton. There was a certain flavor about meeting at the Inn there, which was certainly a lot different from what we have today, with increased membership and the big-town atmosphere of our meetings.

**KISER:** Yes. Well, as I said, the meeting in 1935 was our first large meeting, in Washington. The very next year, in 1936, we met at Princeton at the invitation of Frank Notestein who had just gone down to Princeton the preceding September. This was a meeting in the fall, in October, as I recall. Notestein, as you know, went from Milbank to Princeton in 1936 to head the new Office of Population Research. Also took over Population Index, which previously had been Population Literature.

It was a small group. Of course, in those days there was only one session; everybody went to the same session. They had probably 100 people at that first meeting at Princeton. President Dodds of the university opened the meeting and welcomed the guests. The Office of Population Research put on a little reception at the Princeton Inn; a cocktail party in the afternoon. For a while, every other year they'd meet some other place and then they'd meet at Princeton. The people seemed to like Princeton. It was fairly convenient. It was pointed out that Princeton was more or less in the center of the membership of the Population Association. Later, as we began getting more Western members, the center of gravity moved westward.

I believe the last meeting at Princeton was in 1954 or 55 [1955]. Margaret Jarman Hagood was the President and she had Carl Taylor, the agricultural economist, give a speech [in place of her presidential address]. After that the membership was pretty large, so they began meeting in other places. Now, of course, though we still have some way to go before we're the size of the [American] Sociological Association, we do have to pick the big cities to get a place to accommodate us.

### **From Jean van der Tak's interview with Henry Shryock in 1988:**

**VDT:** One of the big things you did in the last years before you left the Census Bureau, you and Jay Siegel were preparing the monumental Methods and Materials of Demography, which was published in two volumes in 1971 and in an abridged volume in 1980. That has become the bible for students in the field. Can you tell something about how that got started and about putting it all together?

**SHRYOCK:** That was actually my second book. I'd written what started out to be a census monograph for the 1950 census. That was called Population Mobility within the United States. It was published in 1964. I didn't finish it in time to be published in the series, because unfortunately I went off to India for a year during the period I was working on it, so I got behind. But, fortunately, it was published for me by Don Bogue at the University of Chicago, with whom I'd had many contacts at the Census Bureau and elsewhere.

To get back to Methods and Materials of Demography, we were approached on that by people at AID--Joe Cavanaugh and some others were the contacts. They wanted a reference book, a how-to-do-it work manual, for training demographers around the world and approached Siegel and myself and we agreed to do it. We got some support also from the International Statistics Office in the Census Bureau, which was then under Charles Lawrence, who had spent a lot of time in Korea and other places overseas.

Now, Siegel and I had squirreled away some drafts of old chapters which we had worked on some years before with Margaret Hagood, who was at the Department of Agriculture. We three were going to write a book of somewhat the same scope on a much more modest level. Then she died rather tragically and we had laid that aside. So we went back to those drafts and were able to make some use of hers and our own.

**VDT:** Someone I haven't heard much about but whose name ranked large in those days was Margaret Hagood. Tell me a bit more about her.

**SHRYOCK:** Margaret Hagood came of an academic family. Her father was president of Mary Baldwin College in Staunton, Virginia, at one time. They had a large farm. They were raised on a farm in Newton County, Georgia, the same county in which Jerry Combs grew up. Margaret majored in mathematics and she taught at a sort of girls' finishing school up here in Forest Glen after she got her A.B.

Then she decided to go into social science, so she went back to school at the University of North Carolina, where she worked with Howard Odum and Rupert Vance and Catherine Jacher and so on and wrote her first book, called Mothers of the South [1939], a small book. Her magnum opus before she came up to Washington was Statistics for Sociologists, which went through two editions. The first she wrote by herself, the second was written with Dan Price [1952].

Then she was hired by Carl Taylor, the rural sociologist, to come up to the Department of Agriculture and be the social statistician on their staff. She worked right here in Southwest Washington where we are now. She determined that she had to make a name for herself in research in her first few years there, so she got a room in a rooming-house in a very rundown area of Southwest but within a short walking distance of the Department of Agriculture and spent all of her time writing and going back and forth at night to her office. Eventually, she got over that and moved to a nice apartment in another part of town.

**VDT:** Was she married then?

**SHRYOCK:** No. She was married earlier to a dentist, Hagood--her maiden name was Jarman--but

they were later divorced. She had a daughter, who had a rather stormy adolescence and early life. She ended up joining the Zionists and going off to a kibbutz and marrying a major in the Israeli army and she wrote several successful novels in Hebrew, which were translated and published in English. She's still in Israel. Margaret Hagood visited there. This daughter had had a couple of children by a previous marriage, but she had some by the Israeli major as well. Some of Margaret's grandchildren couldn't speak any English at all.

**VDT:** Margaret Hagood died rather young, didn't she?

**SHRYOCK:** Yes, she did. She had a heart condition. I don't know whether you want to keep this on the record or not, but her friend Hope Eldridge--she worked for me at the Census Bureau; she took over my population estimates work. She'd studied under Margaret Hagood at the University of North Carolina; she got her Ph.D. there. She'd been working for many years in physical education at the women's college of the University of North Carolina in Greensboro. She went back to school; got her Ph.D. in sociology. She was quite interested in urbanization, so we had interests in common. She stayed at the Census Bureau until a couple of years after I got back from the war and then they were setting up all these UN agencies, including the Food and Agriculture Organization.

Hope Eldridge left the Census Bureau and went up to the United Nations, in Lake Success at first. John Durand was recruited; he was on the staff of the Population Division. Forrest Linder was there in the Statistics Office. Hope had the job of getting out the very first Demographic Yearbook. What ruined her career at the UN, unfortunately, was that she and her husband had been very active in the Henry Wallace campaign for President; he ran on the Progressive ticket in 1948, I think it was. The Progressives were supported by the Communists, so people who had been active in this movement were very suspect during the McCarthy era. And Hope and a number of other Americans at the UN were grilled by the infamous assistant to McCarthy, Roy Cohn.

She suffered through that. She was fired along with other Americans; she took the Fifth Amendment to protect some friends. Unlike other governments, all UN employees who were American had to be approved by the U.S. government. I don't know if that's still the case, but it was then. The witch-hunters, the Red-hunters, traced the friends of people whom they were then getting after, and the trail led to Margaret Hagood. She was told she was up for a loyalty investigation and because of that she was unable to make a trip to the first World Population Conference in Rome in 1954.

I think that sort of broke her spirit. She went downhill physically from that time, until she finally died of a heart attack about ten years later, but she was in very poor health during most of those years. She was very embarrassed by all this. I don't know why she should have felt at all guilty; she'd never been particularly politically active herself. But she felt she was somehow being disgraced by all this. She was told by the investigators, "Now, you mustn't discuss this with anybody else," which was a silly imposition.

### **From Jean van der Tak's interview with Donald Bogue in 1989:**

**VDT:** In 1953 you published Subregional Migration in the United States with Margaret Hagood. She was not at Scripps.

**BOGUE:** No, Margaret Hagood was the demographer at the U.S. Department of Agriculture in their Agricultural Economic Research Unit. She had been professor of demography at the University of North Carolina and had established what has now become the population and social science research center there. She was a civil servant and they were very interested in urbanization, the exodus of huge numbers of poor people from the South to the North even before the war and during the war, and then

the movement off the farm to metropolitan areas. She later had an assistant, Calvin Beale, who did a great deal of work on migration with the Department of Agriculture. My book with her was a collaborative effort, in which I was using some of the money from the Rockefeller grant and she was using the budget from her office.

**VDT:** She, of course, was one of the early female titans in the PAA.

**BOGUE:** A very grand lady.



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Margaret Jarman Hagood (1907–1963)

Author(s): Hope T. Eldridge

Source: *Population Index*, Vol. 30, No. 1 (Jan., 1964), pp. 30–32

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MARGARET JARMAN HAGOOD  
1907-1963

Margaret Jarman Hagood was one of those who helped steer sociology away from the armchair and toward the calculator. Her work simultaneously enriched sociology and demography.

She was born in Newton County, Georgia, and there at the age of 14 or so, she was for a time a lay preacher among the neighboring farm people. Fortunately for the social sciences, she abandoned that career while still at an early age.

After her marriage and the birth of her daughter, she taught in a one-room elementary school in Brewton, Alabama, while her husband was a student of dentistry. The marriage ended in divorce and she resumed her own education. She earned a B.A. at Queens College, Charlotte, N. C. in 1929 and an M.A. at Emory University, Atlanta, in 1930.

She taught mathematics for some years at a select seminary for young girls near Washington, D.C. Here her interest in the quantitative aspect of things matured. Here also, she acquired perforce a mastery of the refinements of social etiquette that is seldom encountered in an ordinary life.

In the mid-1930's, she went to the University of North Carolina to study for a doctorate in sociology under Professor Howard W. Odum, who, as a boy, used to deliver milk from his father's farm to her father's house. It was during this period that she drove the byways of the Piedmont in an aging coupe to talk with the tenant farm women about whom she wrote in Mothers of the South. In that work, scientific detachment went side by side with concern for the anguish of the deprived, both permeated with the now almost-forgotten flavor and essence of the Depression.

Upon receiving her Ph.D. in 1937, she was appointed Research Associate of the Institute for Research in Social Science at the University of North Carolina. She taught the course in statistics for graduate students in sociology, and her pencil raised callouses on her fingers while she wrote Statistics for Sociologists. Published in 1941, this work broke new ground for the application of statistical techniques to sociological analysis. The concluding section on demographic methods stood for years as the most systematic and comprehensive treatment of the field available to students in this country. Despite the austerity of the subject, the whole book bears the imprint of her personality - its patience, its gentleness, its glint of humor, its sweetness.

The war drew her away from the academic world into government service. From 1942 until 1962 she was with the U. S. Department of Agriculture, and became Chief of the Farm Population Branch of the Economic and Statistical Analysis Division. For twenty years, she furthered the work of that agency, improving the quality and flow of statistics of the farm population, developing a rural level-of-living index that has become identified with her name, and directing research designed to refine the tools of measurement and to add insight into the dynamics of rural life. She may have been the first to use techniques like analysis of variance and covariance, factor analysis, and principle components, for the solution of such problems as the delineation of regions and the construction of level-of-living indexes.

In 1951, she was Visiting Professor in the Department of Rural

Sociology at the University of Wisconsin. In 1952, she published a revised edition of Statistics for Sociologists, with Daniel O. Price as co-author. As a member of the Census Bureau's Technical Advisory Committee on Population, she helped to plan and shape both the Census of 1950 and the Census of 1960. In 1955, Queen's College conferred upon her the honorary degree of Doctor of Science.

In addition to her contributions in the way of research, publication, and direction of the work in farm population, she was active in a number of professional organizations, holding offices or participating in other ways in the American Sociological Society, the Rural Sociological Society, the American Statistical Association, the Population Association of America, and the International Union for the Scientific Study of Population. She was a Fellow of the American Statistical Association and, from 1953 to 1955, a member of its Board of Directors. In 1955, she was president of the Population Association of America; in 1956, of the Rural Sociological Society.

During the last years, her health broke, and she found it necessary to retire in 1962. She died in August of 1963, while visiting a brother in California. Her daughter, Margaret Benaya, now living in Israel, is a writer and the mother of five.

Many of us knew Margaret Hagood's value as scientist, teacher, professional associate, and friend; we shall treasure her memory in all these ways.

Hope T. Eldridge

#### Selected Publications in Demography

Mothers of the South. Portraiture of white tenant farm women. Chapel Hill, University of North Carolina Press, 1939. 252 pp.

Statistics for sociologists. New York, Reynal and Hitchcock, 1941. 934 pp.

[With Daniel O. Price.] Statistics for sociologists. Revised edition. New York, Holt, 1952. 575 pp.

[With Donald J. Bogue.] Subregional migration in the United States, 1935-40. Vol. II. Differential migration in the Corn and Cotton Belts. A pilot study of the selectivity of intrastate migration to cities from non-metropolitan areas. Scripps Foundation Studies in Population Distribution, 6. Oxford, Ohio, Miami University, Scripps Foundation, 1953. vi, 248 pp.

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A state experiment in contraception as a public health service. Journal of Contraception 4(5):103 ff. May 1939.

[With Mary A. Eaton.] An examination of regional differentials in fertility by analysis of variance and covariance. Social Forces 17(4):495-502. May 1939.

[With others.] An examination of the use of factor analysis in the problem of subregional delineation. Rural Sociology 6(3):216-233. Sept. 1941.

Statistical methods for delineation of regions applied to data on agriculture and population. *Social Forces* 11(3):287-297. March 1945.

[With Eleanor H. Bernert.] Component indexes as a basis for stratification in sampling. *Journal of the American Statistical Association* 40(231):330-341. Sept. 1945.

[With Louis J. Ducoff.] Objectives, uses and types of labor force data in relation to economic policy. *Ibid.* 41(235):293-302. Sept. 1946.

[With Louis J. Ducoff.] Labor force definition and measurement. Recent experience in the United States. Prepared for the Subcommittee on Labor Statistics of the Committee on Labor Market Research. New York, Social Science Research Council, 1947. x, 134 pp.

Changing fertility differentials among farm-operator families in relation to economic size of farm. *Rural Sociology* 13(4):393-373. Dec. 1948.

Four chapters in: Taylor, Carl C., et al. *Rural life in the United States*. New York, Knopf, 1949, xviii, 549, xii pp. Chapters: The farm home and family; Rural population characteristics; Dynamics of rural population; [with Louis J. Ducoff] Occupational patterns of rural population.

[With Jacob S. Siegel.] Projection of regional distribution of population. *Agricultural Economics Research* 3(2):41-52. April 1951.

[With Jacob S. Siegel.] Population projections for sales forecasting. *Journal of the American Statistical Association* 47(259):524-540. Sept. 1952.

Report to the Government of Barbados on research and action programmes for reduction of population pressure. United Nations. Technical Assistance Administration. TAA/BAR/1. (LIMITED.) May 29, 1956. 16 pp.

[With Louis J. Ducoff.] The meaning and measurement of special and disguised unemployment. Chapter in: National Bureau of Economic Research. *The measurement and behavior of unemployment*. Princeton, Princeton University Press, 1957. x, 606 pp.

**SURPLUS CENSUS REPORTS FOR 1950 AND 1954 AVAILABLE** The Bureau of the Census is planning to dispose of surplus copies of reports of the 1950 Censuses of Population and Housing and the 1954 Census of Agriculture. The following categories of publications are available:

1950 Censuses of Population and Housing—some clothbound volumes, many individual State reports, census tract reports, housing reports by city blocks, and special demographic studies on such topics as education, families, fertility, population mobility, marital status, and the labor force.

1954 Census of Agriculture—graphic summaries and special reports on ranking agricultural counties, part-time farming, the farm mortgage debt, and other topics. No individual reports are available.

Copies of the *County and City Data Book, 1956*, are also available.

**Margaret Hagood chose not to give a presidential address at the 1955 annual meeting at the Princeton Inn. Instead, she introduced another speaker, whose talk is summarized below, starting on page 169:**

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The 1955 Meeting of the Population Association

Source: *Population Index*, Vol. 21, No. 3 (Jul., 1955), pp. 159-170

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## CURRENT ITEMS

### THE 1955 MEETING OF THE POPULATION ASSOCIATION

On May 21 and 22, 1955, the Population Association of America held its annual meeting at Woodrow Wilson Hall and the Princeton Inn, Princeton, N. J. The program included five sessions of papers and discussion, summarized below, two meetings of the Board of Directors, a business meeting of the Association, and a dinner meeting.

#### SESSION I. Present Status of Demography

Chairman: Frank W. Notestein, Princeton University

##### 1. Demography as a Science

Demography had its origin in the application of the "Baconian" method to human phenomena. Despite its empirical origin, however, it was stimulated to rapid development by a political tract, Malthus' rejoinder to Godwin. The study of population has engaged the attention of students both in the natural and social sciences, and has been dependent for its data largely on the record-keeping activities of the state, particularly as evidenced in modern census taking and vital registration.

Demography at the present time, broadly conceived as a social science, is concerned with the study of population numbers, composition, change, and quality as they are influenced by, and influence, the social, economic, and political orders. This definition should be broadened, however, to include consideration of genetic, biometric, medical, and other natural science interests. Demography in both research and teaching is almost without exception carried on by students who are members of other social or natural science disciplines as well as of demography. Despite its lack of unitary character and the fact that it does not possess an academic province of its own in a departmental sense, demography is a science because it meets the criteria of a science. Compared with a fairly rigorous model of science, demography is on a relatively low rung of the science ladder and has a long way to go. Compared with many other social science fields, demography is in a relatively advanced state of development. The future for demography seems good, because there is much work to be done and there are students willing and able to do it.

Philip M. Hauser  
University of Chicago

##### 2. Present Status of Demographic Theory

Among the economic changes that may produce a change in the rate of net reproduction or net migration three were noted. (i) Changes in the set-composition of a population, important ones of which were attributable to economic change, were an important source of changes in age-specific fertility; their study also threw light upon the determination of both population composition and inter-group equilibration. (ii) Changes in the price structure, through their effects upon the income

structure and upon the marginal rates of substitution between various kinds of goods and services, could affect age-specific fertility significantly, and probably had done so. (iii) While increases in gross national product tended to be followed by increases in population, *ceteris paribus*, other conditions did not remain unchanged and might change enough for decreases in age-specific fertility to be consequent upon increases in gross national product. It turned on how men's aspirations were affected, together with their expectations that they would realize their aspirations. In fact, aspirations might change adversely to fertility as a result of changes in population composition associated with the changes occasioning the increase in gross national product, or as a result of heavy investment in appropriate forms of capital. Moreover, the pattern of living might change significantly as a result of income increases. It was suggested that careful studies be undertaken of family economics and of the impact of changes in the family cycle upon reproduction behavior.

Respecting man's economic response to demographic change, careful studies of the resource and capital requirements associated with population growth in various countries were still needed. Similar studies were needed at the international level before one could estimate how much relief international trade might provide to countries suffering from "population pressure." Concerning the optimum, it was indicated that there was need for study of the formation and reconciliation of the diverse opinions, values, etc., whereon population growth depends in part.

Joseph J. Spengler  
Duke University

### 3. Present Status of Research on Population Distribution and Redistribution

Population distribution may be defined as the study of a population by spatial parts rather than as a single whole. Its claim to scientific interest lies in its concern with place variance, or the tendency for demographic events and processes to vary in type and intensity from one community or area to another. A major part of the study of population distribution should consist of relating place variance to environmental factors, holding constant the effect of differential population composition. This approach is a supplement to (but not a substitute for) the longitudinal approach, which traces the history of demographic processes.

As thus defined, the distributive approach is a type of research design. In its main outlines it is similar to the design of experiments, developed by agronomists and biostatisticians, that arrive at statistical inferences by the analysis of variance. It employs conventional statistical techniques, but involves several difficult methodological problems that have not yet been fully illuminated by mathematical and statistical research.

A survey of recent and current research in population distribution shows that much of the work in this field is primarily descriptive of demographic events in local areas. Thus, although the field appears to offer important opportunities for arriving at scientific explanations for population processes, actually many of those who do this work are not taking advantage of the opportunity. It appears that this may represent a major gap in demographic development.

Donald J. Bogue  
University of Chicago and Scripps  
Foundation, Miami University

## SESSION II. Present Status of Demography

Chairman: Philip M. Hauser, University of Chicago

## 1. Present Status of Research in Mortality and Morbidity

During the past fifteen years a surprisingly small amount of research has been published on the following topics: (a) rural-urban differentials in mortality, (b) variation in mortality among geographic areas, (c) mortality by occupation and socio-economic groups, (d) fetal mortality, (e) the increasing sex differential in mortality rates, and (f) the relatively high mortality rates at the older ages in the United States in comparison with corresponding rates for countries of northwest Europe, Canada, Australia, and New Zealand.

The tabulation of demographic statistics from the 1950 census of population for counties grouped into (a) metropolitan and non-metropolitan areas and (b) economic subareas and regions provides an opportunity for studies of geographic variation in mortality for areas smaller than entire states. A study of occupational and socio-economic differentials in mortality using mortality records for 1950 is now in process.

The continued rapid decline in infant mortality has called attention to the numerically greater problem of fetal mortality. Although available statistics are incomplete, the fetal mortality rate at present probably is at least five times and possibly ten times the infant mortality rate.

No comprehensive data concerning morbidity in the United States has been collected since the National Health Survey of 1935-36. A number of morbidity surveys of local areas, including one sample survey of an entire state, have been undertaken. Plans have been prepared for a continuing national sample morbidity survey, but funds for carrying it out are not available.

Harold F. Dorn  
National Institutes of Health

## 2. The Status of Research on Fertility

Though research on natality is often regarded by demographers as the core area of their field, the number of projects and publications in this area has not kept pace with those in demography as a whole. A review of listings in Population Index suggests that demographic studies of natality are fewer now than before World War II. Especially noteworthy has been the reduction in number of studies on differential fertility and on the causes of the decline of the birth rate. This diminution reflects the dramatic changes in the birth rate since 1940, but it has not been balanced by an equal number of new studies of recent trends.

The paper reviews successes and failures in natality research. Despite great advances in the availability and accuracy of data, and in the methodology of measurement, we are today not so far advanced in the scientific study of natality as we thought we were in 1940. The Indianapolis Study, and other valuable studies, have made demographers keenly aware of the extreme complexities of factors influencing natality. Two major new studies of the subject are briefly described: (1) "A Study of the Growth of American Families," a survey of fertility expectations in a national sample, being conducted jointly by the Survey Research Center of the University of Michigan and the Scripps Foundation for Research in Population Problems; and (2) a study of "Social

and Psychological Factors Affecting Fertility," now in exploratory stages under the guidance of an interdisciplinary steering committee sponsored by the Milbank Memorial Fund.

The paper calls attention to needs and opportunities for natality research and especially for numerous studies probing in many directions. Attention is called to the need for analytical studies of natality in diverse small areas and in new communities such as the mass-produced suburb; for the study of natality among real social groups as well as among census categories of income, occupation, and residence; for exploitation of new data such as the 1950 Census of the Americas; for analysis of the covariation of economic trends and natality; for historical studies of the relation between natality and economic development, for example, in backward regions of advanced countries; for the analysis of specific factors in "urbanization" that affect natality; for studies of the effects of population policies; for analysis of the effects of differential fertility on the social and genetic quality of the population.

Dudley Kirk  
The Population Council

### 3. Present Status of Research on Population Structure and Composition

The word "structure" in demographic studies properly has a precise and limited significance, with reference to the biologically determined sex and age distribution of a closed population.

Recent experience has shown the need of caution in applying stable population functions to empirical populations, but this does not diminish the value of analytic theory and its critical applications. Experimentation with "stable" populations shows that their age structures are determined mainly by levels of fertility. In other words, assuming constant rates, similar age structures result from combining different sets of age specific death rates with a given set of fertility rates; but very different age structures result from combining different levels of fertility with a given set of age-specific death rates (see cover chart). Similar results are obtained by experimenting with the effects of progressive changes in vital rates on the age structures of initially stable populations. For further exposition of this subject, see forthcoming article by Ansley J. Coale.

The investigation of changes in the sex composition of populations, subsequent to the distribution of births by sex, affords relatively smooth sailing for demographers, though the determination of sex ratios at birth apparently remains a mystery.

The most important recent contribution to information on the composition and characteristics of our population has been the refinement of census procedures in obtaining data on such critical characteristics as employment and unemployment, family composition, education, mobility, and income. The concept of the "composition" of a population is essentially heuristic; its content is always relevant to some particular inquiry. Two types of classification have very general relevance to population studies: classification by sex and age, and classification by area and type of community. Apart from these two modes of classification, no other system of defining the composition of populations seems to be peculiarly relevant to demography. As information on the characteristics of populations is obtained, the student delineates patterns of composition to fit his particular interests.

Demographers have special responsibility for investigating the influence of population changes on the characteristics of populations.

Statements about the "qualitative aspects" of population may have any of three rather different meanings, which may be roughly defined as "narrow," "broad," or "loose." The narrow usage refers to the relation of population changes to some particular kind of characteristics, as for example, genetic characteristics. The broad usage deals with the relation of population changes to various characteristics, including social, cultural, and personal characteristics. In a "loose" usage, from the standpoint of demography, one is concerned with various characteristics quite apart from their relation to population trends. This is a proper interest, but it lies wholly outside the field of demography. Interest in the relation of population trends to genetic characteristics is the joint province of demographers and geneticists as their studies bear on the special field of eugenics. This subject merits special emphasis because of its importance for the future of mankind, its elusive character, and the absence of support by special interest groups.

Frank Lorimer  
The American University

### SESSION III. Population Redistribution and Economic Growth

Chairman: Carter Goodrich, Columbia University

#### 1. Long Swings in Rates of Growth of the United States Population and Economic Variables

The paper discusses swings in the rate of growth of population, on the basis of quinquennial estimates of births (white and nonwhite), deaths (native white, foreign-born white, nonwhite), immigration and emigration, for the United States back to 1870. These swings, revealed by changes in absolute additions to population stock and by changes in population flows (births, deaths, and migration), averaged from 20 to 25 years in duration and were fairly synchronous in the several demographic variables, except for the movements in nonwhite population from the 1880's to World War I.

The economic variables in which swings in the rate of growth were studied included: nonfarm residential construction and purchases by railroads of fixed capital, both showing marked responses to swings in net additions to population; other capital formation, which, prior to the 1920's, showed swings inverted to those in population growth; and flow of goods to consumers, with a pattern similar to that in other capital formation. A hypothesis, attempting to account for these interrelations of swings in population growth and in the economic variables, was suggested.

Simon Kuznets  
The Johns Hopkins University

#### 2. Some Interrelationships in a Study of Population Redistribution and Economic Growth

The standpoint, scope, and method of the University of Pennsylvania study of population redistribution and economic growth in the United States, 1870-1950, were described briefly: a study guided by a view of economic development and demographic change as closely interrelated over time and in space; focused upon the movement and redistribution of population and of economic activities; based on analytically-directed estimates prepared largely from census data; utilizing, in the main, the intercensal period as the temporal unit and the state as the spatial unit. Among the estimates described were those of intercensal net migration, by age, sex, nativity, and color or race; the agricultural and nonagricultural components of the labor force, the industrial struc-

ture of the latter, and labor-force participation rates by age and sex; measures of manufacturing activity; and measures of state income differentials.

As examples of analyses emerging from the study, some correlations among migration measures and between migration measures and those of economic activity were presented, suggesting that all segments of the population tended, in the course of time, to move towards the same areas of generally increasing opportunity and away from those of generally diminishing opportunity. Statewise groupings in terms of "impact rates" for the three nativity-color-or-race components of net migration showed, however, that the overall correlations masked significant differences between five rather distinct types of complementing and counteracting net gains and losses: (1) most of the southern states characterized by heavy outmigration of whites usually accompanied by heavy outmigration of Negroes and negligible gains of the foreign born; (2) far western states and several states on the eastern seaboard, where there was a high degree of conformity in intercensal gains of native and foreign-born whites; (3) most of the intermountain and some central states, where gains of native whites and foreign born complemented each other in early decades only; (4) a few central and eastern industrial states, where gains were complementary only in later decades; (5) a majority of the highly industrialized eastern and central states where there was evidence of counter-reaction and of the possible "substitution" of foreign-born gains for native-white losses.

Dorothy Swaine Thomas  
University of Pennsylvania

### 3. Population Change and the Components in Pennsylvania 1870-1950

From 1870 to 1950 nearly two million native whites were lost to Pennsylvania through net out-migration, a loss almost equally balanced by net gains of foreign-born whites and Negroes. The result has been a considerable replacement of native white population by these other elements. The net out-migration of native whites, both absolutely and relatively, has tended to increase, decade by decade, amounting to about six per cent of the average total population for 1940-1950. The gains of foreign-born whites have been very small in recent decades, and the net in-migration of Negroes is far from sufficient to balance the loss of native whites. The migration of foreign-born whites and Negroes has been directed largely to the cities, while the loss of native whites has borne most heavily upon rural areas. Had it not been for Pennsylvania's relatively high natural increase, Pennsylvania's demographic position in the nation would have declined considerably. As it was, the percentage of the total population living in Pennsylvania decreased from 9.1 in 1870 to 7.0 in 1950. Pennsylvania was replaced by California as the second most populous state, and from 1910 to 1950 the number of congressional representatives allotted Pennsylvania decreased from 36 to 30, the largest loss for any state. Since the increase in fertility ratios for Pennsylvania from 1940 to 1950 was much less than for the United States as a whole, and since it seems likely that the net out-migration of native whites may continue, there is a prospect for continuing decline in Pennsylvania's population relative to that of the nation.

Everett S. Lee  
University of Pennsylvania

## SESSION IV-A. Foreign Studies

Chairman: Forrest E. Linder, United Nations

### 1. Ideal Minimum Program of Population Research in Underdeveloped Countries

The principal questions upon which research is needed relevant

to the population problems of both underdeveloped and more developed countries have been listed by a United Nations committee of experts in social sciences. The committee's report brings out the need to expand the amount of research being done with reference to the less developed countries. Since the funds, and especially the number of qualified technicians, are limited, it is important somehow to budget their use so that the primary needs will be met. The following points require consideration in this connection:

- (1) The division of resources between research projects relevant to the underdeveloped and to the more developed countries. Studies relevant to the underdeveloped countries will have to receive a larger share than they are now getting if the questions of greatest importance to the future of the world are to have priority.
- (2) The selection of studies on the underdeveloped countries which can be of most help in dealing with their major problems. There should be a proper balance between research, the results of which are immediately useful in forming policies and planning action, and studies of more academic interest.
- (3) Effective international cooperation - especially the cooperation of demographers and demographic research institutions in the more developed countries - in studies relating to the underdeveloped countries. There is a need for a large amount of on-the-spot cooperation in projects carried out within the underdeveloped countries, and not merely for studies relevant to their problems undertaken at a distance.

John D. Durand  
United Nations

## 2. Evaluation of Recent Demographic Data from Communist Countries

In the U.S.S.R. and its satellites demographic data are regarded as classified information. Some information is released, but generally in a vague or guarded way, and as isolated figures and relative measures rather than in meaningful series or connected bodies of data. Whatever information is available comes to us mainly in secondary sources such as speeches, textbooks, newspaper stories and editorials, and the like, with a small portion being found in technical and professional journals. Unfortunately the bulk of the material is presented in a political, propagandistic, or polemical context, and is often misleading. Total falsification, in the sense of free invention, seems not to be practiced, except perhaps in connection with data for non-Communist countries. Much more common are such faults as vagueness of definition, insufficiency of significant digits, methodological weaknesses in compilation of data, and the like. Also, there is the matter of data presented in comparative form or data presented without statements of limitations or of the exact universe to which they apply. In such instances the figures may be literally correct, but their setting may lead to an erroneous interpretation of their meaning. Another type of problem arises from the data being presented usually in the native language. Care must be taken in translation to preserve nuances that may be important for the evaluation of the data. A number of illustrations of these points are given, using data from the U.S.S.R., Romania, East Germany, Poland, and Hungary.

Norman Lawrence and W. Parker  
Mauldin  
U. S. Bureau of the Census

## 3. Social Structure and Fertility in Underdeveloped Areas

By asking what are the culturally recognized steps necessary for the process of reproduction, one can obtain a classified list of eleven

variables through which, and only through which, institutional factors can influence fertility. Since each of these variables can have a negative or positive effect on fertility, they are all operative at all times in every culture. Consequently, any complete description of cultural determinants of fertility must state the situation with reference to all eleven variables.

Underdeveloped cultures in general seem to have high fertility values on age of entry into sexual unions, proportion of women married, use of contraception, and sterilization. They may have high fertility values on time spent after or between unions, and miscarriage. But they often have low fertility values because of abstinence within unions and voluntary abortion, and they often practice infanticide. Some of the values, such as frequency of coitus and involuntary abstinence, are indeterminate. The industrial societies, however, show surprisingly high fertility values on most of the variables, including some on which the underdeveloped societies are low. Their lowest fertility value results from the use of contraception, which compensates for high values on most of the other variables.

Why the constellations of values on the eleven variables occur as they do requires an analysis of institutional structure, which is attempted in this paper. Such an analysis offers a systematic approach to cultural factors in fertility.

Kingsley Davis and Judith Blake  
Columbia University

#### SESSION IV-B. Census Monographs and Current Surveys

Chairman: Robert W. Burgess, Bureau of the Census

##### 1. Occupation and Country of Birth of the Foreign Born, 1950

This paper describes the occupational distribution of the foreign-born white males in 1950. The data are from a 3 1/3 per cent sample of the white civilian labor force, and will be published in full in a forthcoming census monograph on the foreign stock of the United States. The occupational distribution is by major occupational group and according to an abbreviated list of 84 occupational categories. Separate occupational distributions are given for 28 countries or areas of origin, the first information of this kind available since the 1900 data published in the 1911 report of the Immigration Commission.

Relative to the number of white males employed in each major occupational group, the immigrant males in 1950 are most numerous among private household and other service workers, among laborers, among managers, officials, and proprietors, and among craftsmen. On the same relative basis they are most underrepresented in agriculture (both as farmers and farm laborers), in clerical and sales positions, and in the professions.

The distribution of the foreign born by major occupational group varies widely from one country of origin to another. Immigrants from English-speaking countries, for example, are generally more successful in entering the professions and clerical and sales work. Some immigrant peoples are more attracted to agriculture, some show a considerable concentration among managers and proprietors, and there are other distinctive patterns of occupational distribution.

The more detailed occupational classification reveals concentrations of the foreign-born males in certain occupations, and an association between certain national stocks and certain types of employment

such as the Scotch in accounting and auditing, the Yugoslavs in mining, et cetera.

Edward P. Hutchinson  
University of Pennsylvania

## 2. Interstate Migration and Age Structure

A comparison of the observed percentage, of the population 60 years old and over among selected states with rough estimates of that expected on the basis of the 1890 population and fertility and mortality trends since that time, in the absence of migration, suggests that consistent out-migration in this period in such states as Iowa, Missouri, Kansas, and Nebraska, on the one hand, and on the other, such states as North Carolina, South Carolina, and Mississippi, has raised the observed percentage over expectation, as has the pattern of in- and out-migration in such states as North Dakota, South Dakota, Oklahoma, and Idaho. Consistent in-migration appears to have lowered the observed percentage below expectation in such states as Oregon, Washington, and California, but to have raised this percentage above expectation in Florida. Florida appears to be a genuine case in which in-migration, heavily weighted with elderly persons, has raised the proportions of such persons in the population as a whole.

Henry D. Sheldon  
U. S. Bureau of the Census

## 3. Some New Demographic Data from the Current Population Survey

Recent improvements in the past year and a half in the Current Population Survey have made it possible to provide some new data, as well as some traditional data, at higher levels of accuracy than in earlier years. The new data of particular interest to demographers include: statistics on child spacing collected for the National Office of Vital Statistics in April, 1954; age at marriage and at birth of first and last child; characteristics of persons classified by characteristics of their families (age, mobility, income); and information on recent marriage, also collected for NOVS, in June, 1954. Most of this information is still being processed. Other new items of information relate to the economic activity of the population. For example, the extent of commuting to work across county lines was measured in September, 1954. Monthly statistics on the employment and unemployment of nonwhite vs. white persons are now available in some detail (age, industry, hours worked, etc.). Marital status is being reported monthly, primarily to measure the impact of unemployment on family heads; the information has many other uses, obviously. The characteristics of part-time workers as well as the reasons for their partial employment are currently collected monthly instead of quarterly or less frequently. Regional statistics for broad categories can be provided by the present sample and are being published from time to time. It is hoped that a request to Congress for funds to double the present sample will be granted to make possible further expansions in the scope and reliability of the current Census statistics.

Gertrude Bancroft  
U. S. Bureau of the Census

## SESSION V. Theory and Methodology

Chairman: Walter T. Martin, University of Oregon

### 1. Theoretical Models in Migration Research

"Theoretical models" here refers not to specific hypotheses like Stouffer's, but to the basic conceptual framing of migration research.

The thesis is that the traditional model, in which migration has been defined as the physical movement from place to place, has obscured rather than helped to isolate the central demographic problem in migration—the dynamics of its incidence—and that deductive reconceptualization of migration as behavior would contribute to scientific understanding of the process. A behavioral model would clearly separate migration incidence from its product of population redistribution by conceptualizing it as it occurs in the decision of an individual or group to change residence location. The conceptual framework of the General Theory of Action can be used for this purpose.

Focusing research on the decision field rather than on the uni-dimensional physical movement means that migration can be broken down into at least two analytical questions which might better be studied separately: whether or not an actor changes residence location, and where he goes. The object of investigation shifts from migrants as such to the situational structuring of the roles which determine residence location. Here social system analysis can be useful in discovering the determinant roles in different societies. The variables of the action model are constructed in terms of the general components in role situations which predispose toward or against migratoriness. One such possible variable, an intervening one of "locational stabilization," concerned with the temporal mooring of facilities and rewards to the immediate location, was defined and specified to occupational role situations in the United States, as an example of the effect a behavioral model could have on the categories and hypotheses of migration research.

Sara Smith  
 Woman's College, University of North  
 Carolina

## 2. Some Methods of Making College Enrollment Projections for States

Two different procedures were used to estimate college enrollment in the southern states, the ratio and the cohort. Two different procedures for computing the cohort estimates were used. These estimates were compared with the actual fall enrollment in 1953-54 and 1954-55. The results of these comparisons were inconclusive. The ratio and both cohort procedures were fairly accurate in 1953-54. The error of estimate for the southern region as a whole was -2.6 per cent (minus sign indicates an underestimate) for cohort I, 0.3 for cohort II, and -1.5 per cent for ratio. In 1954-55 all methods did poorly and produced underestimates. Cohort I was -12.8 per cent, cohort II was -9.8 per cent, and ratio was -12.9 per cent. Only about a third of the increase in enrollment in 1954-55 was caused by veteran increase; therefore this is not a sufficient explanation of the underestimate of college enrollment in 1954-55. Only about a fourth of the increase in enrollment was caused by the jump in the size of the entering freshman class, so this also is only a partial cause of the underestimate of total enrollment.

Projections of public school enrollment for 1954-55 made by the cohort method were quite accurate (average error about 1 per cent); so it was only at the college level that our projections underestimated the 1954-55 enrollment. There are defects in the basic data used in the projections, but these probably would not produce a systematic underestimate of enrollment. More complete statistical data are needed to identify the cause of the large jump in enrollment this year.

John K. Folger  
 Southern Regional Education Board

## 3. Problems of Trend Determination During a Transition in Fertility

A neglected aspect of the theory of the vital revolution is the operational definition of the trend in fertility. The various measures

of fertility currently in use may be classified, first, by their level of specificity, i.e. the extent to which the distribution of the population, by variables like age or parity, is controlled, and second, by their form of aggregation, i.e. whether the index used to summarize an array of rates refers to the behavior of all relevant cohorts during a given time period, or to behavior during all relevant time periods of a given cohort. In general each fertility measure will have a unique time series during the course of a demographic transition.

With this in mind, methodological research may be fruitfully directed at the determinants of differences between the time series of various fertility indices. The work of Lotka on the relationships between age distributions, age-specific fertility, and the crude birth rate, may be put in this category (among others). Perhaps more significant empirically is the tendency of period-type measures, such as the conventional gross reproduction rate, to diverge through time from the path followed by their cohort counterpart. This divergence is important because, although cohort fertility indices are much more closely akin to the concept of fertility utilized in the theory of the vital revolution, period measures are much more prevalent and practicable. The prime source of difference between time series of period fertility and time series of cohort fertility is the tendency of the timing pattern of child-bearing to change both erratically and secularly. This consideration is highly relevant for the proper determination of the course of reproductivity, not only in the early phases of decline, but also in periods of fluctuation about a lower fertility asymptote, such as characterize current Western experience.

Norman B. Ryder  
Scripps Foundation for Population  
Research

#### Dinner Meeting

President Margaret Jarman Hagood, presiding

Following the introduction of former presidents of the Population Association and foreign guests, President Hagood presented the speaker of the evening, Dr. Carl C. Taylor, Community Development Consultant, Foreign Operations Administration. A summary of his address on the subject, "India: 360 Million People Plan Their Development," follows.

"Relative to the number of people involved and the low economic base from which it had to start, India's National Development Program is probably the most gigantic planned undertaking the world has ever seen. What is now India was not in 1947, and never had been, an area with geographic integrity or a people with political unity.

"The element in India's National Development Program which is designed to attack the problems and focus on developing her 291 million people who live in villages is her Community Development and National Extension Program. It is the purpose of this program to mobilize into aided self-help programs not only the manpower, but the ingenuity and enthusiasm, of these 291,000,000 persons (1952 figure) who live in 558,000 villages. This immense program provides for channeling all the technical and financial assistance which national and state governments are prepared to provide to villagers through an organized village group program. The program, therefore, attacks: the problem of developing local human and natural resources; the problem of how effectively to create desires and demands for technical assistance; the problems of

local improvement of roads, health and sanitary conditions, schools, literacy, recreation; and the problem of developing local units of government not only for local functions, but as part of the whole machinery of government. The conception of this community development program is so imaginative and its execution so bold that it is, in our judgment, a major contribution in methods for many, if not all, other underdeveloped countries.

"The methods of community development are those of implementing the existing motives and desires of villagers, mobilizing the manpower, and developing the enthusiastic participation of village people and village groups in undertakings which will immediately improve the conditions under which they live. Only national leaders who have faith in and knowledge of the potential, though underdeveloped, capacities and power of their millions of people launch and persistently use community development methods as a major technique of national development.

"Local community development does not mobilize all kinds of talents or do all jobs. Its role is the development of people, as probably the greatest underdeveloped natural resource of an undeveloped country, upon which development of all other national resources depend. An understanding of this basic fact depends on whether the intellectual, spiritual, and political leaders of a nation believe in the potentials of the country's many common people. Prime Minister Nehru said in his 1954 Independence Day address (August 15, 1954), 'A new life, a new atmosphere, has been created by the Five Year Plan and Community Program. But the country cannot be said to have achieved economic and social independence until every village is brought under the development program.'"

#### OFFICERS OF THE POPULATION ASSOCIATION

At the business meeting held on May 21, 1955, at Princeton, N. J., the secretary announced the results of the direct-mail election of officers of the Association and other members of the Board of Directors.

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#### Officers for the term 1955-1956:

President	Henry S. Shryock, Jr.
President Elect	Joseph J. Spengler
First Vice-President	Amos H. Hawley
Second Vice-President	Donald J. Bogue
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#### Members of the Board of Directors:

<u>Term Ending 1956</u>	<u>Term Ending 1957</u>	<u>Term Ending 1958</u>
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Conrad Taeuber	Ronald Freedman	Wilbert E. Moore
Dorothy S. Thomas	T. Lynn Smith	Lorin A. Thompson

The following persons were elected to the Nominating Committee for 1956: Irene B. Taeuber (Chairman), Paul C. Glick, and Dudley Kirk. A committee on future publications of the Population Association was appointed by the incoming President, to consist of Mortimer Spiegelman (Chairman), Christopher Tietze, and Hugh Carter.