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REPORT FOR 1972-73 (FY 73)
TO THE
AGENCY FOR INTERNATIONAL DEVELOPMENT
ON THE
INSTITUTIONAL SUPPORT GRANT 211(d)
TO THE
CAROLINA POPULATION CENTER
THE UNIVERSITY OF NORTH CAROLINA
AT CHAPEL HILL

November 1, 1973

CONTENTS

	<u>Page</u>
Statistical Summary	1
II. Narrative Summary	1
III. Detailed Report	4
A. Background and Objectives	4
B. Accomplishments	4
1. Organization	4
2. Staff development	6
3. Library and Reference Services	7
4. Publications	8
5. Educational Materials and Methods	10
6. Training Activities	11
a. Degree Programs	11
b. Alumni of the Program	13
c. Special Services	13
d. Conferences and Workshops	13
7. Research Activities	17
a. Organizational Studies	17
b. Biomedical Studies	17
c. Demographic Studies	18
d. Psychology Studies	19
e. Family Studies	20
f. Economic Studies	21
g. Political Studies	21
8. Field Program Relationships	23
a. Africa: Ghana, Nigeria, Chad, Togo, Kenya, Morocco, Tanzania	23
b. Asia: India, Korea, Pakistan, Philippines, Taiwan, Thailand	24
c. Latin America: Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Nicaragua, Panama, Venezuela	27
d. Near East: Egypt, Iran, Turkey	29
e. United States	31
9. Services to Population-Related Agencies	32
IV. Expenses Classified by Budget and Program Categories	33
A. Expenditures by Budget Category	33
1. Salaries	33
2. Honoraria and Consultants	34
3. Travel	34
4. Other Direct Costs	34
5. Training Stipends	34
6. Equipment	35
B. Expenditures by Programmatic Category	35
1. Academic Programs Office	36
2. International Programs Office	37
3. State Services Office	40
4. Demographic Research and Services	42
5. Communications and Planning	42
6. Technical Information Services	42
7. Administration and Management	42

CONTENTS (Continued)

	<u>Page</u>
V. Future Directions	43
VI. Financial Summary and Comment	45

Appendices:

- 1 CPC Associates, showing affiliations and interests
- 2 Publications of the Carolina Population Center
- 3 Educational materials produced by the Center
- 4 List of population students, 1972-73
- 5 Suggested courses and electives for population students, 1972-73
- 6 Student-Faculty lecture-discussion series, 1972-73
- 7 Alumni, 1966-73 and present positions held by them
- 8 Short-term trainees and visitors, 1972-73
- 9 Conferences and Workshops, 1972-73
- 10 Foreign travel summary, 1972-73
- 11 Organizational chart of the Center

211(d) Annual Report
November 1, 1973

Title: Institutional Support Grant 211(d)

Grantee: The Carolina Population Center
The University of North Carolina at Chapel Hill

Director: Moye W. Freymann, M.D., Dr.P.H.

I. STATISTICAL SUMMARY

Period of Grant: 1968 to 1973
Expenditures for Report Year: \$335,016
Amount of Grant: \$2.4 million

II. NARRATIVE SUMMARY

The Carolina Population Center of the University of North Carolina at Chapel Hill was established to build a multidisciplinary program of research, education and service in the field of population and family planning, especially oriented to international assistance. This report is for the fifth and final year of the 211(d) grant support.

Progress so far:

The Center's basic structure has stabilized to include a central management unit and six program service units: (1) the International Programs Office is the immediate point of planning and coordination for overseas projects; (2) the Academic Programs Office develops and coordinates campus-based teaching and research activities; (3) the State Services Office maintains access to the Center's own "field laboratory" situations in the southeastern U.S.; (4) the Communications and Planning Office develops and disseminates population-related publications, teaching methods and public education services; (5) the Technical Information Service has pioneered in worldwide assistance with collection and effective retrieval of technical information in the population field; and (6) the Demographic Research and Services Unit provides supportive research services to other units and performs basic population studies.

The Center works closely with and through 18 different departments and schools on this campus, representing disciplines which are concerned with various aspects of international population and family planning work. The Center now serves over 200 faculty Associates from this and nearby institutions. They represent a reservoir of many skills, engaged in various ways with population program activities.

Training activities of this program have especially focused on advanced studies for professionals from developing countries and for internationally-oriented U.S. students. Of a total 247 persons who have received graduate degrees concentrating on population studies during the

period June 1966 - June 1973, nearly one-half are now working in other countries. Annually about 140 graduate students in different disciplines are specializing here in population studies, making use of over 40 population courses. The Center annually also serves over 100 short-term visitors and trainees, and arranges up to ten conferences or workshops on special problems. It administers an overseas internship program which has so far involved 20 young professionals. It maintains a special concern for improved training methods in this field.

Research programs in basic reproduction biology and clinical studies on new birth control methods are now strongly established, and are linked with a global network of overseas collaborators. In demographic research, in addition to other basic studies, a series of collaborative "laboratories for population statistics" in various LDCs aims to advance the quality and the utilization of fundamental population data in such areas. Management and manpower studies continue to deal with various operational problems of population program planning and implementation. Research efforts also deal increasingly with aspects of population dynamics and economic and political factors relate to population policy development.

Service relationships with developing countries include collaborative work with various agencies and institutions in Thailand, Turkey, Iran, India, Egypt, Ghana, Morocco, Kenya, Tanzania, Nigeria, Colombia and Venezuela. Other project activities have also involved Costa Rica, Nicaragua, Brazil, Ecuador, Chile, Korea, Pakistan, Philippines and Taiwan. Such relationships include various short-term services, major institution-building projects, and "network"-type projects which involve collaborators from several countries dealing with particular problems. Direct services are provided to USAID as desired, and substantial help has especially been provided to various UN-related agencies.

Future directions:

The general goals of the Center now are to maintain, strengthen, and increasingly apply the special capabilities which are needed in the international population field, as follows: (1) to develop, administer, coordinate and evaluate various problem-oriented project activities that can benefit from the breadth and depth of relevant professional skills available through this institution; (2) to continue to explore innovative approaches to current issues and to help anticipate new problems in this evolving field; (3) to maintain useful contacts and collaboration with potentially important institutions, agencies and special groups abroad which might be otherwise inaccessible to more formal technical assistance agencies; (4) to help develop the basic long-term competence of key population-related institutions and agencies in LDCs, so as to reduce their dependence on outside assistance, applying to this complex process a "partnership" approach and the coordinated involvement of a variety of talents over a period of time; (5) to serve basic educational functions needed in the population field, including advanced training of professionals, special orientation services, and dissemination of new knowledge and experience; (6) to work closely with and to provide a reservoir of direct program assistance to USAID and to other international agencies in advancing population and family planning programs.

Financial aspects:

The 211(d) investment here over the last five years has been extremely productive. The 211(d) funds were the key factor in developing the resources and activities summarized above and attracting other support to them. During 1972-73 the 211(d) funding of \$335,000 has represented only about 7% of the Center's total population program expenditures.

During 1973-74 the new University Services Agreement with AID will help the Center very much to strengthen its work on development and implementation of certain types of new projects overseas. Additional support during the forthcoming year also includes augmentation of North Carolina State funds for work related to state-level population problems; a small NIH Research Center Award to help strengthen basic population research capacities of the program; and various other project-specific grants and contracts. However, a general support grant from The Ford Foundation expires this year, as have NIH-supported population training grant funds.

Without the availability of 211(d)-type support hereafter, the Center will be left seriously short of the small but crucial element of nonproject funding which is essential to strengthen and maintain general management and technical services for the many specific international project activities being funded through the Center, mostly by AID. Inadequate assurance of such continuing support for this core service framework has already led to some fragmentation, overlapping and inefficiencies which could otherwise be corrected and avoided. Nonproject, core financial support is also strongly needed to help maintain and apply key training activities which are needed in connection with projects and for many aspects of international population programs. Optimally, also, the Center should have a small fund available to apply toward the continuing exploration of innovative approaches to emerging problems in the international population field and the development of corresponding new capacities. For these several purposes, the 211(d) mechanism was excellent. The only visible alternative now is to broaden the concept and to strengthen the financing of the "core" component of the University Services Agreement grant mechanism.

World population problems will worsen over a long period ahead, and these will call for the strongest possible U.S. institution-based research, training, and overseas service activities. Effective institutional supports to a worldwide social movement are slow to build, but they are essential to achieve deep and continuing effects. AID's initial investment in development of the Carolina Population Center should be viewed in this context. The Center's structure and capacities have grown tremendously, but still need help to become stabilized and self-sustaining. Continuation of substantial core support of the 211(d)-type for this Center over the next five years is therefore crucial, in order to maintain the quality and the momentum of the present program and to achieve the maximum fruition of its contributions to world population efforts.

III. DETAILED REPORT

A. Background and Objectives

The Carolina Population Center of the University of North Carolina has the task of developing and coordinating a University-wide, multidisciplinary program of research, education and service in the field of population dynamics and family planning. The Agency for International Development in 1968 provided a grant to the Center of \$2.4 million for a five-year period, in order to establish this program on a scale more appropriate to the seriousness of world population problems. This report is for the fifth and final year of the grant.

The objectives of this assistance were stated to be "to build the strongest possible multidisciplinary competence for research, training, and service in the population and family planning field.... The ultimate objective will be to generate important new sources of technical knowledge, expert personnel, training capacities, and consultative support for the U.S. Agency for International Development, in its international assistance in the population and family planning field." The scope of work was stated to "involve further strengthening of the basic organizational structure of the multidisciplinary university population program at North Carolina, through augmentation of faculty strength for certain disciplines essential to the program, and through provision for space and material needs that are required for a major expansion of its services."

B. Accomplishments

AID's institutional grant continued this year to be the primary basis for the growth of the Carolina Population Center. Without such core support, the program would have had to remain at a much lower level of activity and would have had to be less experimental and innovative. The AID assistance has not only augmented directly the competence of the Center but has also had important "multiplier" effects, through helping to initiate new activities which have then attracted separate support. The accomplishments of the Center which are directly attributable to the 211(d) grant therefore go far beyond that which can be gauged from a simple account of grant expenditures. Though the narrative below notes especially those aspects most directly stimulated by the AID funds, in fact virtually every aspect of the program has benefited. More details on the AID grant expenditures in FY 72 are presented in Section IV.

1. Organization: The present organization of the Center is shown in the chart which is Appendix 11 to this report. Dr. Thomas Hall continued as Deputy Director of the Center, and Dr. Hans Krusa as Deputy Director for Administration. The Center's assistance in development, support and coordination of various population-related teaching, research and service activities to collaborating schools, departments, faculty members and students throughout the University is provided through six basic program offices, as follows: The International Programs Office, which Dr. Richmond Anderson continues to head; the State Services Office, which was headed by Dr. Kirk Mosley until the end of June 1973 and now by Dr. Burns Jones; the Academic Programs Office, headed by Dr. Vaida Thompson; Communications and Planning,

headed by Mr. Winfield Best; Technical Information Services, headed by Miss Bates Buckner; and the Demographic Services and Research Unit, now headed by Dr. J. Richard Udry.

Policy and advisory bodies continue to be the following: (1) The Policy Board is appointed by the Chancellor and includes principal members of the Chancellor's office, Deans of several concerned Schools, and the Center's Director, and is chaired by the Vice Chancellor for Health Sciences. It is responsible for considering and formulating, with the Director, general goals, policies, and strategies for the overall program. (2) The Academic Programs Council of the Center includes the Chairmen of eighteen Departments or Schools in the University, and is charged with keeping informed of, assisting with and advising on various substantive and procedural aspects of the overall program with which they may be concerned. (3) The Leadership Council of the Center is a body of prominent citizens who are concerned with being informed of and assisting with the activities of the Center, especially as they may serve general interests of the people of the State and region. (4) The administrative Cabinet of the Center, which meets weekly to deal with operational matters, includes the Director's office and heads of the six program offices listed above.

Associates of the Center now number 212, including those on the Chapel Hill campus and professionals at nearby institutions who are concerned with some aspect of population/family planning activities. They are served by the Center and constitute a reservoir of talent and participation in various activities. They represent 37 Departments, Schools, Centers or Institutes at UNC-CH, 23 other institutions of higher education in North Carolina, two North Carolina state agencies and the Research Triangle Institute. A list of their names and individual sketches of their backgrounds and interests are provided in Appendix 1.

Topical study groups concerned with specific problem areas continue to play a key role in exploring new program frontiers. Topical study groups have been concerned, for example, with such aspects as abortion research, population policy, migration research, and population and economic development. Area-specific study groups are instrumental in planning and coordinating population/family planning program interests in a particular geographical area. Such working groups relate to Thailand, India, Iran, Egypt, Africa, and Latin America.

Departmentally-based teaching and research on aspects of the population field have involved the areas of anthropology, economics, sociology, psychology, political science, geography, ecology, education, obstetrics and gynecology, maternal and child health, epidemiology, nursing, biostatistics, health education, and health administration.

The space directly available to the Center has been increased this year to 25,323 square feet, in addition to the space utilized for population-related activities by participating departments.

2. Staff development: Professional and key administrative staff additions during the year included the following (in alphabetical order):

Mr. Charles Ausherman joined the Educational Materials Unit, directing it after the departure of Mr. Robert Blake, to work with UNESCO in Bangkok. This unit has subsequently become part of the CPC's Communications and Planning Office (COMPO). Ms. Verna Berryhill, Assistant Professor, joined the School of Nursing and the CPC to work on the Center's nursing and family planning leadership program. Mr. Winfield Best joined the CPC staff as Director of the Communications and Planning office, which combines the Center's publications and public education concerns. Dr. Abraham David is working as the Center's program advisor with the University of Ghana at Legon, Ghana. Dr. Burnas Jones now heads the State Services Office, replacing Dr. Kirk Mosley, who now works on an AID-sponsored project in Turkey. Dr. Arnold Kaluzny, Associate Professor in Health Administration, joined the staff as Deputy to Dr. Richmond Anderson, Director of the International Programs Office. Dr. Rolf Lynton is also joining this office to be especially concerned with institutional development functions. Dr. J. R. Udry was appointed Director of Research and of the Carolina Population Center's Demographic Research and Services Unit, replacing Dr. Thomas Steahr. Dr. Joseph Spengler became a visiting professor in the Department of Economics and Research Associate of the Carolina Population Center. Dr. Audrey Wight joined the Carolina Population Center as CPC representative to the Pontifical University of Javeriana in Bogota.

The International Fertility Research Program added new staff in several key administrative and research positions: Dr. Richard Brenner, Associate Professor of Ob-Gyn, as Director of Research; Dr. Chi I-Cheng as Staff Epidemiologist; Dr. David Edelman as Staff Biostatistician; Dr. Alfredo Goldsmith as Area Coordinator for Latin America Programs; Dr. Javad Vakilzadeh as Research Associate; and Mr. Milton Lieberman as Head of the Data Collection Division.

The International Program for Population Statistics added four new professional staff members: Dr. Richard E. Bilsborrow as a staff economist and demographer; Dr. Daniel G. Horvitz, Professor of Biostatistics, as statistician for the program; Dr. Roe Goodman as Resident Advisor in Colombia; and Dr. Ralph Thomlinson as Resident Advisor in Morocco. Dr. Goodman and Dr. Thomlinson were also named Visiting Professors of Biostatistics.

In FY 73 support from the 211(d) grant was provided for the partial or full salary of 19 faculty members involved in the overall program. This is eight less than last year, and reflects an increase in departmental takeover of basic salary support. The 19 included three professionals in family planning administration, two in population statistics, three in family planning and health education, two in population and psychology, two in population ecology, and one each in population education, economic demography, population anthropology, epidemiology, maternal and child health, nursing, and obstetrics and gynecology. In addition the 211(d) grant helped to fund 29 secretarial positions and 15 research assistants, of whom six were hourly student employees. During FY 73, in addition, nine administrative and full-time population library personnel were supported wholly or partially from this grant, plus 13 part-time student assistants who worked in the library.

3. Library and Reference Services: The Technical Information Service (TIS) Library continued to develop its collection, services, and number of users. During the past year major emphasis was placed on investigating the retrieval capabilities of the established automated system, preparing background and working materials for the Population Library Development Institute and Working Meeting on Asian Resources for a Population Information Network (Bangkok, September 1973), and establishing the Population Library Internship Program.

Routine services by the Population Library rose to an average of 350 persons per month. The number of reference questions handled, including telephone and mail requests, averaged about 100 per week. Mail requests from developing countries showed a marked increase, averaging 30 a month. A great increase occurred in the demand from developing countries for photocopying services. This has been generated largely by the TIS Library's expanded distribution of bibliographical listings, e.g., the acquisitions lists, the Bibliography Series, computerized bibliographies, etc. The photocopying service must continue to expand if the Library is to provide the information needed badly by population/family planning organizations and institutions in countries which lack such resources.

The mailing list for acquisitions lists and the Index to Periodical Literature had reached 700 addresses in more than 80 countries by June 1973. A cost/benefit study of these mailings during the summer led to the establishment of a pilot project to begin in the fall. The project divides the service into two types: (1) a current awareness service, based initially on the distribution of the Index to Periodical Literature, which will be available to all requesters; and (2) a library building service which will be available only to a select group of libraries and information centers in developing countries. The library building service will consist initially of the distribution of the TIS Library's monthly catalogue supplement, which will include full bibliographical information for acquisitions and cataloguing. The division of the Library's mailings into these two categories and the reduction of the number of recipients in one category should lead to increased efficiency and decreased costs. Moreover, the capabilities of the automated system, combined with the experience and expertise of the Library's core staff, should produce in a broad range of these two types of services which will benefit both local and overseas users.

The Bibliography Series has developed its own mailing list, and requests for copies have become so numerous that in the near future the Series will have to be placed on a subscription basis. Four bibliographies were published in the period February-July 1973.

The automation project began Phase II in January 1973, with all entries to the Library's collection included in the data base by then. Subsequent months have been devoted to standardization procedures, routine input of new citations, and researching and implementing improved methods of bibliographic processing and indexing/retrieval operations. The Automated Retrieval Bibliographies, now a fully operational reference service, has

produced more than 100 retrievals to date and distributes an average of 80 copies of retrievals each month. These bibliographies will be improved in the coming year, when references will be retrievable by terms from the Population/Family Planning Thesaurus being developed at the CPC.

The Thesaurus was issued in preliminary draft form in February 1973 and distributed to 43 requesters, mainly overseas. A revised draft was completed in September, and to date has been distributed to 73 requesters. The first edition of the Thesaurus will be published in the spring of 1974. If the reception of the first drafts is an indication, the Thesaurus should become a standard subject vocabulary for the field.

The Library participated during April in the Sixth National Conference of the Association for Population Libraries and Information Centers (APLIC) held in New Orleans in conjunction with the Annual Meeting of the Population Association of America. In September, three CPC staff members are co-hosts with the Economic Commission for Asia and the Far East and APLIC for a seven-day Population Library Development Institute, and for the first Working Meeting on Asian Resources for a Population Information Network, in Bangkok. The CPC staff are chiefly responsible for the planning and implementation of the Institute. Working materials prepared by TIS Library staff members for this project will be edited and expanded into a manual for beginning population librarians to be published in 1974.

Trainees in the Population Library have included three short-term U.S. trainees (Patricia Ribeiro and Barbara Miller of the Population Dynamics Department at Johns Hopkins University and Avi Green from the Library of the United Nations Fund for Population Activities). The first three overseas participants in the Population Library Internship Program were trained during this period: Ms. Joung Im Kim of the Korean Institute for Family Planning in Seoul and Mrs. Eugenia Labbe-Norris of CEIAD in Santiago, Chile, who trained in the TIS Library from January through May, and Mrs. Petrina Amonoo of the Population Dynamics Programme at the University of Ghana, who trained from April through August. Two interns are expected for the fall semester, from Bangkok and Sri Lanka. A fourth trainee, Alicia Curiel, the Librarian of the Instituto de Estudios Superiores de Administracion (IESA) in Caracas, Venezuela, spent two weeks in the Library training with Ms. Martha Cutler, the Special Librarian for Latin American Projects, appointed in April. Ms. Cutler will provide consultative and technical assistance to the Library at IESA and to the Library of the Pontifical University Javeriana in Bogota, Colombia.

4. Publications

The CPC Publications Program, a part of the Center's Communications and Planning Office, revamped its publications series during the year and prepared a record number of technical works for production in the year ahead. The purpose of the program is to stimulate, edit, publish and disseminate monographs and other works which can advance the international population field through reporting on unique population research or population/family planning project developments.

Since some 18 different disciplines may feed into the CPC publications effort, professionals from many fields are needed to help judge the quality of manuscripts and to help guide the program generally. COMPO's publications unit has two mechanisms to handle these tasks: an internal publications committee helps to assure initial quality control of submitted manuscripts. A largely external publications advisory panel is also available to help suggest priorities for publication, identify potentially worthwhile manuscripts from non-UNC-CH sources, and provide a pool of available reviewers to critique manuscripts for their accuracy, clarity and significance.

While monographs remain a mainstay of CPC's publications series, the program generally was redesigned in FY 72-73 to enhance the presentation and utility of its output, and to increase the flexibility for publication and distribution of different kinds of work of high relevance to the field. In addition to monographs, a working paper series is being added, and several major hard or soft cover books have been published or are in press.

Hard cover books are being produced through joint publication arrangements with commercial and university publishers, to share cost and achieve broader dissemination while maintaining editorial control. Outside publishers involved include Ballinger books, Inc. of Cambridge, Massachusetts; D. C. Heath & Company of Boston; and the American University Press in Cairo. The books now in press with these publishers are, respectively, A Mass Media Experiment in Family Planning, by J. Richard Udry, et al.; Population and Politics edited by Richard Clinton; and Family Planning in Rural Egypt by Saad Gadalla.

Soft cover books published by the Center the past year include the major works edited by epidemiologist Abdel R. Omran, Egypt: Population Problems & Prospects, and North Carolina's Changing Population, by Thomas E. Steahr. An example of a recent monograph published by CPC is Development Administration in a North Indian State: The Family Program in Uttar Pradesh, by Robert E. Elder, Jr.

Other major publications in press or in the final stages of editing or review include: Family Planning Manpower by Thomas Hall; Maternity Costs in Industry by Daniel Moffie and Kirk Mosley; Culture, Natality and Family Planning by John Marshall and Steven Polgar; Family Planning Incentives (revised) by David Fimmigan; A Structure for Population Education by Ralph Wileman and Mary T. Lane; Population Education: The Case of Nepal by Daniel Taylor; The Effects of Income on Fertility by Julian Simon; University Population Programs: A General Guide by Rolf Lynton; and a Population Policy for Americans by Vaida Thompson and Mark Appelbaum.

The publications program also has initiated a special series of North Carolina Demographic Sourcebooks by C. Horace Hamilton and a series of publications in the field of domestic family planning program development, in conjunction with the North Carolina Office of State Planning and Department of Human Resources. CPC's reprint service continues to make available population-related articles by UNC-CH faculty which have appeared in professional journals. During the past fiscal year about 4,000 copies of reprints have been distributed.

A complete listing of CPC publications is provided in Appendix 2. The Center's publications generally are now reaching the substantial professional readership. With standing orders from individuals, libraries, and agencies, first printings (2,000 copies in the case of monographs) are often sold out. Nonetheless, a special effort is being made to achieve more thorough notification and announcement of all CPC publications to professionals in the field, nationally and internationally. This already has resulted in a rising influx of requests for most published items, and this curve is expected to rise more steeply as efforts to assemble and utilize lists of relevant specialists are intensified.

In the year ahead, if funds are available, at least fifteen major publications of high international and domestic relevance in population/family planning will be produced. The merger of the notification and distribution facilities for publications and other educational materials is expected to considerably enhance the efficient dissemination of new knowledge and printing and teaching materials throughout the field.

5. Educational Materials and Methods

During the year the Educational Materials and Methods Program became an integral part of CPC's Communications and Planning Office. This activity was established originally with a grant from The Rockefeller Foundation to develop prototype materials which might be widely adaptable to serve the information and education needs of population programs internationally, to establish related training activities, and to develop research and evaluation studies in this area. The unit was the first of its kind in a university setting charged with such responsibility.

A variety of educational materials including booklets, filmstrips, films, a series of sound filmstrips and direct mail pieces, mostly for specific target groups, have been produced and continue to be distributed in large quantities. Some booklets and flipbooks developed under contract from the Office of Economic Opportunity have since been reprinted and distributed by the Government Printing Office. Others have been made available at cost to family planning programs in different parts of the world. Currently an agreement is in prospect to provide selected materials through UNESCO to a number of developing countries.

During the past year the EMMP helped produce radio and television spot announcements tested in four U.S. cities as the basis for evaluating the effects of mass media programs on contraceptive behavior and the prevention of unwanted fertility. This research was conducted by J. Richard Udry and his colleagues, the results of which are now being published as the volume entitled A Mass Media Experiment in Family Planning.

A new project also is being launched, with a foundation grant, to extend the investigations into the use of broadcast media for the recruitment of family planning service consumers. The project will focus especially on the creation and testing of "user-specific" radio and TV spot announcements to increase the utilization of sterilization services by low-income males, and of contraceptive services by sexually-active minor females.

The development of self-instructional materials for professional and lay audiences has become a special interest of this program. Units being tested or developed include programmed instruction in basic demography and population epidemiology. Another series of self-instructional units provides information on human reproduction and contraception to postpartum patients. Programmed instruction projects include games and simulation exercises. One such unit now being tested in anticipation of early production is "Beanio", a board game designed to teach children the elements of population dynamics. Packaged as a kit with workbook and tape cassette, it uses a population of kidney beans and food supply of corn to demonstrate how population growth tends to outstrip resources, and how fertility, population size and migration influence a nation's welfare.

Though the development of programmed or self-instructional units by EMMIP seeks to utilize advanced educational theory and practice, a special effort is being made to be sure all these units can be economically produced and require minimum hardware. This is done partly to assure that the methods and units developed and tested in the U.S. may be more readily adapted for use overseas. The programmed instruction methods now emerging should greatly facilitate the training of population/family planning specialists, and the education of young students or laymen, in the U.S. and in LDCs.

A separate effort, led by Dr. Jain, is now collecting and producing case studies of administrative problems of LDC family planning programs, for use in training of program leaders. Also, simulation models of program situations, and computerized game approaches to such teaching, have been developed and are being improved steadily with further use.

COMPO has initiated at UNC-CH a Committee on Population Communications, involving the heads, or their representatives, of six units concerned with important aspects of this field: the School of Education, the Department of Health Education, the School of Journalism, the Office of Medical Studies, the Department of Radio, Television and Motion Pictures, and the Population Center itself. The committee will facilitate informal communication about joint interests and activities in population/family planning information, education and communication; and help in the mobilization and coordination of resources among these departments needed for more effective design and implementation of communications projects in the population field. Each of these units includes specialists experienced with international work and with the population and family planning field.

A listing of materials produced by CPC's Educational Materials and Methods Program is included in Appendix 3.

6. Training Activities

a. Degree Programs

During 1972-73 a total of 139 students specialized in population studies at the master's or doctoral levels at UNC-CH. This is the same level as last year, and can be compared with the number of 45 such students

in 1966-67. A list of the students enrolled during the 1972-73 academic year is attached as Appendix 4. Students are registered in existing academic departments associated with the Population Center, but their programs of study utilize a combination of population-related courses offered by several departments so they may acquire both depth in the application of a basic discipline to the population field and a grasp of the broader field. Through inter-university cooperation, students may also register for population-related courses offered by nearby Duke University and North Carolina State University at Raleigh.

During this academic year over 40 courses dealing directly with population and family planning were available to the students. This is also about the same level as the previous year. In addition, content of other general courses tended to deal more with population issues. Suggested courses and electives for population students during 1972-73 are listed in Appendix 5.

During 1972-73 steps were taken to strengthen the basic training available in population education, and to strengthen formal training for nurses and midwives in the context of population and maternal and child health. The program in economics introduced a new seminar in economics and population, and in maternal and child health a new seminar dealing with programs that affect human reproduction was offered. Greater attention was also directed to population program management training and policy-oriented studies in both short-term and degree programs.

In addition to departmental courses, population faculty and students meet weekly for a general lecture-discussion series. These are held each Monday evening during both the fall and spring semesters for credit and audit by population students. The program for the 1972-73 series is included in Appendix 6. Selected students and faculty members also meet for other special seminars and presentations, arranged according to needs and opportunities, frequently throughout the year.

Among the 139 students enrolled during 1972-73, 32 percent were from other countries and 68 percent were from the United States; about two-thirds of the students were in research-oriented programs and one-third were in professional fields. Eighteen American students were provided fellowship support under an NICHD population training grant to the Center, and nine received Center support through private foundation grants from the Jesse Smith Noyes and Mary Reynolds Babcock Foundations. Others were supported by funds through their academic departments. Among the foreign trainees, eight were sent directly by AID and others came with the support of The Population Council, The Ford Foundation, World Health Organization, and other private sources. In addition, four foreign students were provided fellowship support by the Carolina Population Center through the Center's AID institutional grant. Two foreign students supported by the Center were funded through an award by the Jesse Smith Noyes Foundation.

b. Alumni of the Program

As of June 1973 the program had graduated 247 students with a specialization in population and family planning. Fourteen of these graduates have since enrolled for further advanced training in population studies. There are 123 graduates employed or studying in the United States, and 112 are now overseas, primarily in the less developed countries. Twelve are working in population-oriented positions with USAID, six of whom are in overseas missions. A summary description of present positions, degrees awarded, and basic disciplines of alumni is included in Appendix 7.

c. Special Services

During 1972-73 short-term orientation services were provided for a total of 123 persons sent to the Center by USAID, The Ford Foundation, The Population Council, World Health Organization, and others. The Center's Training Office organizes carefully structured programs of from one day to several months' duration for such persons. This service involves a heavy investment of faculty time, calculated during 1972-73 as a total of 1,722 faculty man-hours of effort. Costs of the training office services plus such faculty time were primarily borne by the AID 211(d) grant funds. This investment seems justified as an international service. It also helps to build overseas relationships and to stimulate faculty and students.

The largest number of visitors to the Center were internationally-oriented professionals from the United States (47), followed by Venezuela (8), Nigeria (8), Colombia (7), India (6), Ghana (5), Philippines (4), and Thailand, United Arab Republic, Chile, Afghanistan, El-Salvador, England, Ethiopia, Gabon, Hong Kong, Indonesia, Iran, Ivory Coast, Japan, Jamaica, Jordan, Korea, Nepal, Russia, Switzerland, Sudan, and Taiwan (all 3 or less). A list of visitors and short-term trainees is provided in Appendix 8.

d. Conferences and Workshops

The Center sponsored ten conferences or workshops during the period covered by this report, as listed below and summarized as Appendix 9.

(1) International Workshop on Population Program Administration

With assistance from the United Nations Fund for Population Activities, this workshop was held at the Quail Roost Conference Center July 12-16, 1972. The 17 participants from eleven countries included national program directors and management specialists. It dealt with basic aspects of family planning program administration including systems approaches to planning and implementation, information needs, manpower planning and development, statistical evaluation in population programs, the development and utilization of training centers, research administration, policy development and implementation, and economic considerations. Plans were made to annualize this workshop. Participants formed a continuing international committee on population program management.

(2) International Workshop for Nursing Educators in Population and Family Planning

The School of Public Health, School of Nursing and the Carolina Population Center sponsored this special workshop in Chapel Hill from September 17 - October 13, 1972. The 11 participants included leaders in nursing education and nursing services administration from six countries. The purpose was to help nursing educators to increase their knowledge of population and family planning, and to develop and implement in their own countries a family planning educational component to be integrated into the curriculum of basic schools of nursing. This is part of a continuing project for this purpose.

(3) International Population Policy Consortium Meeting, Dubrovnik, Yugoslavia

The International Population Policy Consortium was developed to promote the analysis and understanding of the political aspects of population policy development by social scientists and policy leaders in their own countries. The secretariat of the IPPC is currently located in Chapel Hill, and its membership meets every twelve to eighteen months. The conference was held from October 4-6, 1972, in Dubrovnik, Yugoslavia and included thirteen representatives from eight countries, including the United States. During five substantive working sessions, on-going research and training activities at the concerned institutions were reported on and critically discussed; solutions to various obstacles (political, ideological, financial, and methodological) to population policy research were sought; and the activities, procedures, goals, and potential further contributions of the IPPC were examined.

(4) Inter-campus Workshop on Population Studies in University Programs

On October 20-21, 1972 faculty from the 16 campuses of the University of North Carolina system were invited to a two-day workshop designed to help concerned faculty on other campuses to strengthen their teaching, research, and service activities in the family planning and population field. A number of such faculty have international experience and interests. Discussion included the establishment of continuing inter-campus program exchanges and relationships.

(5) Symposium on Incidence and Costs of Pregnancies in Industry

On October 31, 1972 business leaders in North Carolina were convened to discuss findings of a collaborative pilot project by the School of Public Health, the School of Business Administration and the Carolina Population Center on the incidence and costs of pregnancies in industry. This symposium is part of a larger effort to help industrial leaders to support family planning services and policies, with implications for the U.S. and for developing country situations.

(6) International University Population Program Project Conference of University Heads, Shiraz, Iran

On March 9-11, 1973 the International Study Group of Chancellors and Rectors of leading universities in Africa, Asia and Latin America had their second meeting, at Shiraz, Iran, to discuss common interests and approaches to the development of population programs in universities, relevant study findings on this topic, the possibilities for building national and regional networks of universities with population programs, and the publication of a Guide and a Workbook for policymakers and directors of such programs. Three more universities were invited to join the Group which guides the data collection and development efforts of this project.

(7) Conference on Abortion Research

During March 19-23, 1973 the Carolina Population Center's International Fertility Research Project with the International Union for the Scientific Study of Population invited fifteen international leaders to join faculty on this campus to review current methods and concepts and needs for further work in abortion research. The workshop was designed to advance scientific approaches to abortion techniques, and to create better opportunities for international collaboration in this field.

(8) Planning Conference on Population Program Development for Faculty Members of the Institute of Higher Administration Studies (IESA), Caracas, Venezuela

From May 11-17, 1973 the Director of Academic Affairs at IESA, with six IESA faculty members, participated in a conference at Chapel Hill to plan for further development of a collaborative project with the Carolina Population Center to prepare case teaching materials on aspects of population program administration. The IESA conference also aimed to advance a collaborative project for overall strengthening of IESA's institutional capacities for teaching, research, and services in the population field, for contributing to the overall development of population programs and policies in Latin America.

(9) First Annual International Workshop in Family Planning/Population Program Administration

The July 1972 family planning/population program administration workshop demonstrated the strong need for systematic further efforts to strengthen the capacities of administrators of population/family planning programs. A followup international committee chaired by Dr. Aziz Bindary of Egypt recommended that the University of North Carolina at Chapel Hill design and coordinate an advanced quality workshop on modern methods of management for top-level officials in national family planning programs, and for senior faculty of training institutions who would be involved in the further development of such programs. This was organized by the

Department of Health Administration of the School of Public Health and the Carolina Population Center from June 17 - July 8, 1973. The main theme was "A Systems Approach to Program Planning and Implementation". It was attended by 17 participants nominated by 10 foreign countries. The workshop is planned to be a regular event for several years and to expand enrollment and training components according to needs and resources.

(10) Population Program Development Workshop for Faculty Members of Javeriana University, Bogota, Colombia

During June 25 - July 13, 1973, 16 Deans and senior faculty from the Pontifical University, Javeriana, came to Chapel Hill for a period of intensive review of various aspects of population studies, followed by a period of specific planning for further developments in their teaching, research and service activities. This was organized in response to Javeriana's invitation to UNC-CH to help develop a broad program of population studies at that University. The workshop also helped Javeriana faculty to develop direct relationships with counterpart faculty members at UNC-CH.

7. Research Activities

The following general summary seeks to provide an overview of research efforts connected with the Carolina program, arbitrarily grouped under major categories, and noting completed work as well as current activities and interests. Recent publications of Associates and more information on specific projects are available separately.

a. Organizational Studies

McLaughlin and others are working to evolve and test general program models. Naylor, Moreland and Chu have developed a computerized management game which simulates general decision situations faced by administrators. Related studies by O'Connor, Schultz, Trainer and McLaughlin have dealt with the improvement of information and decision systems in family planning service. Allen and Jain have been concerned with studies of interagency relationships in population programs. On a national level, Udy and a collaborating faculty group have engaged in a major project which included helping to design and evaluate family planning programs in 18 cities across the U.S.; strategies in these cities have involved different types of service and educational inputs. Evaluation efforts have included measurement of changes of incidence of undesired birth timing and of excess fertility in experimental and control areas, and development and testing of indicators of adequacy of service activities. At the regional level, Hall has worked with the Region IV office of the DHEW on strategies for research evaluation and manpower questions. At the state level, Jones and others are concerned with operations and evaluation studies on the state family planning program. A major OEO-sponsored experimental program, under Knauff, has tested methods for augmenting family planning services in 19 rural North Carolina counties. An exploratory study has sought to measure the impact of unplanned pregnancies in industry situations. Close contact is maintained with organizational studies by collaborating institutions and agencies in developing countries. Jain and others have analyzed data from different districts of India to study effects of different population characteristics on program performance. Kessel and several collaborators have initiated major international comparative studies of pregnancy termination methods and services. Problems of manpower analysis and development for the family planning field are of special concern to Jain, McLaughlin, Edmands, Lynton, Hall and others. In the School of Education, Beach, Wileman, Lane, Smallegan, Hurow and others are concerned with developmental and evaluation aspects of population education, and with building research on demographic factors in educational planning.

b. Biomedical Studies

Reproductive biology: The Laboratories for Reproductive Biology, established in 1969 with the aid of a grant from the Rockefeller Foundation, are directed by Dr. H. Stanley Bennett, Kenan Professor, Biological and Medical Sciences. Members of the Laboratories for Reproductive Biology are active in the following research areas: (1) neurological control mechanisms in reproduction; (2) membranes of gametes and other cells; (3) cell and molecular biology of male gametes; (4) endocrine control mechanisms in reproduction; and (5) contraceptive techniques. The Laboratories represent such disciplines as biochemistry, anatomy, zoology, pharmacology, pediatrics, neurology, and obstetrics and gynecology. The Reproductive Physiology Research Laboratory at

North Carolina State University in Raleigh, under the direction of Professor Lester Ulberg, is active in studies of comparative reproductive physiology of mammals. This laboratory is administered through the Department of Animal Science of North Carolina State University. Professor Ulberg and his staff are cooperating with Hulka and others of the Chapel Hill group in their research. Cooperative arrangements exist between the Reproductive Physiology Research Laboratory in Raleigh, the Laboratories for Reproductive Biology and the Carolina Population Center in Chapel Hill.

Clinical research: In the Department of Obstetrics and Gynecology at Chapel Hill, research activities have concentrated on early pregnancy and sterilization. Hendricks and colleagues are studying prostaglandins and their analogs as abortifacients. Hulka is studying mechanical and pharmacologic ways of making dilation (for vacuum aspiration) of the pregnant cervix easier and safer. Hulka is studying improved methods for surgical sterilization, including laparoscopy, and reversible sterilization methods for females and males. Hulka and K. Omran have also studied possibilities of inducing an immunological rejection response to the trophoblast. Another study has involved stimulating the mucus glands of the cervix to secrete antibodies to sperm. Hogue and others are studying the short- and long-term consequences of induced abortion. The international program of fertility control studies, conducted by Kessel and Brenner, involves the Obstetrics and Gynecology, Biostatistics and Epidemiology Departments at Chapel Hill, and an extensive network of international collaborators.

Van Wyk and French in pediatrics are exploring basic endocrinological factors influencing sexual maturation and fecundity. Morris and Udry have studied variation in menstruation, libido and coital frequency, and biological and social factors influencing these, the influence of oral contraceptives on such cycles and on levels of physical activity, the field studies on techniques of detecting early pregnancy and studying pregnancy loss.

Population genetics: Pollitzer's group has a continuing concern with studies on isolated U.S. populations of different ancestry. Using genetic traits, physical measurement and demographic data, estimates of preferential matings and differential fertility among groups and phenotypes have been made. The genetic contribution of the parental populations and the role of cultural factors in gene flow are being investigated. Elston, Pollitzer and others are searching for major genes which may underlie behavioral traits.

c. Demographic Studies

Improved population measurement methods are the subject of a broad research program involving Linder, Wells, Greenberg, Abernathy, Coulter, and others in biostatistics. Investigations also deal with improved longitudinal and periodic designs, survey methods, studies of non-sampling and response errors, and development of a range of mathematical population models. Another major program involving Linder, Myers, Thomlinson, Lingner and others aims to help local institutions in selected less-developed countries to build field "Population Laboratories." These involve demographic studies in a selected local geographic area, in order to test and demonstrate improved measurement methods and to study population dynamics under different conditions. These are now being developed in the Philippines, Colombia, Morocco, Kenya, Ecuador and Turkey.

A research program involving Greenberg, Lachenbruch, and others has aimed to develop new estimation methods for population analysis, to assess their accuracy, reliability and sensitivity, and also to study procedures for collecting appropriate data. Birth interval methods have been of special interest. To evaluate such estimators, an existing computer microsimulation model is utilized, as well as other special purpose models as necessary. Horvitz and Suchindran are especially extending studies on population models. In mathematical demography, Namboodiri in Sociology is continuing his studies on stable population theory and is pursuing studies in numerator analysis techniques.

Substantive studies by Hamilton and Stearns on North Carolina have provided the most detailed demographic analysis ever done of a state population in the U.S. They have also studied population changes in the southern region of the U.S. A number of studies are underway on overseas population groups. Bauman and Kaluzny have worked in Thailand, and Burnight is now at the Population and Social Research Center in Bangkok. Omran directs a project analyzing population patterns in the Middle Eastern countries. Paydarfar has pursued basic studies on the sociology of fertility in Iran, and Gulick has worked on population anthropology research in Isfahan. Wells and Namboodiri have worked with important studies of fertility and population dynamics at Gandhigram in South India.

Research especially related to population distribution is represented by Hawley's longstanding investigations in urban ecology and his interests in the implications of population size on social organization. At Chapel Hill the Center for Urban and Regional Studies represents a strong and longstanding research interest in this subject. A research group under Weiss has received major support for studies of new town development. Myers, of Duke, is especially concerned with strengthening theory and methods in migration research. In geography, Florin is pursuing mortality studies and with Kopec is producing a population atlas of the U.S.A. South. Moriarity is studying U.S. interurban migration. Basile, Birdsall and others are studying population distribution dynamics in other countries.

At a fundamental level of demographic analysis, studies on basic population stabilizing mechanisms are being pursued in the context of the University's ecology program which involves faculty members in seven departments. This work deals with several species of animals and plants. The interests of Stiven and Long in zoology have especially focused on the demographic characteristics of specific populations existing in different environmental systems, the relationship of genetic variability to environmental heterogeneity and flux, and the nature and causes of population mortality.

d. Psychology Studies

The departmental faculty in psychology at Chapel Hill are increasingly involved in development of psychological studies relevant to better understanding of population dynamics. Explorations so far relate to attitude structures associated with family size desires of college students (Thompson, Insko, Appelbaum), semantic differential studies of population terms (Appelbaum and Young), premarital counseling programs concerning birth control and family planning (Lowman), development of educational approaches for use with delinquent populations

(Eckerman), development of educational materials concerning cross-species psychological correlates of reproduction and effects of crowding (Brown), consideration of psychological incentive programs as they may relate to population (Lolordo), crowding studies with humans (Schopler), psychological factors in and ethical issues related to population policy acceptance (Thompson, Appelbaum, Young), perception of and attitudes toward family size, ordinal position and family structure (Thompson, Pinner, Maltes, Appelbaum, Young), psychological correlates of mobility (clinical-personality studies by Galinsky, Little and Lowman; socio-psychological studies by Worchel, Folger, with Andreoli, Arnold, Ruthus, McAllister, and Watzel). Results of several of these projects have been reported at A.P.A. and P.A.A. meetings; several papers (on population policy and on crowding) have been published, are in press, or have been submitted for publication. Field studies by Insko, Blake, and others concerning attitudes toward birth control among low-income groups represent one of the first attempts to advance modern psychological theory related to fertility and contraception. A doctoral study by Kothandapani analyzing various attitude measures as predictors of birth control usage has provided the basis for a Carolina Population Center monograph. Thompson has summarized knowledge on psychological antecedents, correlates and consequences of family size. Thompson, Insko, and Appelbaum are engaged in experimental studies of attitude change approaches among persons desiring more than three children. Thompson, Allen (public health) and Prothro (political science) have also completed preliminary research to develop instruments for assessing attitudes toward population and population policy, under an NICHD contract. The departmental group is particularly concerned with advancing further research in three areas: attitudinal and motivational factors in reproductive behavior, improved measurement of population variables, and psychological aspects of population density and migration.

e. Family Studies

Cogswell has been engaged in an extensive program of cross-national research on family system dynamics as a linkage between aspects of societal organization and fertility behavior. Factors of concern include, for example, structural aspects, spouse interaction, influence of children already born, and socialization processes and outcomes. The project has involved research collaborators in ten countries. This study has also examined different family structures with regard to their functions in identifying social options and equipping family members for alternate performance patterns, with implications for fertility and birth control behavior.

Polgar, in anthropology, has investigated the influence of conjugal role relationships among Black and Puerto Rican families in New York City poverty neighborhoods as these affect the use of different methods of birth control. This work has also been concerned with effects of an additional birth during the study period on education, economic, and health status of observed families. Coulter, in biostatistics, has studied adoption and other outcomes among a cohort of illegitimate births in the State of North Carolina. Eckland, in sociology, has been concerned with aspects of sex roles and reproduction. Cogswell is engaged in a study of the socialization of adolescents into sexual roles in poverty groups, their relationships with their parents, and other factors which may influence the prevention of unwanted pregnancies.

The influence of family childbearing patterns for the health of the family members is a strong concern of Siegel, Morris and others in the Department of Maternal and Child Health. Omran and others in epidemiology are especially concerned with problems of research design in this subject area. Omran has developed and is coordinating a WHO-supported international program of research on relationships between fertility and family health which now involves seven countries, and ultimately several more. In this department also, WHO has established an International Reference Center for Epidemiological Studies. Marshall, as part of an anthropological study of decision-making about contraception in a village in India, has studied intra-family communication networks and beliefs, values, and expectations regarding family size limitation. He is now concentrating on studies of acceptability of different fertility control methods, with WHO.

f. Economic Studies

Population research interests of the departmental faculty in economics at Chapel Hill are substantial. Pfouts has worked on mathematical theory of stable populations, and Tarascio on Keynesian population theory. Orsagh, an economic historian, has studied aspects of geographic distribution of income and of immigrant labor. Scheffler's research in the area of human resource economics has focused on problems of health manpower distribution. Keesing has recently analyzed the relation between population size and density and economic activity in developing countries and has produced labor force projections for the Mexican economy. Witte is interested in the spatial aspects of the urban problem including the determination of land prices across Standard Metropolitan Statistical Areas and the analysis of factors underlying vacant land in urban areas. Strauss has begun work in the area of racial discrimination. His work includes analyses of the impact of race on earnings and the industrial patterns of Negro employment. Turchi has developed a micro-economic model of family size decisions and is concerned with further work on optimum decision theory in population research. Spengler joined the group in 1972 to help in advancing the above research interests, to explore further the social and economic implications of different population distribution patterns and approaches to achieving optimal distribution. Naylor, an associate of the Center who heads the econometric systems simulation program at Duke, has worked with Chu and others on development of econometric models in Brazil and Taiwan; they especially seek to incorporate demographic factors so as to enable the study of implications of alternative growth patterns, suggest needs for additional demographic data and advance general population research concepts. At the nearby Research Triangle Institute, David and Lindsey have studied demographic components of economic development in Nepal and other countries, and in North Carolina.

g. Political Studies

Faculty members in political science at UNC are deeply concerned with development of research on population relationships with politics and government. Prothro has worked with Allen and Thompson on methods to measure population-relevant value profiles among different groups, as relevant to population policy development. White is involved in research on effects of urban migration in Japan on politicization of migrants and on institutional structures. Flash is integrating a longstanding interest in health policy with added attention to

population policy development and implementation. Clinton has completed a study on problems of population policy formation in one developing country with Hispano-Catholic cultural tradition and intends to expand the study to include other Latin American countries. Levine has integrated population considerations into studies of comparative ethno-politics and civil-military relations in Africa. An International Population Policy Consortium was organized here in 1970, co-sponsored by UNC and institutions in Mexico and Yugoslavia, as a means of facilitating further comparative population and political science studies. Its secretariat is currently manned by Clinton in Chapel Hill.

The Department of Political Science in 1970 organized a national Political Science/Population Workshop attended by key political science researchers to consider further development in this area of study. The resulting papers were published in 1972 as Political Science in Population Studies (D. C. Heath and Company) under the editorship of Clinton, Flash, and Godwin. A companion volume, Research in the Politics of Population, edited by Clinton and Godwin, reported on specific studies (also published by D. C. Heath and Company in 1972). A second Population/Political Science Workshop was held in the spring of 1972 with 16 participants from around the nation. Papers growing out of this conference are being edited by Clinton into a volume entitled Population and Politics: New Directions in Political Science Research (D. C. Heath and Company, forthcoming in 1973).

Other relevant activities have included studies of Buddhist relationships with population programs in Southeast Asia, and explorations of implications of various religious value systems for human reproduction. Kamala Rao, of India's National Family Planning Institute, worked on policy-oriented research interests in Chapel Hill during 1970-71. In the Department of Health Administration, Jain has studied the legislative dynamics of abortion law reform in the U.S. and Neasham completed a study of family planning policy formation at the county level in North Carolina. Colleagues at Duke University include Back, concerned with social psychological aspects of population policy, and Halderman, concerned with international law and population programs. Stillman of Duke, with CPC support, is working on a comparative framework for understanding national population policies with reference to African countries. Keir Nash, while a Research Associate of the Center, served as Director of Political Studies of the Commission on Population Growth and the American Future.

8. Field Program Relationships

a. Africa

A project for assisting up to four African universities to develop multidisciplinary programs in population studies was established at the Carolina Population Center in FY 72 with AID support. Each such program established will serve as a regional resource for teaching, service, and research. The first University associated with this program, the University of Ghana, created its Population Dynamics Programme (PDP) in September 1972. David serves as UNC-CH resident scholar. Achievements include the administrative organization of the PDP, including a director, four associate directors and staff; organization of a West Africa Regional Population Seminar in December 1972; the initiation of several population research projects; and the award of fellowships to faculty members from the University of Ghana and the University of Ibadan who will study abroad in Canada and England. Exploration is underway for project sites in Francophone West Africa, East Africa and North Africa. A fellowship was awarded to a Kenyan graduate political science student to study at UNC-CH.

A feasibility study exploring approaches to strengthening family planning content in African health training institutions terminated in July 1972, with a proposal to AID for a long-range program, entitled "Family Planning Courses at African Health Training Institutes." This was funded by AID June 30, 1972, for a period of five years. The program will work with African medical, nursing, midwifery, and other health training institutions in family planning and family health. Project components include assistance for regional teaching institutes for medical schools, regional seminars and teaching institutes for nursing, midwifery, and allied health training institutions, short-term consultation, assistance in developing, testing and distributing self-instructional materials, assistance for two Pan-African conferences, fellowships, publication of proceedings, and a newsletter. During January and February 1973, UNC-CH faculty served as resource persons in self-instructional materials development to three regional seminars held by the Association of Medical Schools in Africa with assistance from another AID-funded project with the Association of American Medical Colleges.

Carolina Population Center faculty and associates assisted Government ministry personnel in Chad and Togo to develop proposals for population-related research and training under the University Services Agreement grant. Neither proposal was approved although the Togo proposal is now seeking other funding. Explorations continued to establish institution building relationships with several universities in Nigeria.

In Ghana and several other African countries, collaboration is developing with the clinical studies of the International Fertility Research Program.

Improvement of population statistics is a goal of an AID-supported Population Laboratory project. A "POPLAB" was established in Kenya in June 1972, and work there has so far included initial mapping and house numbering; field data collection will begin soon. Rose is the UNC-CH Resident Advisor. The Morocco POPLAB has completed initial field work and is analyzing data. The UNC-CH Resident Advisor in FY 73 was Thomlinson.

In Tanzania, a field study to demonstrate how improved methods for vital statistics registration can be linked with post-partum Family planning care has been underway.

Earlier pilot studies on distribution systems for non-clinical contraceptives in three African countries led to a broader demonstration field project in Kenya. Under the University Overseas Population Internship Program (Frederiksen Intern), Berger worked in Kenya with the family planning component of the FAO project, "Planning for Better Family Living." McWilliam worked with the Department of Community Medicine at Ahmadu Bello University, Nigeria, in demographic research including a KAP study and a health survey.

b. Asia

India

CPC Faculty Associates have had extensive experience with India's population and family planning program. In India, as elsewhere, CPC has emphasized that collaborative efforts in the population field should be truly reciprocal.

The Administrative Staff College in Hyderabad with CPC assistance has passed from an initial phase of developing teaching cases on family planning administration problems to a broad capacity for consultation and assistance by the Government of India on family planning program problems and newer project developments. The CPC maintains continuing informal supportive relationships with these developments. This institution hosted the International study group of Family Planning Administrators for their third meeting, in 1973.

The Allahabad Agricultural University Health and Family Planning Project is directed by Drs. Lessel and Graciela David, both of whom were supported by the CPC for a period of advanced studies. This effort includes trials of different types of field work patterns, improved methods of staff training, introduction of newer methods of sterilization and abortion, and improved evaluation methods. It is now funded through IPPF but has continued to receive consultative help from the CPC.

The Gandhigram Institute of Rural Health and Family Planning also maintains contact and mutual supportive relationships with CPC, especially in aspects of staff development. It continues to strengthen field program demonstrations and training programs for official family planning workers throughout South India, and to work on improved educational and service methods and on studies of changes resulting from program influences. Pisharoti's set of non-computer simulation materials for training family planning administrators in developing countries is used in the teaching program at Chapel Hill. Assistance to Indonesia is an indirect bonus from the work with Gandhigram. The Gandhigram Institute was a source of initial field training of Indonesian national and provincial family planning administrators and trainers. The former Director of the Gandhigram Institute, Ranganathan, has served as senior family planning program advisor for the World Bank in Indonesia.

The National Family Planning Institute in Delhi has also maintained contact and exchange, and has received help with staff development. At the National

Institute of Health Administration and Education in Delhi the CPC has helped to strengthen management training and research on family planning administration problems. Dr. K. Rao has transferred to this institution. Family planning research and training interests are also encouraged in management institutes in Calcutta, Ahmedabad, and Delhi. Population study programs at several universities also receive some help through consultation and staff training support.

Population education in schools has received increasing attention in India, with CPC assistance from an early stage including pilot studies near Delhi, curriculum experiments in Mysore State, and help with FPAT efforts in this field.

Statistical measurement of population trends and evaluation of family planning programs in India is a crucial need, to which training activities in Chapel Hill have especially related. Young statisticians in key positions in the Office of the Registrar-General, state government, and research and training institutions have received fellowship support from the CPC for advanced work on basic population measurement and analysis problems. This group is now rising into positions of leadership. Other Indian trainees have included official program administrators, evaluators, educators, and researchers.

The International Fertility Research Project includes active participants concerned with studies and innovations in contraception and abortion methods in India, and a wholly Indian organization to advance such work is taking shape.

Under the AID-supported International University Population Program Development project, an international network of exchange and consultation aimed at the development of university population programs includes relationships with the Universities of Delhi, Bombay, Udaipur, and Jaipur, the Indian Institute of Management at Calcutta, the Administrative Staff College at Hyderabad, Allahabad Agricultural Institute, the Indian Institute of Management at Ahmedabad, and Nehru University. Recently consultations have started with the Thirupathi University, Andhra, about the development of an interdisciplinary population program there.

While current political and funding situations have hindered assistance efforts with India, the CPC has sought to maintain strong informal relationships and will continue with assistance and exchange activities.

Korea

Earlier, McLaughlin and Trainer were involved with USAID and Seoul National University in an approach to analyzing the Korean national family planning system. Since September 1972, Dr. S. H. Yun, Training and Research Officer for the Planned Parenthood Federation of Korea, and a former doctoral student at UNC-CH, has been in contact with CPC regarding a project for development of population/family planning especially for testing in the Korean army.

Pakistan

There has been a continuing dialogue between the Carolina Population Center, the Joint Secretary for Pakistan's population program, AID personnel in Islamabad, and administrators and faculty at the University of Karachi,

regarding the development of an Institute of Population and Social Research at the University of Karachi. This institute would attempt to provide an integrated approach to programmatic aspects of family planning, calling upon relevant disciplines available at the University of Karachi. The University of Karachi and the Carolina Population Center of UNC have initiated a specific University Services Agreement research project to assess the influence of family structure on decisions to utilize family planning services, and this project activity will help provide an initial focus for formalizing the Institute.

Philippines

A Population Statistics laboratory project continues at Xavier University in Luzon with consultation and involvement also of key national statistics officials.

In the field of population education, two Frederiksen interns have finished assignments in the Philippines. Currently Bruce Bennard is assigned to the Regional Health Training Center, Davao City; and Donald Monsky at the Institute of Maternal and Child Health, Quezon City.

New collaborative projects under consideration include a proposal from the Philippines Social Science Council for the development of a regional network of population research training programs. Also, the University of the Philippines and the Association of Philippine Medical Colleges are interested in evaluating the family planning/population content within medical curricula and developing programmed instruction and other methods for teaching in population and family planning.

Consultation has also been provided regarding family planning management training, manpower studies, and the development of a major new Center for national program activities.

Taiwan

Assistance to Taiwan's Council for International Economic Cooperation and Development has been provided by Chu, Moreland, and Seeks since 1970. Taiwan's National economic plans previously virtually ignored a number of key demographic factors and their possible policy implications. An improved planning model for Taiwan, which allows estimation of influences of recent population changes and of alternative future population trends, has been worked out and is now officially utilized. Also, a simple computerized family planning program game was tested and further developed in Taiwan through the international family planning training center there.

Dr. K. K. Chang, of Taiwan's national family planning program, worked earlier in Chapel Hill on an analysis of the Taiwan family planning program system, examining information and supervisory factors which could influence its efficiency, and is now testing these concepts and using them in training work there. A Frederiksen intern, Dr. Alan Tharpe, has served as Administrative Associate to Dr. T. H. Sun, Executive Secretary of the Committee on Family Planning.

Ornan is collaborating with Taiwan Provincial Institute of Maternal and Child Health in Taichung (Dr. Kuan Tan, Director) on studies of the health aspects of family formation. The project is being extended to include a study of intellectual development in relation to family size and a study of professional attitudes towards incorporating family planning advice into health practice.

Thailand

The Institute of Population and Social Research at Mahidol University, established with CPC assistance, continues to receive CPC help in faculty development and in building program-oriented research and service capacities, with Rockefeller Foundation support. Over the past year the Institute was allocated Thai civil service positions with monies being projected effective October 1, 1974. Burnight continues to serve as resident program consultant. The Institute has worked with the Thai Ministry of Health with CPC help, on studies to assess the usefulness of different patterns of using field workers. Activities currently being planned include evaluations of the family planning program of the Bangkok Municipal Health Department and exploring the roles of Thai industry in promoting family planning.

A Frederiksen intern, Donaldson, has completed his initial assignment and has become the Population Council Advisor on evaluation to the Ministry of Health. Two other interns are in place: Riley is working with a Thai counterpart to provide an anthropological assessment of Thai health care systems with reference to family planning services, and Donald Lauro is working with Dr. Chek, Director of Bureau of Public Health in Bangkok. A third Frederiksen intern, Michael Cook, has been cleared for placement and will begin his assignment in October.

c. Latin America

Bolivia

At the request of the AID population officer, the Bolivian Minister of Health and his Director of Maternal-Child Health have visited CPC and discussed various aspects of population studies and services. Several areas of potential cooperation were considered and plans made for further contact.

Brazil

CPC's strong interest in cooperating in the development of population studies and population-related programs in Brazil continues. As the Brazilian government and the local U.S. Embassy soften their restrictions on population-related activities, the contacts made in recent years are likely to bear fruit. These relationships are particularly promising in the case of BEMFAM, the Vargas Foundation and the Federal University of Rio de Janeiro in Rio and the Centro Brasileiro de Analise e Planejamento (CEBRAP) and the Centro de Estudos de Dinamica Populacional (CEDIP) in São Paulo. Naylor at Duke and Daland and Clinton at UNC-CH continue to represent CPC interests in this area.

Chile

Two Chilean doctoral students, one in biostatistics and one in psychometrics, both with special interests in population, are currently studying at UNC, and a CPC Frederiksen intern has worked in Santiago at the Centro de Estudios sobre Tenencia de la Tierra. A librarian from CELADE spent four months at UNC during the spring of 1973 in a special course on population library management. Clinton maintains close contact with the chief of the Sector de Políticas de Población at CELADE.

Colombia

In January 1973, the Rector of Bogota's Pontificia Universidad Javeriana (PUJ) and the Dean of Preventive Medicine spent several days at CPC to finalize the proposal for a collaborative project for the establishment of an interdisciplinary curriculum in development studies with special emphasis on population studies. In June and July the Vice-Rector and fourteen deans, department heads, and professors of PUJ attended an intensive three-week seminar at CPC on population dynamics and the interrelationships between population and development. A project between the UNC and PUJ on family planning and nutrition is also underway.

A Population Laboratory continues to operate with the Colombian national statistics agency.

A project between UNC and the Asociación Colombiana para el Estudio Científico de la Población (ACIEP) is getting underway, to help evaluate the effects of population-related scholarship recipients in Colombia. A collaborative project with PROFAMILIA is also being discussed.

Two Colombian doctoral candidates with interests in population are currently enrolled at UNC, one in economics and one in sociology, the latter on leave from the Departamento Nacional de Planeación.

In May 1973 Ms. Edmonds of UNC's School of Nursing made follow-up contacts with faculty members of the Universidad del Valle in Cali, who had attended the workshop in nursing education held here last year. While in Colombia, Ms. Edmonds also discussed nursing and family planning education programs with counterparts at PUJ and the Universidad Nacional in Bogota.

Costa Rica

Two Frederiksen interns are currently working in Costa Rica, one with the Centro de Estudios Sociales y de Población (CESPO) and one with the Caja Costarricense de Seguro Social. An officer of the Costa Rican IPPF affiliate and member of Costa Rica's Population Council attended the three-week program in population-family planning program administration held at UNC in mid-1973.

Ecuador

In 1972 a Population Statistics Laboratory project was established in Ecuador in collaboration with the Centro de Analisis Demografico.

Nicaragua

Extensive collaboration has evolved between the CPC POPCASE program and the Instituto Centroamericana de Administración de Empresas (INCAE) in Managua.

Panama

The Rector of Panama's Universidad Santa María la Antigua, the country's only private university, and the President of the Asociación Panamena para el Planeamiento de la Familia, the local IPEF affiliate, have visited CPC to discuss developing inter-institutional relationships. This may receive financial support from a private foundation. Ms. Edmonds has also made follow-up contacts with faculty members at the Universidad de Panama's School of Nursing in May 1973.

Venezuela

A seminar on population and family planning for Venezuelan labor leaders was sponsored in October 1972 by the Instituto de Estudios Superiores de Administración (IESA) and the Asociación Venezolana de Planificación Familiar (AVPF), with financial support from the International Population Policy Consortium (IPPC), whose secretariat is at CPC. A resulting publication is being prepared at IESA.

IESA is also working with the POPCASE program at CPC, in developing case-type instructional materials with population-family planning content. In May, several of IESA's professors met with counterparts at UNC to exchange information on activities and interests. Subsequently, one of IESA's professors attended a three-week workshop at CPC on population-family planning program administration, and IESA's head librarian has spent two weeks working at the CPC Library. Another IESA professor is finishing doctoral studies in the UNC School of Business Administration.

d. Near East

Egypt

CPC faculty members have assisted with many aspects of population program development in the UAR, and key UAR family planning officials have consulted or studied at Chapel Hill. A formal collaborative relationship exists with American University in Cairo, for exchange of faculty and help in training junior staff and in field studies on population and family planning. Collaborative research and teaching activities are also undertaken with individuals in Cairo University, Ein Shams, and El Azhar University.

Omran has collaborated with colleagues in Egypt on a comprehensive publication entitled "Population Problems and Prospects in Egypt," produced by CPC. Omran is planning a conference of Arab scholars on population and family planning in the region, proposed for 1974. Gadalla, Associate Director of the AUC Social Research Center, worked with the CPC at Chapel Hill last year to analyze an extensive set of fertility data and to plan follow-up studies on population dynamics and population program and policy development, to be funded with Ford

Foundation and AID support upon his return. Shanawany also worked at Chapel Hill on a Ford Foundation scholarship in the area of population policy development and on plans for strengthening population education in Egypt. McLaughlin has worked with the National Family Planning program leadership on matters of program design and operations research.

The Egyptian government, with help from the World Bank and UNFPA, has utilized Dr. A. Omran, Dr. K. Omran, Dr. C. Arden Miller and Dr. C. McLaughlin to consult on special aspects of its family planning program. Dr. Bindary, Chairman of the Egyptian Family Planning Program, has visited CPC to negotiate closer collaboration between CPC and the national program in Egypt. A subcommittee of CPC faculty is being convened under the auspices of the Egypt and Near East Study Group to put together a working plan.

Iran

Continuing assistance is provided to the Iranian family planning office on various aspects of program development. With UN sponsorship, Paydarfar worked with a team of Iranian experts to assess national family planning activities and resources and to provide a framework for further planning and expansion. Trainees at Chapel Hill have included several of the top staff of the family planning program in the Ministry of Health. Blake worked earlier with the Ministry in organizing a regional family planning communications workshop, and during 1972 provided advanced training and consultation help for the director of the national family planning communications program.

Tehran University faculty members concerned with population studies have received advanced training in Chapel Hill in such areas as family planning program administration, epidemiology, and population statistics. A Frederiksen intern, Bhatnagar, established the first family planning courses in the Tehran School of Social Work. Jalali in the School of Public Health serves as a coordinator of collaborative fertility control studies between Chapel Hill and clinical centers in the Tehran area. At Isfahan University, Gulick worked for a year to help develop research on patterns of communication and acceptance of family planning, and continuing consultation is provided to the emerging population studies program. Financial support is needed for Gulick to return and assist the next phase of this program. At Isfahan, Bhatnagar has worked as a Frederiksen intern to advance population education activities there.

At Pahlavi University in Shiraz, Paydarfar worked on earlier baseline demographic studies among different groups and on factors influencing family planning acceptance. A Frederiksen intern, Bhattacharyya, has developed the first formal demographic courses at the Pahlavi University and has helped to link University interests with official family planning program problems. Hastings and Saltonstall, additional Frederiksen interns, have also been approved for Iran assignments. Several of the CPC faculty have assisted in planning a population center at Pahlavi University and intensified field studies in Fars Ostan, and the CPC will provide continuing support.

Additional program concepts have been jointly developed by CPC staff with Iranian colleagues, ranging from general institution building at Iranian universities to specific problem-oriented projects and program assistance.

Turkey

A Population Statistics Laboratory project at Hacettepe is anticipated with the Turkish national statistical agency. Consultations have proceeded also regarding the strengthening of the Population Studies Center at Hacettepe University

e. United States

While the Carolina Population Center's activities are mainly in the international field, a vigorous domestic program is also maintained. This is not only because of the Center's state, regional, and national responsibilities, but also because such efforts are highly relevant to the international program. Accessibility to active family planning programs is provided in some very "under-developed" areas, convenient sites for field training can be found, new techniques and procedures can be tested in conjunction with overseas collaborators, effective service relationships with official agencies can be demonstrated, and the Center's credibility in LDCs is much higher thereby.

The Center's State Services Office has continued work outlined in the preceding report. The Rural Family Planning Project, funded by the Office of Economic Opportunity and operated under the Carolina Population Center, has been a means of testing and demonstrating improved service systems, and also provides field training sites for students. With the transfer of OEO funds to the state, the demonstration phase of this program is over and the local services will be administered through the North Carolina Statewide Family Planning Program.

In addition, extensive work has been done with North Carolina state and local agencies in training of administrators and staff, program development and evaluation, cost determination, and other aspects. The State Services Office maintains, through the North Carolina Files, an information base which can be used in teaching, special studies, reports, and field activities.

Regionally, the Carolina Population Center provides technical assistance and consultation to provider agencies in the Southeastern region, as well as to the Regional Office of the National Center for Family Planning Services. Interstate communication and coordination are promoted. As an example, the Carolina Population Center plays a significant role in organizing and backstopping regional conferences of Statewide Family Planning Directors.

The Carolina Population Center continues to work with national organizations through representation on boards and councils, conduct of studies, and provision of population data. The Center hosted the organizational meeting of the National Family Planning Forum at Chapel Hill in March 1972 and has contributed to its development into a vigorous body for the exchange of experience on family planning matters within the United States. The Center's staff and Associates have also been called for testimony before the Senate Subcommittee on Human Resources on family planning legislation and other public forums.

9. Services to Population-Related Agencies

In addition to service to domestic-oriented agencies, CPC Associates have served USAID in various advisory groups, consultancies and training courses. CPC Associates have also served the International Planned Parenthood Federation, Ford and Rockefeller Foundations, Pathfinder Fund, World Council of Churches, IUSSP, and other non-governmental organizations.

The United Nations system is a special focus of concern and assistance by the CPC. The UN Fund for Population Activities has used the CPC for basic organizational studies and assistance, and for a special seminar on population program administration, held at Chapel Hill for leaders of national family planning programs of LDCs, in connection with an initial conference in New York in July 1972. The World Bank has made extensive use of CPC Associates for population study missions to India, Iran, Malaysia, Indonesia, and the Philippines. The United Nations Advisory Committee on the Application of Science and Technology to Development contracted with the CPC to help develop its reports on needs for further international action in the population field. The World Health Organization has used CPC staff to consult on various aspects of population statistics, education, manpower development, family planning program administration, human reproduction, and contraception research. UNESCO has utilized several CPC Associates to help in developing population education and mass communications work. The UNFPA, WHO, and ECAFE have called on the CPC Library for help. The FAO and ILO have utilized CPC staff for research and program development on population matters. CPC faculty here have also been involved in population aspects of the World Biological Program. High priority will continue to be given to strengthening population activities of the UN system.

IV. EXPENSES CLASSIFIED BY BUDGET AND PROGRAM CATEGORIES

The preceding narrative provides an updated review of accomplishments in FY 73. These activities obviously far exceed what can be reflected in a simple tabulation of 211(d) expenditures. As indicated earlier, the specific 211(d) grant expenditures have a vital "multiplier" effect. For accounting purposes, however, a listing and an analysis of expenditures follow in this section of the report.

Expenditures are classified in this section in two ways. The first classification follows the traditional budget categories of salaries, supplies, etc. The second classification follows a more programmatic approach, showing program expense areas and indicating the contribution of 211(d) funds to these functional areas.

A. Expenditures by Budget Category

The FY 72 report forecast obligations of \$335,016 for FY 73. Total obligations of 211(d) funds in FY 73 were actually \$335,016. Details of this 211(d) grant expenditure, grouped according to the University's budget object categories, are as follows:

	<u>FY 73 Forecast</u>	<u>FY 73 Actual</u>	<u>Over (under) Projection</u>
Salaries	\$229,608	\$268,684	\$ 39,076
Social security and retirement	25,408	30,096	4,688
Consultants	10,000	5,949	(4,051)
Supplies	2,500	2,884	384
Travel	2,000	4,198	2,198
Other direct costs	36,000	9,865	(26,135)
Stipends, tuition and fees	29,000	14,346	(14,654)
Equipment	<u>500</u>	<u>(1,006)</u>	<u>(1,506)</u>
Total	\$335,016	\$335,016	\$ -0-

1. Salaries - \$268,684

The total salary expenditures of the CPC program administered through the Center during 1972-73 amounted to \$2,153,300. Of this, \$268,684 or 12% was provided from the AID 211(d) grant resources. The other salary costs were largely covered by task-specific contracts or grants from governmental or private agencies, or by University sources. Ford Foundation grants covered 8% of salaries, Rockefeller Foundation grants 1%, and the remaining 79% came from the University and other sources. Of the 211(d) expenditures

for salaries, approximately \$174,644 (65%) were applied to cover professional faculty referred to in Section III above and detailed by department in the following functional breakdown of expenses. An amount of \$91,353 (34%) covered costs of supporting staff required for assistance in faculty teaching, research, and service activities. The remaining \$2,687 (1%) was used to pay for part-time assistance, particularly graduate students in the field of library work and statistical data processing.

2. Honoraria and Consultants - \$5,949

A total of 17 honoraria payments were made, primarily for experts invited to lecture and consult on specific aspects of the total program. Fees paid for such visitation and consultation averaged \$350 each. Of 17 payments, 4 were under \$100, 10 were between \$100 and \$500, 1 was between \$500 and \$1,000, and 2 were over \$1,000.

3. Travel - \$4,198

During 1972-73 the Center covered costs of 35 domestic trips of UNC faculty, staff, consultants, population students, and visiting lecturers, at an average cost of \$119.94 per trip. The travel purposes included professional conferences, Center-sponsored seminars, field training and recruitment. No foreign travel was funded by the 211(d) grant during this year. However, since such travel reflects overseas interests of the Center, it is summarized in Appendix 19.

4. Other Direct Costs - \$9,865

This University category carries various other charges unascrivable to a specific account, and are detailed as follows:

Telephone	\$3,097
Xerox rental and related costs	1,244
UNC duplicating, printing & photo service	3,135
Subscriptions and books	432
Editing, art work & contract typing	1,624
Other miscellaneous items	<u>333</u>
Total	\$9,865

5. Training Stipends - \$14,346

The following expenditures were applied to trainees whose presence especially contributed to the Center's own institutional capacity and to building useful relationships with institutional collaboration abroad. Payments were made with AID approval through the Institute of International Education.

<u>Students</u>	<u>Stipends</u>
El-Tayeb, Bahia	\$ 2,097
Sarangapani, V.	4,257
Sastry, K. R.	4,569
Suchindran, C. M.	<u>3,423</u>
	\$14,346

6. Equipment

No equipment items were procured from 211(d) funds during the year. The minus figure (\$1,006) indicated for the equipment category in the budget summary is due to the fact that expenditure reports for this category in previous years included both expenditures and encumbrances, in order to indicate realistically our allocation of funds in a given year. However, some items for which funds were encumbered were cancelled before being delivered and expended. The minus figure represents the adjustment made possible by final accounting to reflect the true expenditure figure for the life of the grant.

Note: Space requirements were entirely covered by the University and other sources.

B. Expenditures by Programmatic Category

The programmatic profile of CPC expenditures presented below indicates subtotals of 211(d) expenditures with the overall CPC program, under major operational areas and related project units.

		CPC Expenditures	From 211(d)
	<u>GRAND TOTALS</u>	<u>\$4,526,270</u>	<u>\$335,016</u>
1. <u>Academic Programs Office</u>		58,247	9,170
a. <u>General support:</u> This office maintains contact with and serves faculty associates, supports research study groups, and provides student services, especially for international students, and provides a sound base for international service activities.			
b. <u>Teaching program support:</u> CPC funds have been provided for partial support of special study programs within different departmental disciplines. Departmental coordinators advise students with interests in the population field, assist in developing courses, field work and research, and maintain liaison with the overall program. The amount allocated for this purpose rose somewhat in 1972-73 because departmental absorption of responsibility for continuing work stimulated by this support was slowed by University budget pressures and reductions of NIH training funds in the population field. Amounts allocated to different departmental programs during FY 73 were as follows:			
	<u>Total</u>	<u>211(d)</u>	
Anthropology	31,249	15,893	
Biostatistics	13,285	10,228	
Economics	22,484	9,713	
Education	22,137	18,590	
Epidemiology	17,961	2,939	
Health Administration	63,614	28,123	
Health Education	4,181	1,313	
Maternal and Child Health	15,180	10,388	
Nursing	15,546	(498)	
Political Science	13,155	4,385	
Psychology	40,605	23,446	
Sociology	6,805	4,783	
c. <u>Special Training Programs, Services, and Fellowships</u>		194,782	20,031
Described in Section III.B.6 and Appendices.			

	CPC Expenditures	From 211(d)
2. <u>International Programs Office</u>	\$ 145,340	\$ 16,067
<p>Although the Center's entire program is internationally oriented, this office is the point of immediate focus for international project development, country study programs, and overseas fellowships. With the development during 1971 of the AID-sponsored University Services Agreement, this office has added administrative and project development capacities which are necessary to strengthen area-specific planning groups, to link the existing University resources closer to IBC institutions and agencies for specific project development purposes, and to maintain the closer liaison with concerned offices in AID/Washington required for development and monitoring of these projects.</p> <p>Project budget totals which are country-specific are first listed below, followed by interregional project categories. Brief comments are made on each; more details are available elsewhere.</p>		
a. <u>Africa</u>	147,074	-0-
<p>An AID-sponsored project aims at helping to build broad-based programs of population study at the University of Ghana and selected other African institutions. Another project is concerned with means of strengthening population and family planning content in African health training institutions.</p>		
b. <u>Colombia</u>	31,110	-0-
<p>An AID-sponsored project aims at helping to develop the population component in a new interdisciplinary Graduate Program at Javeriana University, Bogota. A separate project with the PUJ on family planning and nutrition is also underway.</p>		
c. <u>Venezuela</u>	21,057	-0-
<p>With AID sponsorship, two projects are underway with the Institute of Higher Administration Studies (IESA) in Caracas. Under one project case teaching materials on aspects of population program administration are being developed. Under a second project, collaboration is underway to strengthen IESA's institutional capacities for teaching, research, and services in the population field.</p>		
d. <u>India</u>	6,517	-0-
<p>As noted in Section III.8.f., CPC has continued involvements in India, helping with strengthening of government programs and institutional development.</p>		

	CPC Expenditures	From 211(d)
e. <u>Iran</u>	\$ 26,220	\$ -0-
<p>Two AID-sponsored projects are underway between CPC and Pahlavi University in Shiraz. The Pahlavi Population Center has been developed to help organize and develop a strong, university-based program oriented to the program in southern Iran. A related Data Systems Project aims to strengthen the research and evaluation function of the Pahlavi Population Center.</p>		
f. <u>Population Problems and Prospects--Near East</u>	25,065	-0-
<p>Dr. Omran has led a comprehensive study of population problems in Near Eastern countries, especially related to family planning program and policy implications, involving experts in the countries themselves.</p>		
g. <u>Thailand</u>	80,800	-0-
<p>Rockefeller and AID assistance has been provided for development of Mahidol University's Institute for Population and Social Research. Also, a joint project with the Ministry of Health seeks more efficient patterns for use of family planning field workers.</p>		
h. <u>International Fertility Research Program</u>	1,020,995	-0-
<p>This broad program includes a central data analysis service to facilitate field evaluation of new fertility control techniques, and an international group of study contributors. The Department of Obstetrics and Gynecology and others at UNC cooperate in field testing and training programs for newer methods of fertility control, including pregnancy termination, IUDs, sterilization and hormonal methods. The program will also be concerned with effects of the system of delivery on fertility control acceptance and results and implications for manpower and evaluation.</p>		
i. <u>Reversible Sterilization Studies</u>	25,915	-0-
<p>New techniques for reversible vasocclusion in the males and tubal occlusion in the females are being developed, and are moving beyond preclinical studies to collaborative clinical trials abroad.</p>		
j. <u>Laboratories for Population Statistics</u>	538,665	-0-
<p>This program seeks to improve the quality and the use of basic demographic data through field studies and demonstrations in a network of key collaborating agencies and institutions in several countries. The program is led by a control unit at Chapel Hill, developed in cooperation with the Department of Biostatistics.</p>		

	CPC Expenditures	From 211 (d)
k. <u>Fertility Changes Estimation Methods</u> This project seeks to develop and disseminate more efficient methods for fertility changes in primary areas of LDCs where routine birth recording is deficient, especially through use of numerator analysis methods.	\$ 27,469	-0-
l. <u>Population Program and Policy Design</u> This broad program aimed to (1) analyze existing problems of family planning program and policy design, (2) suggest improved methods and models, (3) develop field tests and demonstrations of improved methods through interested overseas institutions and agencies, (4) build related training activities, (5) develop more general program and policy models which can be used as simulations for training and policy planning purposes, and (6) augment the supply of professional competence for international consultation in population program and policy development. The program built upon relationships previously established by the Carolina Population Center with institutions and agencies abroad, in order to expand activities toward the achievement of the above objectives. It also has aimed to mobilize the talents of existing and new University faculty members for these objectives.	151,404	-0-
m. <u>Overseas Population Interns</u> This project serves to strengthen the manpower pool for the population field by enabling qualified young professionals to obtain valuable field experience in LDC situations, and to contribute directly to field programs in a dozen locations.	188,600	-0-
n. <u>International University Population Program Development</u> This project is assisting in the establishment and growth of programs of population research, teaching and service in key universities of LDCs. A senior advisory group includes the heads of eight LDC universities, and contributors from thirty LDC institutions participate in identifying common problems and useful solutions.	32,437	-0-
o. <u>Family Planning Teaching Materials Development</u> This project, assisted by Ford Foundation, aims to build teaching materials especially for population program administrators in LDCs, using case methods, simulations and other techniques, and testing, producing and disseminating these through collaborating groups in LDCs.	45,997	-0-

	CPC Expenditures	From 211 (d)
<p>p. <u>Nursing and Family Planning Leadership Training</u></p> <p>This project provides training and consultation to key educators, administrators and supervisors of nursing midwifery and related health personnel in LDCs, to help them strengthen the roles of such workers in family planning service programs.</p>	\$ 91,546	-0-
<p>q. <u>Population Policy Consortium</u></p> <p>This project aims to advance population policies especially by involving LDC scholars in policy relevant studies and helping them facilitate policy development processes. It involves an international consortium secretariat, seminars and exchange, and support for specific projects.</p>	46,195	-0-
<p>3. <u>State Services Office</u></p> <p>For most effective international work, the Center has had to develop access to its own immediate "field laboratory" situation. This is needed because (1) research work on field problems can often best be initiated in the population and program situations available nearby which have features similar to LDC areas, (2) legitimation of collaborative work with overseas agencies and institutions often requires that we be doing similar studies here; (3) new methods and patterns developed here often have direct demonstration value for LDCs, (4) teaching programs here for international trainees require the development and use of live situations for purposes of demonstration and practical experience, (5) for building institutions in LDCs that are responsive to local program needs, we must be able to demonstrate such linkages, and (6) local support of CPC's international work will also be influenced by the Center's capacity to respond to real local needs.</p>	61,235	-0-
<p>a. <u>Manpower Planning: N.C. Family Planning Program</u></p> <p>This project has assessed family planning manpower needs in collaboration with state, regional, county and community agencies and organizations and developed a plan for manpower training and development.</p>	11,442	-0-
<p>b. <u>Evaluation Systems for N.C. Family Planning Program</u></p> <p>This project helped to design an evaluation system for the N. C. Statewide Family Planning Program, in collaboration with state and local officials, with attention to operational and long-term goals.</p>	17,128	-0-

	CPC Expenditures	From 211(d)
c. <u>Family Planning Services for Youth in N.C.</u>	\$ 3,889	\$ -0-
<p>This project is developing studies of the current level of family planning services available to youth, and plans to improve and demonstrate activities to meet the special needs of such groups.</p>		
d. <u>Improved Rural Family Planning Methods</u>	426,924	-0-
<p>This project, funded by OEO in July 1970, has sought to develop and demonstrate better methods of service delivery in rural areas, emphasizing consumer involvement and use of local outreach workers and health practitioners. The project involves a CPC unit for planning, training and evaluation, and three multicounty program areas, in the western, central and eastern parts of the state. The project budget includes actual costs of service delivery.</p>		
e. <u>Region IV, DHEW, Technical Assistance</u>	41,094	-0-
<p>Under this DHEW-sponsored project, CPC staff have rendered consultation services to the southeastern regional office of DHEW, have provided technical assistance to state and local programs in the region, and have helped to distribute educational materials and published a quarterly newsletter.</p>		
f. <u>Environmental Education Program</u>	14,906	-0-
<p>This project, funded by the U.S. Office of Education, has helped the School of Education's Center for Population and Environmental Education to pioneer in methods for strengthening population education in school systems.</p>		
g. <u>Family and Population Research</u>	10,555	-0-
<p>This program has sought to build greater understanding of family-level dynamics influencing fertility, and especially to analyze and solve problems of adolescent pregnancies and sex education. The effort has included several NIH-supported projects (1) studying family stresses and responses to disability, (2) analyzing problems and testing improved methods of promoting contraception among disadvantaged youth groups, and (3) developing a cross-national network of studies in this area.</p>		

	CPC Expenditures	From 211(d)
4. <u>Demographic Research and Services Unit</u> This unit aims to (1) facilitate interdisciplinary studies of population dynamics; (2) provide basic data on field areas needed for action-research on family planning program and policy development in the U.S. and abroad in LDCs; (3) provide information needed for field assignments of trainees from LDCs and the U.S.; (4) provide help and consultation on access and use of various demographic methods and data; (5) continue cooperative efforts with departments of UNC, the Research Triangle Institute and others, in advancing population research theory and methods; and (6) provide an administrative base for efficient implementation of certain population research projects.	\$ 49,659	\$ 11,680
5. <u>Communications and Planning Unit</u> This combines education materials development functions and the Center's publications program, as previously described under Section A.4 and 5. These have a strong international orientation. It also maintains contact with the Center's Leadership Council and state agencies to help link Center activities to real current public problems and needs.	121,129	54,703
6. <u>Technical Information Services</u> As described under Section III.B.2.	267,675	33,285
7. <u>Administration and Management</u> See Section III.B.1 and Section IV.A. for detail.	325,997	60,777

V. FUTURE DIRECTIONS

The Carolina Population Center at the University of North Carolina at Chapel Hill now represents the largest U.S. institution-based resource for international program support and assistance in the population field. It was built up for this purpose through major assistance from USAID through the 211(d) grant mechanism. At this time, the proposed future directions of the program can be summarized as to maintain, strengthen, and most effectively utilize certain kinds of capacities which will be needed increasingly by the world population movement. These include the following:

1. Development, administration, coordination and evaluation of a variety of projects serving specific needs of the world population movement. Under the terms of the USAID University Services Agreement with the Center, some 16 different projects totaling over \$2 million affect over 20 developing countries. Projects funded by USAID through the Center under other mechanisms also total over \$2 million annually. Especially useful have been "network"-type projects which enlist collaborators from many countries to help develop and demonstrate solutions to particular problems in the population field. Such projects benefit from, and need for maximum efficiency, full use of the administrative and technical resources which are available to the CPC program as a whole.

2. Maintenance and use of a continuing capacity, in cooperation with USAID staff, to identify and explore new problems and needs in the population field and to develop new efforts to meet such needs as they emerge. This involves use of over 120 faculty associates of the Center and the established linkages between the Center and other concerned institutions, agencies and projects throughout the world. The foresighted policy of USAID has been in this way to build and utilize a reservoir of expertise available for programming work in the population field, in order to supplement basic AID staff and to avoid dependence on less satisfactory expedients to advance assistance to this field.

3. Provision of assistance to institutions and agencies abroad especially through the vehicle of a University-based unit which is often more politically acceptable and administratively flexible than a governmental agency. This uses a neutral, nonthreatening, co-equal partnership-type of approach which is increasingly important and necessary throughout the world. It opens opportunities for communication, exchange, and innovative work with important groups in LDCs, including professional societies, teaching and research institutions, private associations and official agencies, which may be otherwise inaccessible.

4. Development especially of the basic competence of institutions and agencies in developing countries in a holistic and comprehensive manner, so as to reduce their dependence upon future outside assistance. This optimally calls for a "team" approach by a group which has direct and current experience itself with institution-building work, and which can directly call on the variety of resources required for this complex process. Such needs include direct consultation and joint planning, staff development through

short- and longer-term training services, help in logistic matters, help with strengthening relationships and contributions to administrative agencies, development of practical field work and demonstrations, and help with full utilization of local and other resources. The partnership approach also helps to identify complementary competencies and possible mutual contributions to the learning and growth of both institutions. Most important, such joint, broader-based project planning and development helps to avoid collapse or dissipation at the end of USAID or other funding, and fosters continuation of relationships and commitments in the future.

5. Provision of direct technical assistance and support to other international agencies in the population field, which often may also be assisted financially by USAID, so as to increase their effectiveness. These agencies include, for example, various U.N. agencies, IPEF, and private groups. The Carolina Population Center staff frequently are directly called on and heavily utilized to help strengthen the work of such other agencies and activities. This important product of AID support to the Carolina Population Center may be insufficiently recognized.

6. Provision of specific training services for persons from developing countries. For longer-term training, of some 250 students who have received advanced degrees under the overall program so far, about half now play key roles in population programs in LDCs. Currently 40 students from LDCs are in residence, who are supported from various sources. The CPC program has been and continues as a resource for preparing U.S. staff for international work in this field. In addition to longer-term training, the Center makes short-term training arrangements to meet special program needs from time to time; each year such services are provided to over 100 special visitors and trainees, who are sent by AID, other international agencies, and their own governments. These training activities, which are now supported to a large extent from other sources, still will depend very crucially on USAID support of certain staff who are concerned with key functions of processing, guiding, teaching, and following up with such trainees.

VI. FINANCIAL SUMMARY AND COMMENT

Budgetary aspects:

The annual and cumulative projections and expenditures under the 211(d) grant are summarized as follows:

	<u>Initial Obligation Projections</u>	<u>Cumulative Totals</u>	<u>Obligations Incurred Totals</u>	<u>Cumulative Totals</u>
FY69	650,000	650,000	450,513	450,513
FY70	500,000	1,150,000	575,597	1,026,110
FY71	450,000	1,600,000	524,262	1,550,372
FY72	400,000	2,000,000	514,612	2,064,984
FY73	400,000	2,400,000	335,016	2,400,000

The 211(d) expenditures this year of \$335,016 may be compared with a total of \$4.5 million directly obligated by the Center during FY 73 for all population program costs. Of the total program expenditures this year, about 7% came from the 211(d) grant funds, as compared with 12% in FY 72, 19% in FY 71, and much higher proportions in earlier years. The 211(d) investment here over the last five years has obviously been extremely productive; these funds were the key factor in developing the resources and activities summarized in this report, and in attracting other support to them.

During 1973-74, the new University Services Agreement with AID will help the Center very much to strengthen its work on specific development and implementation of certain types of new projects overseas, and the "core" component of this grant helps to cover some of the basic expenses which have previously been covered under 211(d) grant funds. Additional support during the forthcoming year will also include augmentation of North Carolina State funds through a special bill providing CPC with funds to work on state-level population problems; a small NIH Research Center Award to help strengthen basic population research capacities of the program; and various other project-specific grants and contracts. However, Federal domestic program funds which were anticipated for population research and training and support of population research centers have still remained very limited. Also, domestic family planning service program budgets have badly neglected institutional training and research support activities, to their detriment. Foundation sources have been strained because of the shortfalls in expected federal funding of such work, and a general support grant from The Ford Foundation to the Center expires this year. State support for basic costs of this Center is gradually growing, but it is limited and must naturally focus more on U.S. service-type activities.

At this time, some continuing 211(d)-type support to the Center is therefore still crucially needed. A core of nonproject funding is essential to strengthen and maintain general management and technical services for the many specific international project activities which are being operated through the Center, mostly funded by AID. Indeed, the greater load of special contract work increases the needs for 211(d)-type expenditures on certain institutional supportive activities which are required to fill needs and gaps not coverable from project funds. Inadequate assurance of such continuing support for this core service framework henceforth has already led to some fragmentation, overlapping and inefficiencies which could otherwise be corrected and avoided. Nonproject, core financial support is also strongly needed to help maintain and apply key training activities which are needed in connection with current projects and for many other aspects of international population programs. Optimally, also, the Center should have a small fund available to apply toward the continuing exploration of innovative approaches to emerging problems in the international population field and the development of corresponding new capacities. For these several purposes, the 211(d) mechanism was excellent. The only visible alternative now is to broaden the concept and to strengthen the financing of the "core" component of the University Services Agreement grant mechanism.

Administrative aspects:

Other administrative and policy actions by USAID can also help to assure the maintenance and most effective utilization of this type of major institutional resource. These include the following:

1. Making full use of the Center's capacities wherever possible. In some cases, AID units have appeared to turn to other organizations which may have less depth and require more tooling up, in an area where the CPC has an underused capacity. Using the CPC resources is more efficient and helps to maintain them.
2. Continuing to channel all AID population project support on this campus through the Center, as the core mechanism for servicing, coordinating, and helping to evaluate such activities. Technical help is welcome, also, in further strengthening such core services. Separate units in AID and in the University normally tend to fragment activities, and thereby to incur unnecessary inefficiencies.
3. Working with CPC and University officials to develop appropriate costing methods and administrative procedures for the allocation of portions of overhead charges paid on AID contracts and grants to be applied toward basic Center administrative and technical supporting services related to AID-funded activities.
4. Designating a responsible point of authority in the USAID Population Office to maintain an overview of the Center as a major resource, with a concern for maintaining, strengthening, and fully utilizing its capacities along such lines as noted above.

5. Avoiding, with regard to this Center as well as specific project activities, a view sometimes held that the "grass roots" effectiveness of AID funds depends on the extent to which they are directly expended within LDCs. Most important is the ultimate effect of limited AID expenditures on bringing change and generating other resources, locally from LDCs or from other international agencies, to support key activities in LDCs. The main indicator of success should be the multiplier effect of raising the commitment and competence of population-concerned leaders and institutions in LDCs, and mobilizing other resources to expand and continue such work over the long run. The work of the CPC should especially be judged in such a frame of reference. This concept may involve more sophisticated and longer-view approaches to programming, and more difficult accounting problems, but it is crucial for most efficient use of AID support in the population field.

World population problems will worsen over a long period ahead, and these will call for the strongest possible U.S. institution-based research, training, and overseas service activities. Effective institutional supports to a worldwide social movement take time to build, but they are essential to achieve deep and continuing effects. AID's initial investment in development of the Carolina Population Center should be viewed in this context. The Center's structure and capacities have grown tremendously, but they still need basic support to become stabilized and self-sustaining. Continuation of substantial core financial assistance of the 211(d) type for this Center over the next five years is therefore crucial, in order to maintain the quality and the momentum of the present program, and to achieve the maximum fruition of its contributions to world population efforts.

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AT CHAPEL HILL

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ACADEMIC AFFILIATIONS OF ASSOCIATES
OF THE CAROLINA POPULATION CENTER

November 1973

<u>UNC at Chapel Hill</u>		<u>INSTITUTES AND CENTERS</u>	
<u>SCHOOLS OF</u>			
Business Administration	5	Carolina Population Center	8
Education	7	Center for Pop. and Env. Education	1
Law	1	Health Services Research Center	1
Library Science	1	Institute of Government	3
Medicine:			
Anatomy	4		
Family Medicine	5		
Obstetrics and Gynecology	2		
Pediatrics	3		
Pharmacology	2		
Psychiatry	2		
Nursing	4		
Public Health:			
Biostatistics	11		
Epidemiology	5		
Health Administration	15		
Health Education	1		
Maternal and Child Health	8		
Mental Health	1		
Public Health Nutrition	1		
Public Health Nursing	5		
Social Work	1		
		UNC-CH TOTAL	<u>136</u>
		<u>OTHER CAMPUSES</u>	
		Appalachian State University	6
		Duke University	4
		East Carolina University	7
		Elizabeth City State University	1
		Elon College	1
		Fayetteville State University	1
		Greensboro College	1
		Guilford College	1
		High Point College	1
		Lenoir Rhyne College	1
		Mars Hill College	1
		N.C. Agric. and Technical State Univ.	2
		N.C. Central University	3
		N.C. State University at Raleigh	6
		Pembroke State University	1
		Pfeiffer College	1
		St. Augustine's College	1
		UNC at Asheville	1
		UNC at Charlotte	5
		UNC at Greensboro	5
		UNC at Wilmington	3
		Western Carolina University	1
		Winston-Salem State University	1
			<u>55</u>
		<u>MISCELLANEOUS</u>	
		At large	15
		Low Income Housing Dev. Corp., Durham	1
		Research Triangle Institute	4
		UNESCO, Paris	1
			<u>21</u>
		GRAND TOTAL	212

CAROLINA POPULATION CENTER

Biodata, Associates, UNC-CH

November 1973

- ABERNATHY, James R. - Assoc. Prof., Bios. B.S. (Bus. Admin.), 1951, Howard College; M.S.P.H. (Bios.), 1953 and Ph.D. (Bios.), 1965, Univ. of N.C. Interests: Demographic measurement; randomized response and paired choice methodologies.
- ADAMS, J. Stacy - Prof., Psych. and Reynolds Prof. Appl. Behav. Sci.; Bus. Admin. B.A. (Romance Lang. & Psych.), 1948, Univ. of Miss.; M.A. (Psych.), 1955 and Ph.D. (Psych.), 1957, Univ. of N.C. Interests: Systems theory; growth; socio-technical systems.
- ALLEN, James E. - Assoc. Prof., Health Admin. and Lecturer, Dept. of Religion. B.A. (Hist.), 1957, Univ. of Arizona; S.T.B., 1960 and Ph.D. (Soc. and Ethics), 1964, Boston Univ.; M.S.P.H. (Family Planning Admin.), 1969, Univ. of N.C. Interests: Human values and population problems; development of national population policies; multi-agency approaches to family planning program development.
- ANDERSON, John J.B., Assoc. Prof., Nutrition. A.B., History, Williams; M.A., Biology, Boston Univ.; Ph.D. Biology, Cornell. Interests: Relationships between nutrition and population; development of educational packages for training workshops.
- ANDERSON, Richmond K. - Director, International Programs Office, CPC. B.A. (Chem. & Physics), 1929, Cornell College; M.S. (Biochem.), 1931, and Ph.D. (Biochem.), 1934, and M.D., 1937, Northwestern Univ.; M.P.H., 1948, Johns Hopkins; D.Sc. (honorary), 1958, Cornell College. Interests: International population programs; nutrition and population.
- APPELBAUM, Mark I. - Assoc. Dean, College of Arts and Sciences, Asst. Prof., Psych. B.S. (Chem.), 1963, Carnegie Institute of Technology; Ph.D. (Psychometrics and Clin. Psych.), 1968, Univ. of Ill. Interests: Multivariate experimentation and statistical analysis especially in human abilities; innovative university curricular developments in population studies.
- AZAR, Edward E. - Assoc. Prof., Poli Sci. B.A., 1960 Amer. Univ. of Bierut; M.A., 1965, Univ. of the Pacific; Ph.D., 1969, Stanford Univ. Interests: Interface between population research and international political research; population and peace research.
- BALFOUR, Marshall C. - Adjunct Prof., Health Admin. B.S. (Biol. & Public Health), 1918, Mass. Inst. of Technology; M.D., 1926, Harvard Medical School; M.P.H., 1948, Johns Hopkins. Interests: Family planning program design; population dynamics in Asia incentive systems.

- BAUMAN, Karl E. - Assoc. Prof., Maternal and Child Health. B.A. (Soc.), 1961 and M.A. (Soc.), 1963, Univ. of Nebraska; Ph.D. (Soc.), 1965, Fla. State Univ. Interests: Evaluation of family planning programs; population dynamics in Southeast Asia.
- BEACH, Norton W. - Dean, School of Educ. and Prof., Educ. B.A. (Bus.Admin.), 1938 and Ed.M. (Educ.), 1940, Boston Univ.; Ed.D. (Educ.), Teachers College, Columbia Univ. Interests: Population education program methods and designs.
- BENNETT, H. Stanley - Kenan Prof., and Chrmn., Anat. Dir., Labs for Reproductive Biology. A.B. (Chem.), 1932, Oberlin College; M.D., 1936, Harvard Univ. Interests: Fundamental research development in reproductive biology.
- BERGMAN, Edward M. - Asst. Prof., City & Regional Planning. A.A.S. (Civil Tech.), 1964, Ferris State College; B.S. (City Planning), 1966, Michigan State Univ.; M.C.P./Ph.D. (City Planning), 1968/1972, Univ. of Pennsylvania. Interests: Population distribution.
- BERRY, Sandra L. - Asst. Prof., Nursing. B.S.N. (Nursing), 1966, Roberts Wesleyan College; M.S.N. (Nursing), 1968, Washington Univ., M.S.P.H., 1970, Univ. of N.C. Interests: Nursing roles and education in family planning; methods of nursing education, especially programmed instruction materials.
- BERRYHILL, V. Betty - Asst. Prof., Nursing. B.S.N. (Nursing), 1967, Western; M.P.H., (Public Health), 1968, Univ. of N.C. Interests: Nursing and family planning.
- BILSBORROW, Richard E. - Asst. Prof., Bios. B.A. (Econ.), 1963, Carleton College; M.A. (Econ.), 1966, and Ph.D. (Econ.), 1968, University of Michigan. Interests: Population factors in economic development planning.
- BIRDSALL, Stephen S. - Assoc. Prof., Geog. B.A. (Earth Sciences), 1962, Antioch College; M.A. (Geog.), 1964 and Ph.D. (Geog.), 1968, Michigan State Univ. Interests: Population movement and population pressure; early slave migration in the U.S.
- BOYER, Micheline - Instructor, Public Health Nursing. B.A., 1943, Univ. de Paris; B.S.N., (Nursing), 1966, Univ. de Montreal; M.P.H., (Nursing), 1967, Univ. of N.C. Interests: Nursing and family planning.
- BROWN, Robert T. - Asst. Prof., Psych. A.B. (Psych.), 1961, Hamilton College; Ph.D. (Psych.), 1966, Yale Univ. Interests: Population density effects on physiology, behavior, and reproduction; interaction between density, availability of food and reproduction.
- CLINTON, Richard L. - Asst. Prof., Poli Sci. B.A. (Span.), 1960; M.A. (Hist.), 1964 and M.A. (Latin Amer. Area Studies), 1964, Vanderbilt Univ.; Ph.D. (Poli. Sci.), 1971, Univ. of N.C. Interests: Population policy formation process, particularly in Latin America; normative political implications of population growth.

- COGSWELL, Betty E. - Asst. Prof., Family Medicine. A.B. (Eng.), 1952, Goucher College; M.S. (Rehab. Coun.), 1958, N.C. State Univ.; Ph.D. (Soc.), 1965, Univ. of N.C. Interests: International family planning programs (institution building); changing roles of women and fertility; adolescent sexual behavior; cross-national studies on family dynamics and fertility.
- COULTER, Elizabeth J. - Prof., Bios. and Assoc. Prof., Econ. A.B. (Soc. Sci.), 1941, Swarthmore College; A.M. (Econ.), 1946 and Ph.D. (Econ.), 1948, Radcliffe. Interests: Evaluation of health and family planning programs; economic costs of illness and health care; methods of study of vital events; out-of-wedlock births.
- DAHLSTROM, W. Grant - Prof., Psych. A.B. (Psych.), 1941, Univ. of Calif. at L.A.; M.A. (Psych.), 1944 and Ph.D. (Psych. & Neuropsychiatry), 1949, Univ. of Minn. Interests: Population aspects of human sexual behavior and sex role patterns; psychological correlates of migration.
- DAVID, Abraham S. - UNC/CPC Resident Rep. in Ghana; Adjunct Assoc. Prof., Health Admin. B.S. (Ag. Sci.), 1958 and M.Sc. (Ag. Sci.), 1960, Purdue Univ.; Ph.D. (Econ.), N.S. State Univ.; M.S.P.H. (Pop. Prog.), 1968, Univ. of N.C. Interests: Economic and systems studies on population policy; operations research in population programs.
- DAWSON, Leonard H. - Asst. Prof., Health Educ. A.B. (Elem. Educ.), 1960, Univ. of Kentucky; M.S.P.H., 1963, Univ. of N.C. Interests: Utilization of community aides for family planning program acceptance and approaches to newly married couples, high parity women; education interventions, stimuli and constraints of program acceptance.
- DILLON, Martin - Asst. Prof., Library Science and Computer Science. B.S. (Eng.), 1961, Canisius College; Ph.D. (Eng.), 1967, State Univ. of N.Y. at Buffalo. Interests: Application of computer retrieval methods to the population information field.
- EDMANDS, Elizabeth M. - Assoc. Prof., Public Health Nursing and Maternal and Child Health. B.S. (Public Health Nursing), 1943, Univ. of Michigan; M.A. (Nursing Educ.), 1955, Columbia Univ. Teachers College. Interests: Approaches to teaching population and family planning in schools of nursing; nursing roles in family planning programs; family planning in occupational health.
- EVANS, John P. - Assoc. Prof., Bus. Admin. B.S. (Mech. Eng.), 1960, M.S. (Ind. Eng.), 1962, and Ph.D. (Phil.), 1968, Cornell Univ. Interests: Program planning models for allocating resources in comprehensive population programs.
- FARIAS, Hector - Asst. Prof., Family Medicine. B.S. (Eng.), 1961 and M.S. (Eng.), 1965, Texas A & T Univ.; Ph.D. (Educ. Admin.), 1971, Northwestern Univ. Interests: Organizing disadvantaged communities for better use of health and family planning services.

- FISHBURNE, John I. - Asst. Prof., Ob/Gyn. A. B. (Chem.), 1959, Princeton M.D., 1963, Medical College of S.C. Interests: Teaching and development of female sterilization procedures through laparoscopy.
- FLASH, William S. - Assoc. Prof., Health Admin. and Lecturer, Pol. Sci. A.B. (Hist. & Gov. Econ.), 1948, M.P.A. (Public Admin.), 1950 and Ph.D. (Poli. Sci.), 1954, Harvard Univ. Interests: Comprehensive health planning involving policy development in health and population fields.
- FLEMING, William L. - Prof., Preventive Medicine and Medicine. A.B. (Chem.), 1925, M.S. (Bact.), 1927, and M.D., 1932, Vanderbilt Univ. Interests: Family planning and demography in teaching and research in family and community medicine; relationships of family planning and venereal disease control.
- FLORIN, John W. - Asst. Prof., Geography. B.A. (Geog.), 1964, Univ. of Kansas; M.S. (Geog.), 1966, and Ph.D., 1971, Penn. State Univ. Interests: Medical geography; population geography; historical geography of Anglo-American migration and diffusion.
- FOGEL, Catherine I. - Asst. Prof., Nursing. B.S. (Nursing), 1963 and M.S. (Public Health), 1968, Univ. of N.C. Interests: Ob./Gyn. nursing especially areas of family planning and abortion.
- FRENCH, Frank S. - Assoc. Prof., Pediatrics. A.B. (Biol.), 1951, Univ. of Kansas; M.D., 1956, Univ. of Rochester. Interests: Endocrine factors in sexual maturation and fertility.
- FREYMANN, Moyer W. - Director, CPC and Prof., Health Admin. B.S. (Zool.), 1945, Yale Univ.; M.D., 1948, Johns Hopkins Univ.; M.P.H., 1956 and Dr. P.H., 1960, Harvard Univ. Interests: International approaches to research, teaching, service in population fields; population theory; international development methodology.
- FRYE, Bobbie - Instructor, Nursing. B.S.N. (Nursing), 1968, Washington Univ.; M.S. (Public Health Nursing Educ.), 1971, Univ. of N.C. Interests: Nurse practitioner roles in family planning; teaching on maternity, family planning, abortion, and human sexuality.
- GALINSKY, M. David - Assoc. Prof., Psych. A.B. (Psych.), 1956, Duke Univ.; A.M. (Clin. Psych.), 1959 and Ph.D. (Clin. Psych.), 1961, Univ. of Michigan. Interests: Clinical psychology and family planning.
- GENTRY, John T. - Prof., Health Admin. A.B. (Psych.), 1944, B.S. (Medical Sciences), 1948 and M.S., 1948, Washington Univ.; M.P.H., 1951, Harvard Univ. Interests: Population factors in health care planning; family planning in health services systems.
- GOULD, F. J. - Prof., Statistics. B.S. (Biochem.), 1959, Univ. of Chicago; M.S. (Math.), 1962, Ill. Inst. of Tech.; Ph.D. (Math.), 1963 and Ph.D. (Bus.), 1967, Univ. of Chicago. Interests: Systems analysis and design applications to population planning and public policy.
- GOURLEY, Geraldine - Assoc. Prof., Maternal and Child Health and Social Work. Ph.B. (Soc. Work), 1935, Washburn College; M.A. (Soc. Work), 1942, Univ. of Chicago. Interests: Social welfare roles in family planning programs; poverty and fertility.

- GRUBER, Felix - Asst. Prof., Epid. B.S. (Sci.), 1955, Instituto Escuela, Caracas; M.D., 1961, Univ. Central de Venezuela, Caracas; M.S.P.H. (Public Health Admin.), 1964 and Dr. P.H. (Epid.), 1971, Univ. of N.C. Interests: Planning, development and evaluation of family planning programs; new methods of fertility control; migration and health; family studies.
- GUERIGIAN, Jean L., Asst. Prof., Pharmacology. B.S., M.S., M.D., Univ. of Paris. Interests: Estrogen- and progestin-binding ("receptor") molecules in uterus and breast; development of self-instructional materials.
- GULICK, John - Prof., Anthro. and Visit. Prof., Population Anthro., Univ. of Isfahan, Iran. A.B., 1949, A.M., 1951 and Ph.D. (Anthro.), 1953, Harvard Univ. Interests: Population anthropology; urbanization in Near East; population program acceptance.
- GUSTAVESON, Patricia - Lecturer, Maternal and Child Health. A.B. (Euthenics), 1952, Grinnell College; M.S.W., 1969, Univ. of N.C. Interests: Family planning/population in social work curriculum; social workers' role in family planning services; rural family planning programs.
- HAFER, R. R. - Asst. Prof., Anthro. B.A. (Eng.), 1961, Univ. of Cincinnati; M.A. (Eng.), 1964, Duke Univ.; Ph.D. (Anthro.), 1971, Indiana Univ. Interests: Impact of environmental changes on community and population dynamics.
- HALL, Thomas L. - Deputy Director, CPC and Prof., Health Admin. A.B. (Hist.), 1953, Reed College; M.D., 1957 and M.P.H., 1961 Harvard Univ.; Dr. P.H. 1967, Johns Hopkins. Interests: Family planning and health manpower; program administration, planning and evaluation.
- HAMILTON, C. Horace - Consulting Demographer, CPC. B.A. (Soc.), 1923, Southern Meth. Univ.; M.S. (Rural Soc.), 1925, Texas A & M; Ph.D. (Soc.), 1932, Univ. of N.C. Interests: Demographic research methods, especially migration; N.C. population dynamics; assessment of population program needs and effect.
- HAWKINSON, William P. - Assoc. Prof., Educ. B.A. (Soc.), 1951 and M.A. (Soc.), 1954, Kent State Univ.; Ph.D. (Soc./Anthro.), 1959, Ohio State Univ. Interests: Population education.
- HOGUE, Carol J. Rowland - Research Associate, Epid. A.B. (Soc.), 1966, William Jewell College; M.P.H. (Epid.), 1971 and Ph.D. (Epid.), 1973, Univ. of N.C. at Chapel Hill. Interests: Epidemiology of reproduction, patterns and sequelae of abortion.
- HORVITZ, Daniel G. - Prof., Bios. B.S. (Math.), 1943, Mass State College; Ph.D. (Stat.), 1953, Iowa State College. Interests: Sampling theory and methods; design of large-scale social surveys in the field of health, economics, market research and demography; design of experiments, computer simulation models of population dynamics.

- HOUNSHELL, Paul B. - Director, NSF, Institutes in Science, and Assoc. Prof., Educ. B.S., 1955, M.Ed. (Educ.), 1956, Univ. of Virginia; Ed.D. (Educ.), 1959, Univ. of N.C. Interests: Population content development in science teaching.
- HUGHES, G. David - Prof., Bus. Admin. B.S., 1952, Drexel Univ., 1952, U.S.N. Officer Candidate School; 1953, U.S.N. Engineering School; M.B.A. 1960 Wharton School, Ph.D. 1963, Univ. of Pa. Interests: Family planning in industry.
- HULKA, Barbara S. - Assoc. Prof., Epid. and Asst. Prof., Family Medicine. B.A. (Music), 1952, Radcliffe; M.S., 1954, Julliard School of Music; M.D., 1959 and M.P.H., 1961, Columbia College. Interests: Relationships between organization of services and abortion procedures to complication rates and contraceptive acceptance.
- HULKA, Jaroslav F. - Assoc. Prof., Ob./Gyn., and Maternal and Child Health. B.S. (Psych.), 1952, Harvard Univ.; M.D., 1956, Columbia College of Physicians and Surgeons. Interests: Reversible sterilization; immunologic approaches to contraception; evaluation of techniques of therapeutic abortion; legal aspects of abortion; evaluation of family planning clinics.
- HUROW, Arthur - Deputy Director, Center for Population and Environmental Education, School of Educ. B.S. (Military Science), 1960, Univ. of Maryland; M.A. (International Relations), 1962, George Washington Univ.; Advanced Management Program, 1965, Harvard Univ.; Advanced Doctoral Student, Univ. of N.C. Interests: Population education curriculum in secondary schools and community colleges.
- INSKO, Chester A. - Prof., Psych. A.B. (Phil.), 1957, Univ. of Calif; M.A. (Psych.), 1958, Boston Univ.; Ph.D. (Psych.), 1963, Univ. of Calif. Interests: Basic social psychological dynamics of contraceptive use and fertility change.
- JAIN, Sagar C. - Chairman and Prof., Health Admin. B.A. (Econ.), 1950, St. Stephens College, India; M.A. (Labor Welfare and Personnel Mgmt.), 1952, Univ. of Delhi; M.S. (Industrial Relations), 1960, Univ. of Ill; Ph.D. (Organizational Behavior), 1964, Cornell Univ. Interests: Comparative studies of family planning programs; legislative process in abortion laws; application of systems approach to community-wide family planning and program design.
- JERDEE, Thomas H. - Prof., Bus. Admin. B.A. (Psych., Bus. Admin. & Soc.), 1950, Gustavus Adolphus College; M.A. (Psych.), 1956 and Ph.D. (Personnel Industrial Psych.), 1961, Univ. of Minnesota. Interests: Values and attitudes influencing mode of governance and acceptance of control; interested in level of concern as a factor affecting receptivity to population programs.
- JOHNSON, Rita B. - Assoc. Prof., Educ. and Assoc. Prof., Family Medicine. A.A. (Soc.), 1953, B.A. (Soc.), 1956, M.A. (Soc. of Educ.), 1963, and Ed.D. (Curriculum and Behavioral Sciences), 1966, Univ. of Calif. at L.A. Interests: Development of self-instructional materials and programmed instructional modules on population-related topics.

- JONES, Arthur - Consultant, CPC. A.B. (Soc.), 1929, Oberlin College; Certificate, 1950, Northwestern School of Financial Public Relations. Interests: Legislative process in population program development in the U.S.A.
- JONES, Jr., W. Burns - Dir.; State Services Office, CPC, and Adjunct Assoc. Prof., Health Administration. B.S., 1951, The Citadel; M.D., 1955, Medical College of S.C., Charleston; M.P.H., 1960, Univ. of N.C. at Chapel Hill. Interests: Family planning program administration and management.
- KAISER, Edward J. - Assoc. Prof., City and Regional Planning. B.A. (Arch.), 1958, Illinois Inst. of Tech.; Ph.D. (City and Regional Planning), 1966, Univ. of N.C. Interests: Intra-metropolitan residential mobility behavior survey research and modeling for study of urban growth and change.
- KALUZNY, Arnold J. - Assoc. Prof., Health Admin. and Deputy Director, International Programs Office, Carolina Population Center. B.S. (Econ.), 1959, Wisconsin State Univ.; M.H.A. (Hosp. Admin.), 1962, and Ph.D. (Medical Care Organization and Social Psych.); 1967, Univ. of Michigan. Interests: Studies of organizational and administrative aspects of family planning programs.
- KAVALER, Florence - Adjunct Assoc. Prof., Health Admin. B.A. (Mathematics), 1955, Columbia Univ.; M.D., 1961, Downstate Medical Center, N.Y.; M.S. (Bios.), 1961, and M.P.H., 1965, Columbia Univ. Interests: Higher education for public health; health and family planning program evaluation.
- KESSEL, Elton - Director, International Fertility Research Program and Lecturer, Health Admin. B.A. (Econ.), 1940, Univ. of Chicago; M.D., 1952, Chicago Medical School; M.P.H. (Tropical Public Health), 1960, Harvard Univ. Interests: Family planning delivery systems, international fertility control field studies.
- KNAUFF, Lynn K. - Asst. Prof., Maternal and Child Health. B.A. (Eng.), 1957, St. Lawrence Univ.; M.S.P.H., 1970, Univ. of N.C. Interests: Family planning program development and administration particularly in the rural southeastern U.S.A.
- KNELSON, John H. - Asst. Prof., Pediatrics; Director, Newborn Services, NCMH, and Chief, Bio-Medical Research, Nat. Environmental Res. Agency, EPA. B.A. (Pre-med.), 1955, Manchester College; M.D., 1960, Northwestern Univ.; M.P.H. (Epid.), 1967, Univ. of Michigan. Interests: Demographic factors in neonatology; demographic considerations in bio-environmental research.
- KRUSA, Hans E. - Deputy Director for Admin., CPC. B.A. (Econ. & Spoken Eng.), 1937, St. Olaf College; M.S. (Retailing), 1938 and Ph.D. (Marketing), 1955, New York Univ.; M.S.P.H., 1968, Univ. of N.C. Interests: Population program administration especially management and marketing aspects.
- LACHENBRUCH, Peter A. - Assoc. Prof., Bios. B.A. (Math.), 1958, Univ. of Cal. at L.A.; M.S. (Math.), 1961, Lehigh Univ., Ph.D. (Bios.), 1965, Univ. of Cal. at L.A. Interests: Population simulation using

digital computers; discriminant analysis; statistical methodology in population studies.

- LANE, Mary Turner -- Assoc. Prof., Educ. A.B. 1939, Salem College, M.Ed. 1952, Univ. of N.C.; D.Ed., 1962, Duke Univ. Interests: Population education.
- LIEBERMAN, Milton D. - Div. Head, International Fertility Research Program. A.B. (Soc. Studies), 1936, Penn. State Univ.; (Econ.), 1940, G.W. Univ.; (Law), 1942, Georgetown Univ.; (Public Admin.), 1946, American Univ. Interests: Population measurement and contraceptive studies.
- LIETH, Helmut - Prof., Botany and Ecology. Agricultural Apprentice in Unterborsh, Rheinisch, Berg. Kreis; Crillo High School, Gelsenkirchen; and Agricultural School, Lindlar; Phil and Sci. at the Philosophical and Theological College, Hamberg; Ph.D. (Botany), 1953, Univ. of Cologne. Interests: Primary productivity of the world; utilization of productivity in the biosphere; capacity of land; productivity models.
- LINDER, Forrest E. - Prof. Bios., Dir. Inter. Program of Population Laboratories. B.A. (Psych. & Math.), 1930, M.A. (Psych. & Math.), 1931 and Ph.D. (Psych. & Math.), 1932, Iowa State Univ. Interests: Design of statistical systems for measurement of population change; theory of measurement of population change; development of field laboratories for population studies.
- LINER, Charles D. - Asst. Prof., Public Law and Govt. and Asst Prof., Econ. B.S. (Econ./Bus. Admin.), 1961, Univ. of Tenn.; M.A. (Econ.), 1968, George Washington Univ.; Ph.D. (Candidate), Washington Univ. Interests: Urban and regional economic growth and development and state and local government services; population factors of N.C.
- LINGNER, Joan W. - Asst. Prof., Bios. B.S. (Psych.), 1958 and M.S. (Psych.), 1960, St. Louis Univ.; Ph.D. (Demog.), 1962, Univ. of Penn. Interests: Population measurement; migration dynamics.
- LIPSITZ, Lewis - Assoc. Prof., Poli. Sci. B.A. (Poli. Sci.), 1957, Univ. of Chicago; M.A. (Poli. Sci.), 1959 and Ph.D. (Poli. Sci.), 1964, Yale Univ. Interests: Political theory and population policy, especially the issue of coercion and various alternatives and approaches in different societies.
- LITTLE, Bernadette G. - Asst. Prof., Psych. A.B. (Psych.), 1966, Marywood College; M.S. (Psych.), 1968 and Ph.D. (Psych.), 1970, St. Louis Univ. Interests: Demographic and personality variables related to patterns of migration fertility and reproduction.
- LODDENGAARD, Robert A. - Instructor, Health Admin. B.E.E. (Elect. Eng.), 1949, City College of N.Y.; M.S.P.H., 1971, Univ. of N.C. Interests: Population program planning, operations research and evaluation.

- LOWMAN, Joseph C. - Asst. Prof., Psych. A.B. (Psych.), 1966, Greensboro College; Ph.D. (Psych.), 1970, Univ. of N.C. Interests: Study of effects of premarital information; psychological antecedents of population movement, fertility, and social casualty rates.
- LUNDE, Anders S. - Dir., Office of State Services, Nat. Center for Health Stat., Research Triangle Park, and Adjunct Prof., Bios. B.A. (Soc.), 1938, St. Lawrence Univ.; M.A. (Soc./Demog.), 1947 and Ph.D. (Demog./Pop.), 1955, Columbia Univ. Interests: Vital statistics, registration systems and measurement of differential fertility; international population growth in developing countries and obtaining vital statistics and census data by means of sample surveys.
- LYNTON, Rolf P. - Assoc. Prof., Mental Health and Adjunct Prof., Policy Sciences Program, State Univ. of New York at Buffalo. B.Sc. (Econ.), 1944, London Univ.; M.A. (Soc.), 1969, Duke Univ.; Ph.D. (Poli. Sci.), 1970, State Univ. of N.Y. at Buffalo. Interests: Studies of new careers in health and population fields; case studies of family planning programs; consultation process; institutional development in population fields.
- MADISON, Don H. Res. Assoc., Physics, and Dir., Rural Serv. Rsrch. Ctr., Hlth, Serv. Rsrch, Ctr. B.A. (Music Educ.), 1958, La Sierra College; M.D., 1965, Loma Linda College. Interests: Research migration of physicians and changing M.D./population ratios by area over time.
- MARSHALL, John F. - Asst. Prof., Anthro. B.A. (Psych.), 1963, Baldwin-Wallace College; M.S. (Soc. Psych.), 1965, Penn. State Univ.; Ph.D. (Anthro.), Univ. of Hawaii. Interests: Population anthropology; factors affecting response to family planning programs in India.
- MCCORMICK, J. Frank - Prof., Botany and Ecology. B.S. (Biol.), 1958, Butler Univ.; M.S. (Biol.), 1960 and Ph.D. (Biol.), 1961, Emory Univ. Interests: Research and teaching of ecology.
- McEVOY, Frederick D. - Asst. Prof., Anthro. B.A. (Anthro.), 1964, Univ. of Nebraska; Ph.D. (Anthro.), 1971, Univ. of Oregon. Interests: Demographic consequence of technological and economic change; economic and political conditions and migration in West Africa.
- MCLAUGHLIN, Curtis P. - Prof., Bus. Admin. B.A. (Chem.), 1954, Wesleyan Univ.; M.B.A., 1956 and D.B.A., 1966, Harvard College. Interests: Production of information and professional services in engineering, health and education; population program operations research.
- MILLER, C. Arden - Prof., Pediatrics and Maternal and Child Health. M.D. 1948, Yale Univ. Interests: University population program development processes, and family health and fertility.
- MINTON, Blan V., Instr. Family Medicine, and Clinical Scientist, Child Development Institute. B.A., Sociology and Religion, Wake Forest Univ., M.S.W., UNC. Interests: Marriage and the family, marital adjustments to developmentally disabled children; sexuality of developmentally disabled.

- MONGEAU, Beatrice B. - Inst., Public Health Nursing. B.S.P.H.N., 1955, M.P.H. (Pub. Hlth. Adm.), 1956, and Doctoral Candidate (Soc.), 1957, Univ. of N.C. Interests: Nursing research; roles of midwives.
- MORIARTY, Barry M. - Asst. Prof., Geog. B.S. (Earth Sciences & Geog.), 1956 and M.E. (Educ.), 1958, Mass. State Univ.; A.M. (Geog.), 1964, Boston College; Ph.D. (Geog.), 1970, Michigan State Univ. Interests: Urban economics and population growth and distribution.
- MORRIS, Naomi M. - Prof., Maternal and Child Health. B.A. (Pre-med.), 1952 and M.D., 1955, Univ. of Colorado; M.P.H., 1959, Harvard School of Public Health. Interests: Evaluation of maternal and infant care projects; pregnancy spacing and outcome of pregnancy; fetal loss in Thailand.
- MYERS, Robert J. - Vis. Prof., Bios. A.B. (Econ.), 1926, Washburn Univ.; M.A. (Econ. Stat.), 1928 and Ph.D. (Econ.), 1937, Univ. of Chicago. Interests. Manpower and labor force component of population studies.
- NAMBOODIRI, N. Krishnan - Prof., Soc. B.Sc. (Math.), 1950 and M.Sc. (Stat.), 1953, Univ. of Kerala; M.A. (Soc.), 1962 and Ph.D. (Soc.), 1963, Univ. of Michigan. Interests: Indian demography, family-size values.
- NASH, Arnold S. - Prof. Emeritus, Hist. and Soc. of Religion. M.Sc. (Chem.), 1930 and M.A. (Phil.), 1933, Univ. of Liverpool; M.Sc. Econ. (Soc.), 1937, London School of Economics; D.D., 1946, Coe College. Interests: Comparative religion, public policy and the population question; the roles of the university in teaching, research, and service in the population field.
- NAYFEH, Shihadeh N. - Assoc. Prof., Pediatrics and Biochem. B.S.(Chem.), 1959, Normal Diploma (Teaching), 1959, and M.S. (Biochem.), 1961, American Univ. of Beirut; Ph.D. (Biochem.), 1964, Univ. of N.C. Interests: Steroid hormones in development and maturation of male reproductive functions; possible contraceptive agents to control sperm maturation in epididymis.
- NELSON, Virginia M. - Assoc. Prof., Public Health Nursing. B.A. (Nursing), 1946, Stanford Univ.; B.S. (Pub. Hlth Nursing), 1949, Univ. of Minnesota; M.P.H. (Public Health), 1955, Univ. of Pittsburgh. Interests: Short-course teaching and administration programs in public health nursing in family planning context.
- OETTINGER, Jr., Elmer R. - Prof., Public Law and Govt., and Asst. Dir., Institute of Govt. A.B. (Dram. Arts), 1932, J.D. (Law), 1939, M.A. (Dram. Arts), 1952, and Ph.D. (Eng.), 1966, Univ. of N.C. Interests: Consultant to governmental and civic groups with special concerns in population.
- OMRAN, Abdel R. - Prof., Epid. B.S. (Gen. Sci.), 1945, Minufia School, Egypt; M.D. 1952 and D.P.H. (Epid.), 1954, Faculty of Medicine, Cairo Univ.; M.P.H. (Epid.), 1956 and Dr. P.H. (Epid.), 1959,

- Columbia Univ. Interests: Epidemiological studies of human reproduction in Asia and Middle East; population problems and prospects in the Middle East; development of manual on community medicine for developing countries; health and disease patterns associated with demographic change; Moslem fertility.
- OMRAN, Khairia F. - Research Assoc., Ob./Gyn. M.S., 1957, Cairo Univ.; M.P.H. (Maternal and Child Health), 1958, Columbia Univ.; D.P.H. (Viral Epid.), 1965, Columbia Univ. Interests: Immunological approaches to fertility control, and abortion and sterilization.
- PAYDARFAR, Ali A. - Res. Assoc., Carolina Population Center. B.A. (Psych. & Theology), 1950, Tehran Univ., Iran; B.L.J. (Law, Econ. & Poli. Sci.), 1954, Tehran Univ.; M.A. (Soc.), 1960 and Ph.D. (Soc.), 1962, Univ. of Kentucky. Interests: Demography and family dynamics; population program organization and evaluation problems.
- PEARLMAN, William H. - Prof., Pharmacology. B.S. (Chem.), 1934, Brooklyn College; Ph.D. (Biochem.), 1940, Columbia Univ. Interests: Steroid sex hormone studies.
- PEREZ-REYES, Maria G. - Assoc. Prof., Psychiatry. B.S. (Biol.), 1945, Academia Hispano Mexicana; M.D., 1952, Universidad Nacional Autonoma de Mexico Facultad de Medicina. Interests: Adolescent contraception, pregnancy and abortion.
- PERRY, H. Arnold - Prof., Educ. A.B. (Educ.), 1926 and M.A. (Educ.), 1933, Duke Univ.; Ph.D. (Educ.), 1943, Columbia Univ. Interests: Inclusion of population content in school curricula; Latin American education.
- PETRUSZ, Peter - Asst. Prof., Anat. M.D., 1963, Medicin Univ. of Pecs, Hungary. Interests: Basic reproduction-related research in neuroendocrine control mechanisms and theory and application of biological and immunological hormone assays.
- PFOUTS, R. William - Prof., Econ. B.A. (Econ.), 1942, and M.A. (Econ.), 1947, Univ. of Kansas; Ph.D. (Econ.), 1952, Univ. of N.C. Interests: Demographic aspects of econometric models.
- POLGAR, Steven - Prof., Anthropology. M.A. (Anthro.), 1954 and Ph.D. (Anthro.), 1956, Univ. of Chicago; M.P.H. (Health Admin.), 1957, Harvard Univ. Interests: Prehistorical, historical and cross-cultural data on population dynamics; evaluation of family planning programs, particularly cultural 'hang-ups' of staff and policymakers; evolution and cultural change; African population studies.
- POLLITZER, William S. - Prof., Anat. A.B. (Biol.), 1944 and M.A. (Biol.), 1947, Emory Univ.; Ph.D. (Human Variation), 1957, Columbia Univ. Interests: Genetics of human groups, effects of differential fertility and social change on genetic factors.

- PURDY, Ross L. - Asst. Prof., Soc. B.A. (Soc.), 1964, Whitman College; M.A. (Soc.), 1967 and Ph.D. (Soc.), 1970, Univ. of So. California. Interests: Occupational and geographic division of labor, urbanization.
- REED, Jr., John S. - Asst. Prof., Soc. B.S. (Pol. Sci. & Math.), 1964, M.I.T.; Ph.D. (Soc.), 1970, Columbia Univ. Interests: Regional sociology with particular reference to the American South.
- ROUSE, Beatrice - Res. Assoc., Psychiatry. B.A.E. (Educ.), 1957, Univ. of Fla.; M.Ed. (Educ.), 1964, Univ. of Fla.; Alcohol Studies, 1971, Rutgers Univ.; Survey Research, 1972, Univ. of Michigan. Interests: Therapeutic abortion.
- SCHEFFLER, Richard M. - Asst. Prof., Econ. B.S. (Econ.), 1965, Univ. of Vermont and Hofstra Univ.; M.A. (Econ.), 1967, Brooklyn College; Ph.D. (Labor and Human Resources), 1971, New York Univ. Interests: Production and distribution of health and family planning services.
- SCOTT, R. Neill - Assoc. Prof., School of Educ. B.S., 1948, West. Carolina College; M.A., 1950, Peabody College; Ed.D., 1956, Univ. of Tenn. Interests: Problems of family life and sex education.
- SHACHTMAN, Richard - Asst. Prof., Statistics. B.S., N.C.S.U., M.A., Ph.D. (Math.), Univ. of Maryland. Interests: Structuring and analysis of models to estimate long-term complications due to induced abortion; quantitative model building.
- SIEGEL, Earl - Prof. & Chrmn., Dept. of Maternal and Child Health. B.S. (Pre-med.), 1944, Univ. of Pittsburgh; M.D., 1948, N.Y. Medical College; M.P.H. (Maternal and Child Health), 1961, Univ. of Calif. Interests: Relationships between family planning and health; evaluation of population programs, family planning content in professional education.
- SLOME, Cecil - Assoc. Prof., Epid. M.B.Ch.B., 1944, Univ. of Capetown; D.P.H., 1954, Univ. of London. Interests: Epidemiologic aspects of health and population programs.
- SMALLEGAN, Marian - Asst. Prof., Mental Health, and Asst. Prof., Educ. A.B. (Chem.), 1945, Hope College; M.A. (Chem.), 1947, Univ. of Illinois; Ed.D. (Adult Educ.), 1969, Boston Univ. Interests: Evaluative research on the effects of training interventions in family planning programs.
- SPENGLER, Joseph J. - Visit. Distinguished Lecturer, Econ. A.B. (Econ.), 1926, A.M. (Econ.), 1929 and Ph.D. (Econ.), 1930, Ohio State Univ. Interests: Population theory, optimal population concepts; economic developments.
- STILLMAN, Jeanne B. - Inst., Health Admin. B.A. (International Relations), 1964, American Univ.; M.S.P.H. (Health Admin.), 1971, Univ. of N.C. Interests: Education and delivery of family planning services to teenage population; East Africa program development in family planning.

- STIVEN, Alan - Prof., Zool. and Ecology, and Chrm, Ecology Curriculum. B.S. (Biol.), 1957, New Brunswick; M.A. (Zool.), 1959, Univ. of British Columbia; Ph.D. (Ecology Biometrics), 1962, Cornell Univ. Interests: Experimental epidemiology; population integrative and regulatory mechanisms.
- STUMPF, Walter E. - Assoc. Prof., Anat. and Pharmacology. B.S. (Biol.), 1950, Univ. of Leipzig; M.D., 1952, Univ. of Berlin; Ph.D. (Pharmacology), 1967, Univ. of Chicago. Interests: Neurophysiology of sexuality.
- SUCHINDRAN, C. M. - Visit. Inst., Bios. B.Sc. (Math.), 1960, and M.Sc. (Stat.), 1962, Univ. of Kerala; M.S.P.H. (Bios.), 1968 and Ph.D. (Bios.), 1972, Univ. of N.C. Interests: Mathematical demography and statistics.
- TARASCIO, Vincent J. - Prof., Economics. B.A. (Econ.), 1961, San Jose State College; Ph.D. (Econ.), 1966, Rice Univ. Interests: Theoretical aspects of dependence between population change and economic and social change; age structure of population and relationship to political and social stability.
- TEICHER, Morton I. - Dean and Prof., School of Social Work. B.Soc.Sci., 1947, City College of New York; M.Soc. Work, 1942, Univ. of Penn.; Ph.D. (Anthro.), 1956, Univ. of Toronto.
- THOMPSON, Vaida D. - Asst. Prof., Psych. and Dir., Academic Programs Office, CPC. R.N., 1951, White Cross Hospital School of Nursing; B.S. (Nursing Educ.), 1958 and M.A. (Psych.), 1959, Fla. State Univ.; Ph.D. (Psych.), 1968, Univ. of N.C. Interests: Psychological theory in population research; attitudes toward population policies; differential attitudes of those wanting small or large families. Techniques of attitude change relative to family size, population policy and contraception.
- TULCHIN, Joseph S. - Assoc. Prof., Hist. B.A. (Hist.), 1959, Amherst College; Ph.D. (Hist.), 1965, Harvard Univ. Interests: Demographic aspects of research on urban problems in Latin America; population politics.
- TURCHI, Boone A. - Lecturer, Econ. and Res. Assoc., Population Program. A.B. (Econ.), 1963, Harvard Univ., M.A. (Econ.), 1967, Boston Univ.; Ph.D. (Econ.), 1972, Univ. of Michigan. Interests: Fertility in the U.S. from economic demographic frame of reference.
- UDRY, J. Richard - Dir., DRSU, Carolina Pop. Center, Prof., Maternal and Child Health, and Prof., Soc. B.S. (Soc.), 1950, Northwestern Univ.; M.A. (Soc.Sci.), 1956, Long Beach State College; Ph.D. (Soc.), 1960, Univ. of So. Calif. Interests: Biosocial aspects of reproduction including biological effects of contraceptive usage on sexual behavior; national evaluation of family planning programs; the relationship between pregnancy spacing and pregnancy outcomes.

- UHLENBERG, Peter R. - Asst. Prof., Soc. B.S. (Math.), 1964, Wheaton College; M.A. (Demography), 1967 and Ph.D. (Demography), 1970, Univ. of Calif. at Berkeley. Interests: Minority group fertility patterns in the U.S.; minority group status and fertility; African population study.
- VERKUIL, Paul - Asst. Prof., Law. A.B. (Eng.), 1961, College of William and Mary; LL.B., 1967, Univ. of Virginia; LL.M. (Trade Regulation), 1969, New York Univ.; M.A. (Econ. & Poli. Sci.), 1971, The New School for Social Research; J.S.D. Candidate, New York Univ. Interests: Legal economic population policy problems in Latin America.
- WALLACE, Wesley H. - Prof. and Chrmn., RTVMP. B.S. (Educ.), 1932, and M.S. (Econ./Hist.), 1933, N.C. State Univ.; Ph.D. (Hist.), 1962, Duke Univ. Interests: Communications aspects of population-dissemination of information and training for use of media in population programs.
- WARREN, David G. - Assoc. Prof., Public Law and Govt. and Advisor to State Bd. of Health, St. Dept. of Mental Health and St. Task Force on Population Planning. A.B. (Econ.), 1958, Ohio Univ.; J.D. (Law), 1964, Duke Univ. Interests: Political and legal aspects of population policy development and implementation.
- WEISS, Shirley F. - Assoc. Prof., City & Regional Planning. B.A., 1942, Rutgers; M.R.P., 1958, Univ. of N.C. at Chapel Hill. Interests: Urban and regional planning, research on new town development.
- WELLS, H. Bradley - Prof., Bios. B.A. (Math.), 1950, Emory Univ.; M.S.P.H. (Bios.), 1953 and Ph.D. (Bios.), 1959, Univ. of N.C. Interests: Design of statistical systems for measurement of fertility trends and evaluation of family planning programs; applied research in non-sampling errors in fertility surveys.
- WHITE, James W. - Asst. Prof., Poli. Sci. A.B., 1964, Princeton Univ.; 1962-63 Inter-University Center for Japanese Studies; M.A., 1965 and Ph.D., 1969, Stanford Univ. Interests: Japan; political aspects of internal migration.
- WIDMANN, Donald E. - Asst. Prof., Psychiatry. A.B., 1956, Harvard Univ.; M.D. 1960, Western Reserve Univ. Interests: Psychiatric consultations for therapeutic abortions and teaching programs in therapeutic abortion for medical students.
- WILEMAN, Jr., Ralph E. - Assoc. Prof., Educ. B.S. (Art Educ.), 1953, Otterbein College; M.A. (Instructional Materials), 1961 and Ed. D., 1966, Teachers College, Columbia Univ. Self-teaching courses for teachers of population education.

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Publications of the Carolina Population Center

Monographs

- 1 Jaroslav F. Hulka. Therapeutic Abortion. A Chapel Hill Symposium. 1969. (Out of print)
- 2 Sagar C. Jain and Steven W. Sinding. North Carolina Abortion Law 1967. A Study in Legislative Process. 1969. (Out of print)
- 3 Robert R. Blake, ed. Final Report--International Workshop on Communication Aspects of Family Planning Programs. 1969. (Out of print)
- 4 Charles B. Arnold, ed. Medical Students and Population Research. 1969. (Out of print)
- 5 Robert R. Blake, Chester A. Insko, Robert B. Cialdini and Alan L. Chaikin. Beliefs and Attitudes about Contraception Among the Poor. 1969. (\$1.50)
- 6 Robert R. Blake, ed. Family Planning Educational Materials: An Annotated Bibliography of Selected Items. 1969. (Out of print)
- 7 Elizabeth M. Edmands, ed. A Report on the First National Family Planning Conference for Nurse Educators in Baccalaureate Schools of Nursing. 1970. (Out of print)
- 8 Patricia B. Gustaveson. Implementation of Family Planning Policy by Public Welfare. 1970. (Out of print)
- 9 Steven Polgar, ed. Culture and Population: A Collection of Current Studies. 1971. (Out of print)
- 10 A. S. David and R. S. S. Sarma. Potential Socioeconomic Consequences of Planned Fertility Reduction, North Carolina--A Case Study. 1971. (\$1.50)
- 11 Edward Pohlman. Incentives and Compensations in Birth Planning. 1971. (\$1.50)
- 12 Curtis P. McLaughlin and Edward S. Trainer. Qualitative Evaluation of Family Planning Proposals and Programs: A Systems Approach. D. G. Horvitz, F. G. Giesbrecht, B. V. Shah, and P. A. Lachenbruch. POPSIM, A Demographic Microsimulation Model. 1971. (\$1.50)

Monographs

- 13 Harald Frederiksen with F. L. Dunn, Moya W. Freymann, Sidney L. Kark, Kenneth W. Newell, E. J. Pampana, Anthony J. Radford, Carl E. Taylor, Joe D. Wray, and John B. Wyon. Epidemiographic Surveillance: A Symposium. 1971. (\$1.50)
- 14 Joseph J. Spengler. Declining Population Growth Revisited. 1971. (\$1.50)
- 15 Virupaksha Kothandapani. A Psychological Approach to the Prediction of Contraceptive Behavior. 1971. (\$1.50)
- 16 Abdel R. Omran. The Health Theme in Family Planning. 1971. (\$1.50)
- 17 Anthony R. Mcasham. Family Planning in North Carolina: The Politics of a Lukewarm Issue. 1971. (\$1.50)
- 18 Robert E. Elder, Jr. Development Administration in a North Indian State: The Family Planning Program in Uttar Pradesh. 1972. (\$3.00)
- 19 Julian L. Simon. The Effects of Income on Fertility. 1973. (\$3.00)

Center Publications

Other Publications

- Paul E. Zopf. North Carolina, A Demographic Profile. 1967. (Out of print)
- C. Horace Hamilton. ' Estimates of the Population of North Carolina Counties, 1966 and 1967 and of Components of Population Change Since 1960. Demographic Report H-1, 1968. (In limited supply)
- Samuel M. Wishik and Jaroslav F. Hulka. Casebook for the Intrauterine Contraceptive Device. 1968.
- C. Horace Hamilton, ed, County Population Trends of North Carolina--1790-1960. Statistical Services Center, Department of Administration, Raleigh, and Carolina Population Center. 1969. (In limited supply)
- C. Horace Hamilton. Estimates of the Population of North Carolina Counties, 1967 and 1968. Demographic Report H-2, 1969, and Supplementary Tables, Demographic Report H-2(s). 1969. (In limited supply)
- Moye W. Freymann. Cracking the World Population Problem: A U.S. Goal for the '70s. Prepared for the Presidential Task Force on International Development. 1969.
- C. Horace Hamilton and T. H. Ramsey. Estimates of the Population of North Carolina Counties, 1968 and 1969. Demographic Report H-3, State Planning Division, Department of Administration, Raleigh, and Carolina Population Center. 1970. (In limited supply)
- Charles B. Arnold, Ann Sauls, and Sylvain Fribourg. Family Planning in Tewkesbury County: A Casebook in Community Health. 1970.
- Charles T. Fancuff. Action Research: Development of a Pilot Model for Teaching Population Dynamics Information in the Government Schools of Mysore State, India. 1971.
- A. A. Paydarfar. Modern and Traditional Iran--Part I. Carolina Population Center and U.N.C. Sociology Department. 1971.
- Thomas E. Steahr. Chapel Hill: A Demographic Profile of a University Town. 1971.
- C. Horace Hamilton, ed. Source Tables: Educational Selectivity of Net Internal Migration in the United States and Its Four Major Regions During the Decade 1940-1950 by Age, Sex, and Color. 1972. (In limited supply)
- Curtis P. McLaughlin, David L. Kelly and Tanya M. McLaughlin. Family Planning Computer Gaming: The Quicktest Model. 1972.
- Curtis P. McLaughlin. Applying Models to the Family Planning Programs of Developing Countries. 1972.

Other Publications (Continued)

2

A. A. Paydarfar. The Population and Family Planning Program in Iran: An Inventory of Manpower, Facilities, and Services. 1972.

Insights. University of North Carolina at Chapel Hill Population Student Handbook. For 1972-73; 1973-74. A handbook for population students.

"Population Growth and North Carolina's Future." Speech text pamphlet containing addresses delivered by John D. Rockefeller 3rd and Terry Sanford.

Moye W. Freymann, ed., "Population Program Administration, A Summary of Shared Experience." Report of an International Workshop at Quail Roost Conference Center sponsored by the United Nations Fund for Population Activities, the Carolina Population Center and the Department of Health Administration, University of North Carolina at Chapel Hill. 1973.

Annual Report of the International Fertility Research Program. 1972.

Thomas E. Steahr. North Carolina's Changing Population, with an Introduction by Joseph J. Spengler. 1973.

Abdel R. Omran, ed. Egypt: Population Problems & Prospects. 1973.

Green Series

- Robert R. Blake, ed. Final Report: International Workshop on Communications in Family Planning Programs. 1971. (Out of print)
- Moye W. Freymann. Approaches to the Human Fertility Problem. Prepared for the United Nations Advisory Committee on the Application of Science and Technology to Development. 1968.
- K. A. Pisharoti, K. V. Ranganathan, S. Sethu, and P. R. Dutt. The Athoor Experience: Implications for a Statewide Family Planning Programme. A joint publication by the Gandhigram Institute of Rural Health and Family Planning and the Carolina Population Center. 1972. (\$1.50)
- K. K. Chang. A Decision Making System for A Family Planning Program: A Case Study of Taiwan. 1972. (\$1.50)

Population Program and Policy Design Series

- Elihu Bergman. The Politics of Population USA: A Critique of the Policy Process. 1971. (In limited supply)
- Sagar C. Jain. Comparative Study of Effective and Non-Effective Family Planning Program in India, Report of the Feasibility of Study Design. 1971. (Out of print)
- Homa Ghasemi-Gonabadi (Asayesh). Iran Population and Family Planning Studies: An Annotated Bibliography. 1971. (In limited supply)
- Richard L. Clinton. Problems of Population Formation in Peru. 1971. (In limited supply)
- R. Kenneth Godwin. Attitudes and Behavior Related to Modernization. 1971. (In limited supply)

JOURNAL SERIES*

1. J. Richard Udry and Naomi M. Morris. "Frequency of Intercourse by Day of the Week," The Journal of Sex Research, 1970.
2. J. Richard Udry. "The Effect of the Great Blackout of 1965 on Births in New York City," Demography, 1970.
3. N. Krishnan Namboodiri. "On the Relation Between Economic Status and Family Size Preferences When Status Differentials in Contraceptive Instrumentalities are Eliminated," Population Studies, 1970.
4. J. Richard Udry and Naomi M. Morris. "Behavioral Effects of Contraception," Journal of Medical Education, 1969.
5. Frederick S. Jaffe and Steven Polgar. "Family Planning and Public Policy: Is the 'Culture of Poverty' the New Cop-Out?," Journal of Marriage and the Family, 1968.
6. Naomi M. Morris and J. Richard Udry. "Variations in Pedometer Activity During the Menstrual Cycle," Obstetrics-Gynecology, 1970.
7. Ethel M. Nash and Lois M. Loudon. "The Premarital Medical Examination: What Patients Desire," The Journal of the American Medical Association, 1969.
- 8a. N. Krishnan Namboodiri. "A Method of Comparative Analysis of Fertility Dynamics Represented by Sequences of Fertility Schedules," Demography, 1970.
- 8b. N. Krishnan Namboodiri. "A Statistical Exposition of the 'Before-After' and 'After-Only' Designs and Their Combinations," American Journal of Sociology, 1970.
9. A.S. David. "Nepal: National Development, Population, and Family Planning," Studies in Family Planning, 1969.
10. Steven Polgar and Frederick S. Jaffe. "Evaluation and Recordkeeping for U.S. Family Planning Services," Public Health Reports, 1968.
11. J. Richard Udry, Naomi M. Morris, Karl E. Bauman, and Charles L. Chase. "Social Class, Social Mobility, and Prematurity: A Test of the Childhood Environment Hypothesis for Negro Women," Journal of Health & Social Behavior, 1970.
12. Oscar J. Sikes. "Introducing Family Planning in a Rural Setting," International Journal of Health Education, 1970.
13. Karl E. Bauman. "Selected Aspects of the Contraceptive Practices of Unmarried University Students," American Journal of Obstetrics and Gynecology, 1970.

* Journal Series Nos. 1-38, 40, 42, 43 and 45 are out of print.

14. Ali A. Paydarfar and Mahmood Sarram. "Differential Fertility and Socioeconomic Status of Shirazi Women: A Pilot Study," Journal of Marriage and the Family, 1970.
15. James E. Allen. "How Catholics Are Making Up Their Minds on Birth Control," The Christian Century, 1970.
16. J. Richard Udry and Naomi M. Morris. "Effect of Contraceptive Pills on the Distribution of Sexual Activity in the Menstrual Cycle," Nature, 1970.
17. T. O. Ling. "Buddhist Factors in Population Growth and Control: A Survey Based on Thailand and Ceylon," Population Studies, 1969.
18. John B. Graham. "Population Studies: A Paradigm of Biomedical Research in the Coming Age," Alabama Journal of Medical Sciences, 1969.
19. T. H. Naylor. "Systems Research in Organization and Management: A Systems Analysis Approach to Population Control," Global Systems Dynamics, 1969.
20. Chester A. Insko, Robert B. Cialdini, Robert R. Blake, and Stanley A. Mulaik. "Attitude Toward Birth Control and Cognitive Consistency: Theoretical and Practical Implications of Survey Data," Journal of Personality and Social Psychology, 1970.
21. Ethel M. Nash. "The Physician's Role as Counselor: When, Where and How to Make Referrals," Clinical Obstetrics and Gynecology, 1970.
22. Richard W. Taylor. "Hindu Religious Values and Family Planning," Religion and Society, 1969.
23. Earl Siegel, Donald Thomas, Robert Tuthill, Elizabeth Coulter, and Sidney Chipman. "Factors Associated with Involvement of Low-Income Women in a Public Family Planning Program," American Journal of Public Health, 1970.
25. James E. Allen. "Population Control: A Bibliographic Overview," Choice, 1971.
26. Charles H. Hendricks. "Pregnancy Termination: The Impact of New Laws," The Journal of Reproductive Medicine, 1971.
27. Steven Polgar and Frances Rothstein. "Family Planning and Conjugal Roles in New York City Poverty Areas," Social Science & Medicine, 1970.
28. Richard Udry, Srisomang Keovichit, Robert Burnight, Donald O. Cowgill, Naomi M. Morris, and Charas Yamarat. "Pregnancy Testing as a Fertility Measurement Technique: A Preliminary Report on Field Results," American Journal of Public Health, 1971.

Center Publications

29. A. E. Keir Nash. "Going Beyond John Locke? Influencing American Population Growth," Milbank Memorial Fund Quarterly, 1971.
30. J. J. Spengler. "Population Control: Multidimensional Task," Vanderbilt Law Review, 1971.
31. J. Richard Udry, Karl Bauman, and Charles Chase. "Skin Color, Status and Mate Selection," American Journal of Sociology, 1971.
32. Naomi Morris and J. Richard Udry. "Sexual Frequency and Contraceptive Pills," Social Biology, 1971.
33. N. Krishnan Namboodiri and N. M. Lalu. "The Average of Several Simple Regression Estimates as an Alternative to the Multiple Regression Estimate in Postcensal and Intercensal Population Estimation: A Case Study," Rural Sociology, 1971.
34. Arnold S. Nash. "Food, Population and Man's Environment," Technology and Social Justice, 1971.
35. Steven Polgar. "United States: The PPFA Mobile Service Project in New York City," Studies in Family Planning, 1966.
37. Earl Siegel, Donald Thomas, Elizabeth Coulter, Robert Tuthill and Sidney Chipman. "Continuation of Contraception by Low Income Women: A One-Year Follow-Up," American Journal of Public Health, 1971.
38. C. T. Faneuff. "Requirements for Training Teacher-Educators and Teachers in Promoting Population Awareness Including (a) Subject-Content and Methodology and (b) Source Materials and Aids: A Suggested Plan," Journal of Family Welfare, 1971.
39. Charles Hendricks. "Effect of PGE₂ and PGF₂ on Uterine Contractility," Annals of the New York Academy of Sciences, 1971.
40. Peter Uhlenberg. "Demographic Correlates of Group Achievement: Contrasting Patterns of Mexican-Americans and Japanese-Americans," Demography, 1972.
41. J. J. Spengler. "Malthus on Godwin's Of Population," Demography, 1971.
42. Arnold S. Nash with contributions by Forrest E. Linder and Moya W. Freymann. "Innovative Organization for Population Research: Some Thoughts on Professors and Population Centers," Innovative Organization for Population Research, 1971.
43. Udai Pareek and V. Kothandapani. "Modernization and Attitude Toward Family Size and Family Planning: Analysis of Some Data from India," Social Biology, 1969.
44. Ethel M. Nash. "Premarital and Marital Counseling, Textbook of Obstetrics and Gynecology," Second Edition, 1971.

Center Publications

45. Abdel R. Omran. "The Epidemiologic Transition," Milbank Memorial Fund Quarterly, 1971.
46. J. Richard Udry and Naomi M. Morris. "A Spoonful of Sugar Helps the Medicine Go Down," American Journal of Public Health, 1971.
47. John F. Marshall. "A Conceptual Framework for Viewing Responses to Family Planning Programs," Journal of Cross-Cultural Psychology, 1972.
48. N. Krishnan Namboodiri. "Experimental Designs in Which Each Subject is Used Repeatedly," Psychological Bulletin, 1972.
49. John B. Graham. "The Relation of Genetics to Control of Human Fertility," Perspectives in Biology and Medicine, 1971.
50. Karl E. Bauman and J. Richard Udry. "Powerlessness and Regularity of Contraception in an Urban Negro Male Sample: A Research Note," Journal of Marriage and the Family, 1972.
51. Richard L. Clinton. "Portents for Politics in the Latin American Population Expansion," Annals of the Southeastern Conference on Latin American Studies, 1972.
52. James E. Allen and Sagar C. Jain. "Multiagency Participation in Family Planning Administration," Public Health Reports, 1971.
53. Thomas E. Steahr and Calvin F. Schmid. "College Student Migration in the United States," Journal of Higher Education, 1972.
54. C. H. Hendricks, W. E. Brenner, L. Ekblad, V. Brotanek, J. I. Fishburne, Jr. "Efficacy and Tolerance of Intravenous Prostaglandins F₂ and E₂," American Journal of Obstetrics and Gynecology, 1971.
55. John F. Marshall, Susan Morris, and Steven Polgar. "Culture and Natality: A Preliminary Classified Bibliography," Current Anthropology, 1972.
56. Steven Polgar. "Population History and Population Policies from an Anthropological Perspective," Current Anthropology, 1972.
57. Naomi M. Morris and J. Richard Udry. "Contraceptive Pills and Day-by-Day Feelings of Well-Being," American Journal of Obstetrics and Gynecology, 1972.
58. Peter Uhlenberg. "Marital Instability Among Mexican Americans: Following the Patterns of Blacks?," Social Problems, 1972.
59. Karl E. Bauman. "The Poor as a 'Perfect Contraceptive Population' and Zero Population Growth," Demography, 1972.

60. N. Krishnan Namboodiri. "On the Ratio-Correlation and Related Methods of Subnational Population Estimation," Demography, 1972.
61. Karl E. Bauman and Porapan Varavej. "Reason for Contracepting and Choice Between IUD and Pill: Implications for the Difference in Continuation Rates," Social Biology, 1972.
62. Karl E. Bauman. "Volunteer Bias in a Study of Sexual Knowledge, Attitudes, and Behavior," Journal of Marriage and the Family, 1973.
63. Richard Lee Clinton. "Opposition to Population Limitation in Latin America: Implications for U.S. Policy," from Research in Politics of Population. D. C. Heath and Company, 1972.
64. E. Siegel, Donald Thomas and Elizabeth Coulter. "Family Planning-- Changes in Attitudes and Practices Among Low Income Women Between 1967 and 1970-71," American Journal of Public Health, 1973.
65. Lloyd Bacon. "Migration, Poverty and the Rural South," Social Forces, 1973.
66. Peter Uhlenberg. "Fertility Patterns Within the Mexican-American Population," Social Biology, 1973.
67. J. Richard Udry, K. E. Bauman and C. L. Chase. "Population Growth Rates in Perfect Contraceptive Populations," Population Studies, 1973.
68. J. Richard Udry and Fred Reed. "Female Work Fertility and Contraception Use in a Bi-Racial Sample," Journal of Marriage and the Family, 1973.
69. Peter Uhlenberg. "Noneconomic Determinants of Nonmigration: Sociological Considerations for Migration Theory," Rural Sociology, 1973.
70. Karl E. Bauman and J. Richard Udry. "The Difference in Unwanted Births Between Blacks and Whites," Demography, 1973.

TECHNICAL INFORMATION SERVICE PUBLICATIONS

Bibliography Series

1. Marshall, Judith M. Studies Relating Women's Non-Familial Activities and Fertility. May 1972. No charge.
2. Walker, Richard L. Basic Reference Sources in Population/Family Planning: An Annotated Bibliography. June 1972. No charge.
3. Clinton, Richard L. Teaching Population Dynamics: A Bibliographic Essay. February 1973. No charge.
4. Radel, David. Population in Sub-Saharan Africa, 1965-1971. April 1973. \$2.00.
5. Bertera, Robert L. Population/Family Planning Programs: Annotated Bibliography of Evaluation Methodologies. June 1973. \$1.00.
6. Dahl, Nancy S. Social and Psychological Variables Affecting Abortion Attitudes and Behaviors. July 1973. No charge.

Other

Fogle, Catherine, Gleiter, Karin, and McIntyre, Marilyn, eds. International Directory of Population Information and Library Resources. First ed. 1972. (\$7 in U.S.; free to developing nations)

Gleiter, Karin and Fogle, Catherine. International Directory of Population Information and Library Resources, Supplement to First Ed., 1972.

OVERVIEW, The International Journal of Population Libraries. Published quarterly.

Proceedings of the Second National Workshop in Population Library and Information Services, April 24-25, 1969. 1970.

Proceedings of the Third National Conference on Population Library and Information Services, May 14-15, 1970. 1971.

Proceedings of the Fourth National Conference on Population/Family Planning Library and Information Services, May 5-7, 1971. 1971.

Proceedings of the Fifth National Conference on Population/Family Planning Library and Information Services, May 4-5, 1972. 1972.

Acquisitions Lists (monthly printouts)

Books and Monographs
Area Files
Papers and Reprints
List of Serials

Publications available through the Carolina Population Center but not published by the Center:

Daniel O. Price, ed. The 99th Hour, The Population Crisis in the United States. Chapel Hill: The University of North Carolina Press, 1967.

C. Horace Hamilton. "The Vital Statistics Method of Estimating Net Migration by Age Cohorts." Reprinted from Demography IV, No. 2 (1967): 464-478.

C. Horace Hamilton. "The Need for Family Planning in North Carolina." The University of North Carolina Newsletter, Vol. LIII, No. 3, September 1968.

Thomas E. Steahr. "North Carolina's Population Concentration." The University of North Carolina Newsletter, Vol. LVI, No. 1, March 1971.

POPIAB Publications

Publications of the International Program of Laboratories for Population Statistics may be obtained from Population Laboratories, Biostatistics Department, School of Public Health, University of North Carolina at Chapel Hill, Chapel Hill, N. C. 27514. This program is an activity of the Carolina Population Center and the Department of Biostatistics, and a listing of the POPIAB publications may be obtained from either of these offices.

POPCASE Publications

Publications of the International Project for Teaching Cases in Family Planning Administration may be obtained either through the Department of Health Administration or through the Harvard Intercollegiate Clearinghouse, Soldiers Field Post Office, Boston, Mass. 02163. This program is an activity of the Carolina Population Center and the Department of Health Administration, and a listing of the POPCASE publications may be obtained from either of these offices.

THE UNIVERSITY OF NORTH CAROLINA
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TELEPHONE: (919) 966-2157
CABLE: POPCENTER, CHAPEL HILL, N. C.

Educational Materials Produced by the
Educational Materials Program of the
Communications and Planning Office

Booklets

Birth Control Foam and How to Use It
Facts About the Loop
You and the Pill
The Right Way to Birth Control
Is Your Family Complete?
Fertility Tests and Treatments
Vasectomy (also available in Spanish)
Laparoscopy (also available in Spanish)
Tubal Ligation (also available in Spanish)

Cards

Congratulations on Your Recent Engagement!
Congratulations on Your Recent Marriage!
Congratulations on Your New Baby!

Sound filmstrip

Series: HOW MANY CHILDREN DO YOU WANT?
Part I. "How Babies Begin"
Part II. "Doctor Methods of Birth Control"
Parts III and IV. "Drugstore and Least Effective Methods
of Birth Control"

Film

"Under One Roof" (16 mm, color) (26 minutes)

Newspaper column

Weekly newspaper column, "Family Planning and Health, by
Mrs. Gloria Riggsbee"

Radio program

"Family Planning and Health, by Mrs. Gloria Riggsbee"

Radio and television spots:

Radio: Horse race: Message: Don't gamble; plan your children.
Hen and chick: Message: Have only the number of children
you can care for adequately.
Stork: Message: Some visitors are unexpected; plan your
family now.
Knotted string: Message: Birth control is effective only
if you remember to use it.

Television: Slot machine: Message: Don't gamble; plan your children.
Doctor's advice: Message: If you're not using birth control,
plan to have that next child right away.
Stork: Message: Some visitors are unexpected; plan your
family now. (Animation)
Hen and chick: Message: Have only the number of children
you can care for adequately. (Animation)
Knotted string: Message: Birth control is effective only
if you remember to use it.
Gambling table: Message: Gambling doesn't pay; plan your
children.

(Each of the above radio and television spots are 30 seconds
in length, except for Gambling table, which runs 60 seconds.)

Self-instructional materials for the consumer:

Population dynamics: A series of three self-instructional sound filmstrips,
student workbooks, and records or cassette tapes.

Part I: "The Facts About Population Ecology"

Part II: "The Facts About Human Reproduction"

Part III: "The Facts About Birth Control for Teenagers"

Birth Control Methods: A self-instructional game for postpartum patients.

Self-instructional materials for the professional:

"Factors Affecting Fertility": 45 minutes. For professional students
beginning population studies. Contains instructor's manual, cassette
tape with script, slides or filmstrip, 54 frames, bibliography. Davis-
Blake framework introduced as approach to analyzing fertility determinants,
using QRS responsive learning system or can be used manually.

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CABLE: POPCENTER, CHAPEL HILL, N. C.

POPULATION STUDENTS: FALL AND SPRING, 1972-73

<u>DEPARTMENT</u>	<u>STUDENT</u>	<u>COUNTRY</u>
<u>Anthropology</u> (16)	Axelrod, Paul	United States
China (Taiwan) - 1	Beaubier, Geoffrey	United States
United Arab Republic - 2	Brooks, Jane	United States
United Kingdom - 1	Cochran, Roger	United States
United States - 12	Edgar, Ellen	United States
	El-Katsha, Samiha F.	United Arab Republic
	Gamble, George	United States
	Grossmith, Christopher J.	United Kingdom
	Khattab, Hind A.S.	United Arab Republic
	Lott, William	United States
	Lowenbach, Trude	United States
	Morris, Susan	United States
	Nardi, Bonnie	United States
	Settlemyre, Thomas	United States
	Sutton, Susan	United States
	Wang, Jen-ying	China (Taiwan)
<u>Biostatistics</u> (9)		
Brazil - 1	Bhattacharyya, Bishwanath	India
Chile - 1	Dorigo, David	Brazil
India - 1	El-Khorazaty, Mohammed	United Arab Republic
Turkey - 1	Freeman, Daniel	United States
United Arab Republic - 3	Lessler, Judith	United States
United States - 2	Mustafa, Ahmed	United Arab Republic
	Nour, El Sayed	United Arab Republic
	Rodriques, German	Chile
	Yesilcay, Yasar	Turkey
<u>Business</u> (1)		
United States - 1	Rodner, Henry	United States
<u>Ecology</u> (3)		
United States - 3	Cummings, William O.	United States
	Schroeder, Donna	United States
	Seltzer, George	United States

Population Students

<u>DEPARTMENT</u>	<u>STUDENT</u>	<u>COUNTRY</u>
<u>Education (12)</u>		
Iran - 2	Amini, Parviz	Iran
Korea - 1	Butterworth, Barbara	United States
Sweden - 1	Chaiwat, Panjaphongse	Thailand
Thailand - 4	Galosy, Judith	United States
United States - 4	Hashim, Lisa	Sweden
	Lee, Kyung-Sik	Korea
	Louden, Lois	United States
	Luikart, Clark	United States
	Paydarfar, Mohammed	Iran
	Prapapen, Suwan	Thailand
	Tiensong, Narong	Thailand
	Wansorn, Soumai	Thailand
<u>Epidemiology (4)</u>		
Turkey - 1	Brinton, Louise	United States
United States - 2	Gjorgov, Ane	Yugoslavia
Yugoslavia - 1	Hogue, Carol	United States
	Sabahat, Guven	Turkey
<u>Geography (4)</u>		
Canada - 1	Chalupka, Edward	Canada
United States - 3	Enberg, Dennis	United States
	Gesler, Wilbert	United States
	Snow, Cynthia	United States
<u>Health Administration (22)</u>		
Thailand - 2	Boonyanitaya, Chaiyuth	Thailand
United Arab Republic - 1	Corum, Joanne D.	United States
United States - 19	Dabbs, Carol	United States
	Eldredge, Marion	United States
	Fontein, Carol	United States
	Hassan, Abdel-Salam	United Arab Republic
	Holley, John	United States
	LaSonde, Portia	United States
	Loken, Christine	United States
	Miller, Mary Kay	United States
	Oliver, Nancy H.	United States
	Parke, Christine O.	United States
	Robbins, Vicotria E.	United States
	Sookapat, Pongroch	Thailand
	Spraght, Sarah	United States
	Stephens, Michael	United States
	Stevens, Jonathan B.	United States
	Stone, Kathleen	United States
	Taylor, Cleve	United States
	Trainer, Edward	United States
	Van Wie, William	United States
	Watson, Deborah	United States

<u>DEPARTMENT</u>	<u>STUDENT</u>	<u>COUNTRY</u>
<u>Health Education (18)</u>	Ausherman, Charles	United States
China - 1	Bouldin, Susan	United States
Colombia - 1	Broome, Betty	United States
Iran - 1	Forberg, Lynn	United States
Korea - 1	Gardner, Lytt	United States
Turkey - 1	Harrell, Betty Jo	United States
United States - 13	Hayward, Mary	United States
	Huang, Charles	China (Taiwan)
	Jackson, E. Jean	United States
	Lagevardi, Hossein	Iran
	LaMaster, Lucinda	United States
	Pederson, Christine	United States
	Reid, Margaret	United States
	Roberts, Ellen	United States
	Tuncer, Ali	Turkey
	Villado, Lily Montano	Colombia
	Wells, Elizabeth	United States
	Yun, Sung Hee	Korea
<u>Library Science (1)</u>		
United States - 1	Tutihasi, Laurraine	United States
<u>Maternal and Child Health (10)</u>		
Iran	Amini, Ataollah	Iran
Thailand - 2	Beard, Daniel	United States
United States - 7	Dinkel, Rebecca	United States
	Griffin, William	United States
	Heins, Henry C.	United States
	McCooke, Ann	United States
	Price, Anita D.	United States
	Srisuphan, Wichit	Thailand
	Turk, Jacqueline	United States
	Thewtong, Dilok	Thailand
<u>Political Science (9)</u>		
Germany - 1	Humberger, Edward	United States
Greece - 1	Imery, Harriet	United States
United States - 7	Koehler, Gernot	Germany
	Kotsovolou, Youlika	Greece
	McCarthy, John	United States
	McGonigle, Michael	United States
	Schoultz, Iars	United States
	Stewart, Debra	United States
	Stubbs, Anne	United States

Population Students

4

<u>DEPARTMENT</u>	<u>STUDENT</u>	<u>COUNTRY</u>
<u>Psychology (4)</u>		
Chile - 1	Foree, Donald	United States
Mexico - 1	Maltes, Sergio	Chile
United States - 2	Rendon-Barrea, Fransisco	Mexico
	Songer, Elaine	United States
<u>Public Health Nursing (8)</u>		
Canada - 1	Cantrell, Barbara	United States
Ethiopia - 1	Djote, Mulu B.	Ethiopia
Jamaica - 1	Dicarlo, Elizabeth	United States
United States - 5	Gentles, Dorothy V.	Jamaica
	Hardinger, Ann N.	United States
	Jenkins, Joyce	United States
	Kittleman, Shirlee	United States
	Stijovic, Mirjana B.	Canada
<u>Social Work (3)</u>		
United States - 3	Geren, Julie	United States
	Nance, Gilna	United States
	Rollette, Karin	United States
<u>Sociology (11)</u>		
Canada - 1	Bravo, German	Colombia
Colombia - 1	Buescher, Paul	United States
India - 2	Devi, Radha D.	India
United States - 7	Fleisher, Patsy	United States
	Howard, William	India
	Miller, Virginia	United States
	Sastry, K.R.	India
	Stryckman, Paul	Canada
	Wardwell, John	United States
	Young, Erwin	United States
	Young, Margaret	United States
<u>Zoology (4)</u>		
United States - 4	Hunter, James T.	United States
	Jenner, Martha G.	United States
	Outen, Ronald	United States
	Smythe, Robert	United States

Population Students

Distribution of Students by Country

Brazil - 1
Canada - 3
Chile - 2
China (Taiwan) - 2
Colombia - 2
Ethiopia - 1
Germany - 1
Greece - 1
India - 3
Iran - 4
Jamaica - 1
Korea - 2
Mexico - 1
Sweden - 1
Thailand - 8
Turkey - 3
United Arab Republic - 6
United Kingdom - 1
United States - 95
Yugoslavia - 1

TOTAL 139

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SUGGESTED COURSES AND ELECTIVES
FOR STUDENTS SPECIALIZING IN
POPULATION STUDIES

ACADEMIC YEAR 1972-1973

ANTHROPOLOGY

- ANTH 55 Introduction to Civilizations of India & Pakistan (3) Marshall. (Spring)
- ANTH 120 Culture Change and Underdeveloped Areas (3) Thomas. (Fall)
- ANTH 139 Environmental Anthropology (3) Yarnell. (Fall)
- ANTH 172 Applied Anthropology: Family Planning (3) Marshall. (Fall)
- ANTH 255 Seminar in Cultural Ecology and Population (3) Polgar. (Spring)
- ANTH 263 Seminar in Psychological Aspects of Modernization (3) Peacock. (Spring)
- ANTH 327-2 Seminar in Selected Topics (3) Staff. (Spring)
- ANTH 328-2 Seminar in Selected Topics (3) Thomas. (Spring)

BIOSTATISTICS

- BIOS 100 Public Health Statistics (3) Greenberg, Abernathy, Williams. (Fall)
- BIOS 103 Management of Public Health Data (2) Greenberg, Abernathy, Williams. (Fall)
- BIOS 105 Principles of Statistical Inference (3) Staff. (Fall and Spring)
- BIOS 145 Principles of Experimental Analysis (3) Kleinbaum, Kuebler. (Spring)
- BIOS 164 Sample Survey Methodology (3) Koch. (Spring)
- BIOS 221 The Role of Health Statistics in Administration (2) Coulter. (Spring)
- BIOS 270 Demographic Techniques I (3) Wells. (Fall)
- BIOS 271 Demographic Techniques II (3) Suchindran. (Spring)
- BIOS 275 Statistics in Population Programs (2) Abernathy. (Spring)

Courses and Electives

BIOS 277 Mathematical Models in Demography (3) Suchindran. (Spring)

BIOS 374 Seminar in Population Statistics (3) Wells. (Spring)

BUSINESS ADMINISTRATION

BUSI 196 Social Psychology of Organizations (3) Adams. (Fall and Spring)

BUSI 208 Simulation Theory (3) DesJardins. (Spring)

BUSI 232 Management Information Systems (2) DesJardins. (Fall)

BUSI 250 Personnel Administration (3) Calhoun. (Fall)

BUSI 351 Individual Behavior in Organizations (3) Jerdee. (Fall)

BUSI 352 Interpersonal and Intergroup Behavior in Business Organizations (3) Adams, Rosen. (Spring)

BUSI 354 Organizational Design and Development (3) Bell. (Spring)

CITY AND REGIONAL PLANNING

PLAN 106 Introduction to Urbanism and Planning (3) Parker. (Fall)

PLAN 215 Theory of Planning I (3) Godschalk, Parker. (Fall)

PLAN 241 Environmental Planning (3) Hufschmidt. (Spring)

PLAN 265 Social Policy Planning (3) Moroney. (Spring)

PLAN 268 Planning and Social Structure (3) Mayer. (Fall)

PLAN 270 Planning of Service Delivery Systems (3) Moroney. (Fall)

ECOLOGY

ECOL 102 Ecology (3) Stiven, Leith. (See Zoology 108) (Fall)

ECOL 201 Seminar in Ecology (2) Carl. (See Zoology 255) (Fall)

ECONOMICS

ECON 165 Economics of Population (3) Turchi (Fall)

ECON 399 Graduate Seminar in Economics and Population (3) Spengler, Turchi. (Spring)

EDUCATION

EDCI 111 Audio-Visual Instruction: Techniques and Materials (3) Wileman, Gale (Fall, Spring, Summer)

EDCI 113 Introduction to Instructional Material Production (3) Wileman (Fall, Spring)

EDIO 123 Cultural Constraints in Educational Development (3) Staff (Spring)

EDCI 184 Sex Education in the School Curriculum (3) Scott. (Spring)

Courses and Electives

- EDCI 209 Curriculum Theory (3) Blackburn, Hennis (Spring and Summer)
EDCI 200 The School Curriculum (3) Staff. (Fall)
EDCI 303 Problems in the Curriculum (3) Staff. (Fall)

ENVIRONMENTAL SCIENCES AND ENGINEERING

- ENVR 101 Elements of Environmental Health (2) Turner. (Spring)
ENVR 111 Man and His Environment (3) Shiffman, Chanlet. (Spring)
ENVR 217 Systems Analysis in Environmental Planning (3) Sherwani. (Fall)

EPIDEMIOLOGY

- EPID 161 Epidemiology in Population Dynamics and Family Planning (3) Omran. (Fall)
EPID 168 Behavioral Science Measurement in Health Programs and Research (3) Jenkins. (Fall)
EPID 230 Applied Methods in Epidemiology and Health Services Research (4) Coroni, Cordle. (Spring)
EPID 231 Measurements of Quality in Medical Care (2) Hulka. (Spring)
EPID 260 Epidemiologic Foundations for Disease Control Problems (3) Cassel, Staff. (Spring)
EPID 262 Epidemiology of Program Acceptance (2) Patrick. (Spring)
EPID 264 Culture and Health (3) Kaplan. (Spring)
EPID 266 Epidemiologic Investigation (3) Tyroler. (Spring and Summer)

GEOGRAPHY

- GEOG 132 World's Food Supply (3) Hawley. (Fall)
GEOG 150 Population Geography (3) Florin. (Spring)
GEOG 153 Political Geography (3) Eyre. (Fall and Spring)
GEOG 156 Natural Resources (3) Basile. (Spring)

HEALTH ADMINISTRATION

- HADM 100 Concepts of Health Administration (3) Herzog, Schaefer, Allen, Kaluzny. (Fall)
HADM 101 Political, Economic and Social Perspectives on Health Administration (2) Sprague, Veney, Beauchamp, Gentry. (Fall)

- HADM 111 Human Ecology and Health Systems (3) Staff. (Spring, Summer)
- HADM 140 Problems in Health Administration (Family Planning) (1 or more) Jain,
141 Allen. (Spring)
142
- HADM 160 Seminar in Population Policy (2) Jain, Allen, Freymann, Staff. (Fall)
- HADM 180 Comprehensive Health Planning (1 or more) Phillips, Staff. (Fall)
- HADM 200 Planning of Community Health Services (3) Schaefer, Phillips, Staff.
(Spring)
- HADM 260 Family Planning Program Development (3) Jain, Allen, Freymann, Staff.
(Spring)
- HADM 275 Politics and Government in Health Administration (2) Flash, Staff. (Spring)
- HADM 360 Research in Organization and Administration of Fertility Control Programs
(2 or more) Jain, Allen, Freymann, Staff. (Spring, Summer)

HEALTH EDUCATION

- HEED 206 Education and Social Change in Population Planning (2) Dawson, Staff.
(Spring)

JOURNALISM

- JOUR 146 International Communication and Comparative Journalism (3) Bishop.
(Fall)
- JOUR 151 Introduction to Mass Communication Research (3) McCombs. (Fall and Spring)
- JOUR 165 Communications and Opinion (3) Shaw. (Fall and Spring)
- JOUR 251 Media Research Methods (3) McCombs. (Spring)
- JOUR 346 Seminar in International Communication (3) Bishop, Cole. (Spring)

MATERNAL AND CHILD HEALTH

- MICH 103 Reproductive Physiology and Conception Control (2) Hulka. (Fall)
- MICH 140 Problems in Maternal and Child Health: Doctoral Seminar "Programs Affecting
Human Reproduction" (2) Udry, Noyes. (Fall, Spring, and Summer)
- MICH 141-42 Problems in Maternal and Child Health (1 or more) Staff. (Fall, Spring, Summer)
- MICH 210 Maternal and Child Health I (3) Siegel. (Fall)
- MICH 212 Social Problems and Services for Children and their Families (2) Gourley,
Schaefer. (Spring)

MHCH 216 Nursing and Family Planning (2 or more) Edmands. (Spring)

MENTAL HEALTH

MENH 234 Evaluation and Programming Elements in Mental Health (3) Brogan, Wilson. (Spring)

MENH 257 Cross-Cultural Consultation (3) Lynton, Smallegan. (Spring)

POLITICAL SCIENCE

POLI 173 Population and Politics (3) Clinton. (Spring)

POLI 213 Public Administration and Policy Making (3) Daland. (Spring)

POLI 305 Seminar on Application of Political Behavior Research to Public Problems (Population Policy) (3) Flash. (Spring)

POLI 330 Seminar in Development Administration (3) Daland. (Spring)

PSYCHOLOGY

PSYCH 133 Introduction to Social Psychology (3) Insko, Thibaut, Thompson. (Fall and Spring)

PUBLIC HEALTH

PUBH 101 Seminar in Population and Family Planning (1) Polgar, Freymann, Thompson. (Fall)

PUBH 102 Determinants and Consequences of Population Change (1) Lingner. (Fall)

RADIO, TELEVISION & MOTION PICTURES

RTVMP 151 Introduction to Mass Communications Research (3) McCombs. (Fall and Spring)
(See JOUR 151)

RELIGION

RELI 140 Comparative Religion and the Population Problem (3) Nash. (Spring)

RELI 191 Religious Ethics and Issues in Contemporary Medicine (3) Allen. (Fall)

SOCIAL WORK

SOWO 351-375 Seminars in Administration and Planning in Social Welfare (3) Staff.

SOWO 376-378 Seminars in Social Work Supervision (3) Staff.

SOCIOLOGY

SOCI 54 Population Problems (3) Uhlenberg, Hawley. (Fall)

SOCI 62 Family and Society (3) Udry. (Fall)

- SOCI 168 The City and Urbanization (3) Goldsmith, Purdy. (Fall and Spring)
- SOCI 186 Population (3) Hawley, Ramboodiri, Uhlenberg. (Fall and Spring)
- SOCI 187 Populations in the Third World (3) Uhlenberg. (Spring)
- SOCI 202 Theories of Social Organization (3) Hawley, Simpson, Lenski. (Spring)

STATISTICS

- STAT 181 Deterministic Models in Operations Research (3) Gould, Smith, Schactman.
(Fall and Spring)

ZOOLOGY

- ZOOL 108 Ecology (3) Stiven, Carl, McCormick, Leith. (Fall and Spring)
- 108L Ecology Laboratory (1) Staff.
- ZOOL 122 Human Genetics (3) Whittinghill. (Fall)
- ZOOL 208 Population Ecology (3) Stiven. (Spring)
- ZOOL 208L Methods in Population Analysis (2) Stiven. (Spring)
- ZOOL 252 Seminar in Population Genetics (2) Long. (Spring)
- ZOOL 255 Seminar in Ecology (2) Carl. (Fall)

COURSE ELECTIVES 1972-73

DUKE UNIVERSITY

ECONOMICS

ECON 317 Seminar in Demographic Population and Resource Problems, Staff. (Spring)

ECON 319 Economic Growth (3) Staff. (Spring)

POLITICAL SCIENCE

POLI SCI 249 Comparative Political Analysis and Political Development (3) Braibanti. (Fall)

SOCIOLOGY

SOCI 243 Population Dynamics and Social Change (3) Myers. (Fall)

THE UNIVERSITY OF NORTH CAROLINA
AT CHAPEL HILL

CAROLINA POPULATION CENTER
UNIVERSITY SQUARE
CHAPEL HILL, NORTH CAROLINA 27514

TELEPHONE: (919) 966-2157
CABLE: POPCENTER, CHAPEL HILL, N. C.

LECTURE-DISCUSSION SERIES

Fall 1972

At the Wesley Foundation

<u>Date</u>	<u>Topic</u>	<u>Discussant(s)</u>
September 11	Orientation for population students	Carolina Population Center staff
September 18	"Economic Considerations of Population Policy"	Dr. D. Gayle Johnson Professor and Chairman Department of Economics University of Chicago
September 25	"Psychological Considerations in Population Issues"	Dr. Henry P. David, Director, Transnational Family Research Institute, American Institutes of Research, Silver Spring, Maryland
October 2	"Legal Issues in Population"	Ms. Harriet F. Pilpel, Senior Partner Greenbaum, Wolff & Ernst New York City
October 9	"The Missing Ingredient in Family Planning Programs: A Cross-Cultural View"	Dr. John Marshall, Instructor Department of Anthropology; and Dr. Steven Polgar, Professor of Anthropology, UNC-Chapel Hill
October 16	"Whose Problem is Population?"	Dr. Aaron Segal Department of Government Cornell University, Ithaca
October 30	"North Carolina: Population Factors in State Goals and Planning"	Dr. Leigh Hammond, Deputy Secretary Department of Administration Raleigh
November 6	"Minority Perspectives on the Population Commission Report: Some Comments and Extensions"	Mr. Ernest Attah, Assistant Professor Department of Sociology Brown University Providence, Rhode Island
November 13	"Ethical-Moral Issues in Population Policy"	Dr. Daniel Callahan, Director Institute on Society, Ethics, and Life Sciences, Hastings-on-Hudson, New York
November 20	"Youth and Citizen Goals and Roles in Population Policy"	Stephen L. Salyer, Co-Chairman Citizen's Committee on Population and the American Future, Washington

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LECTURE-DISCUSSION SERIES

Spring 1973

At the Wesley Foundation

<u>Date</u>	<u>Topic</u>	<u>Discussant(s)</u>
January 15	"Funding for Family Planning: Federal Problems and Prospects" (or: "Illegitimi Non Carborundum")	Mr. Donald Fisher, Policy Analyst Center for Family Planning Development 1600 "J" Street, N. W. Washington, D. C.
January 22	"Funding of Family Planning: Regional and State Level Actors and Factors"	Mr. H. Donald Harrison NCPFS/DHEW 50 Seventh Street, N. E. Atlanta, Georgia Mr. Louis J. O'Conner, Jr. Director, Welfare Programs Division Department of Social Services State of North Carolina P. O. Box 2599 Raleigh, North Carolina Mr. Thomas J. Vitaglione, Chief Family Planning Section N. C. State Board of Health Raleigh, North Carolina
January 29	"North Carolina Legislative Action and Non-Action in Family Planning and Population Programs: Telling It Like It Is, and How It Could Be"	Mr. Arthur Jones, Consultant Carolina Population Center University of North Carolina at Chapel Hill Chapel Hill, North Carolina
February 5	"Experiences In County and Local Family Planning Delivery Systems" (Or: "A Tale Stranger Than Fiction")	Mr. Howard B. Campbell District Health Director Pasquotank-Perquimans-Chowan-Camden Health District Elizabeth City, North Carolina Ms. Jean Lassiter Public Health Nursing Consultant N. C. State Board of Health Elizabeth City, North Carolina Mr. James Lewis, Executive Director Albemarle Human Resource Development System Edenton, North Carolina

- February 12 "Advances in Contraception, Abortion, and Sterilization Techniques: Problems in Development and Dissemination"
- Dr. Jaroslav F. Hulka
Associate Professor, Department of Obstetrics and Gynecology, and Department of Maternal and Child Health
University of North Carolina
at Chapel Hill
Chapel Hill, North Carolina
- February 19 "Abortion Counseling"
(An Idea That Has Come of Age)
- Mr. Robert Wilson, Director
Human Sexuality and Counseling Service
University of North Carolina
at Chapel Hill
Chapel Hill, North Carolina
- Ms. Sara E. Spaght, M.P.H. Candidate
Department of Health Administration
University of North Carolina
at Chapel Hill
Chapel Hill, North Carolina
- February 26 "Population Education: An Attempt to Define an Area"
- Dr. Ralph E. Wileman
Associate Professor, and Chairman
Educational Media Area
School of Education
University of North Carolina
at Chapel Hill
Chapel Hill, North Carolina
- Dr. Mary Turner Lane
Associate Professor
School of Education
University of North Carolina
at Chapel Hill
Chapel Hill, North Carolina
- March 5 "Getting Population Into Public School Curriculum: Problems and Resolutions"
- Mr. Jesse M. Vuncannon
Director of Social Studies Education
North Carolina Department of
Public Instruction
Raleigh, North Carolina
- March 19 "Land Use and Urban Planning: Population and Environmental Perspectives"
- Dr. Edward J. Kaiser
Associate Professor
Department of City and Regional Planning
University of North Carolina
at Chapel Hill
Chapel Hill, North Carolina
- Mr. John L. Robson, Urban Planner
Office of Land Use Planning
Office of Air Programs
Environmental Protection Agency
Durham, North Carolina

March 26	"The Mass Media: Its Role in Changing Population Policies"	Mr. David E. Gillespie Deputy Director Southern Growth Policies Board Research Triangle Park, North Carolina
		Mr. Winfield Best, Director Communication and Planning Office Carolina Population Center University of North Carolina at Chapel Hill Chapel Hill, North Carolina
April 2	"International Programs: Operational Problems"	Dr. Nafis Sadik, Coordinator Programming Division United Nations Development Program United Nations Fund for Population Activities New York, New York
April 9	"Profiles of Population Change in Egypt: Application of the Epidemiologic Transition Theory to Contemporary Development"	Dr. Abdel Omran Professor of Epidemiology School of Public Health University of North Carolina at Chapel Hill Chapel Hill, North Carolina

Carolina Population Center

1. Summary of Past StudentsConcentrating in Population Studies at UNC-CH

The overall population and family planning training program has produced 247 alumni over the seven years through December 1972. The four tables below summarize degrees awarded, major disciplines, and present country location and occupation of these alumni. Of the 247 graduates of the program, 99 (40%) were enrolled in research-oriented programs, and 148 (60%) have been in programs concerned with family planning delivery and program development. Nineteen of the former trainees are not employed in population research or service-oriented work. Fourteen have since returned to graduate school to pursue another advanced degree in population studies. Almost half of the group (112) are in less-developed countries; and 92 are in research and teaching at the university level in the U.S. or overseas.

Table 1. Degrees to population/family planning students, July 1966 to May 1973

<u>Degree</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>Total</u>
Ph.D.	-	-	-	1	7	12	11	-	31
Dr. P.H.	-	-	-	-	1	3	1	2	7
M.A.	-	-	2	4	3	9	7	3	28
M.S.	-	-	-	-	1	2	1	-	4
M.P.H.	1	6	9	9	1	1	15	1	43
M.S.P.H.	-	3	18	28	18	31	16	-	114
Non-degree students	-	-	6	4	4	4	2	-	20
	<u>1</u>	<u>9</u>	<u>35</u>	<u>46</u>	<u>35</u>	<u>62</u>	<u>53</u>	<u>6</u>	<u>247</u>

Table 2. Departmental majors of former population/family planning students, 1966-73

<u>Departmental Major</u>	<u>No. of Students</u>	<u>Departmental Major</u>	<u>No. of Students</u>
Anthropology	12	Education	13
Biostatistics	35	Health Administration	56
Economics	2	Health Education	29
Epidemiology	11	Maternal & Child Health	46
Genetics Curriculum	2	Mental Health	1
Geography	3	Radio, Television	3
Political Science	5		<u>247</u>
Psychology	3		
Sociology	22		
Zoology	4		

Table 3. Location of 247 former population/family planning students in 1973

<u>Country</u>	<u>No. of Alumni</u>	<u>Country</u>	<u>No. of Alumni</u>
Australia (as student)	1	Liberia	1
Bangladesh	3	Malaysia	2
Bolivia	1	Mauritius	1
Canada	1	Nairobi	1
Chile	1	Nepal	1
China (Taiwan)	4	Pakistan	7
Colombia	4	Panama	1
Dominican Republic	1	Peru	1
Germany	1	Philippines	4
Ghana	1	Thailand	11
India	34	Trinidad & Tobago	1
Indonesia	1	Turkey	1
Iran	9	United Arab Republic	9
Ireland	1	United Kingdom	3
Korea	3	United States (13 still as advanced students)	135
		Vietnam	2

Table 4. Employment of 247 former population/family planning students, in 1973

<u>Type of Work</u>	<u>No. of Alumni</u>	
	<u>In United States</u>	<u>Overseas</u>
A. Population/family planning policy position at national level	26	40*
B. Population/family planning policy position at state or local levels	19	6
C. Population/family planning-related work in education institutions		
1. Research & Teaching	46	46
2. Administration	2	1
3. Below University level	1	-
Total in educational institutions	<u>50</u>	<u>47</u>
D. Family Planning clinical work	5	5
E. Work with private, population-oriented foundations and agencies		
1. Administration	9	5
2. Research	2	2
F. Enrolled in advanced population study programs	13	1
G. In non population-oriented positions	3	2
H. Whereabouts unknown or yet unemployed	<u>9</u>	<u>5</u>
TOTALS	135	112

*(Includes five U.S. government advisory staff)

PRESENT POSITIONS
OF
FORMER STUDENTS IN THE POPULATION PROGRAM
UNIVERSITY OF NORTH CAROLINA
Chapel Hill

1966

Roshan, Syed Mahmud, M.P.H.:
(HEED) Provincial Family Planning, Program,
Government of Pakistan, Lahore

1967

Brown, Roy E., M.P.H.:
(EPID) Department of Community Medicine,
School of Medicine, Mt. Sinai Hospital,
New York

El Rafie, Mervat, M.P.H.:
(MCH) Family Planning Field Study Project,
Faculty of Medicine, Department of
Public Health, Cairo University,
Cairo, U.A.R.

Gopalan, Venkatesa, M.S.P.H.:
(HADM) Deputy Director and Head of Social
Welfare Division, Programme Evaluation
Organization, Planning Commission,
Government of India, New Delhi

Jordan, Michael, M.S.P.H.
(HADM) Population Officer, U.S.A.I.D., New Delhi
India (since transferred)

Kanwar, Kanta, M.P.H.:
(MCH) Department of Preventive Medicine,
Family Planning Research and Training
Program, Lady Harding Medical College,
New Delhi, India

Malleck, Mohsina, M.P.H.:
(HEED) Medical Director, Family Planning
Association of Mauritius, Port-Louis,
Mauritius

Niemann, Uta, M.P.H.:
(HEED) Ministry of Foreign Aid and Community
Development, Bonn, West Germany

Rizk, Nagwan, K., M.S.P.H.
(HADM) Assistant Professor, Institute of
Preventive Medicine, Alexandria
University, Alexandria, U.A.R.

Wray, Joseph, M.P.H.:
(EPID) Staff Member, Biomedical Sciences,
Rockefeller Foundation, and Visiting
Professor of Community Medicine, Mahidol
University, Bangkok, Thailand

FORMER STUDENTS IN THE POPULATION PROGRAM
UNIVERSITY OF NORTH CAROLINA
Chapel Hill

1968

Aboul-Fetouh, Saleh M., M.P.H.: (EPID)	Doctoral Candidate, Department of Epidemiology, School of Public Health, University of North Carolina, Chapel Hill
Bali, Prema, M.S.P.H.: (MCH)	Family Planning Unit, Department of Preventive Medicine, All India Institute of Medical Sciences, New Delhi, India
Brandon, Scott, M.S.P.H.: (HADM)	Population Officer, U.S.A.I.D., Mission, Panama
Chowdhury, R.S., No Degree: (HEED)	Family Planning Counselor, Bangladesh Pakistan Family Planning Board, Dacca
Carlson, Bruce D., M.S.P.H.: (HADM)	Population Advisor, Ford Foundation, Bogota, Colombia
David, Abraham S., M.S.P.H.: (HADM)	Carolina Population Center/University of North Carolina at Chapel Hill Resident Representative, Population Dynamics Programme Univ. of Ghana, Legon, Accra, Ghana
Davis, James E., M.S.P.H.: (HADM)	Program Officer (Family Planning), Near East/South Asia Bureau, U.S.A.I.D., Washington
Eshra, Dalal K., M.P.H.: (MCH)	Instructor in Maternity, Human Relations and Family Planning, Higher Institute of Nursing, Alexandria University, Alexandria, U.A.R.
Gibson, Patricia S., M.S.P.H.: (HADM)	Population Program Officer for Nepal, Near East/South Asia Bureau, U.S.A.I.D., Washington
Guimei, Maaly, M.P.H.: (MCH)	Instructor, Public Health Nursing and Maternal and Child Health, Higher Institute of Nursing, Alexandria University, Alexandria, U.A.R.
Haase, Kenneth W., M.S.P.H.: (BIOS)	Assistant Chief, Survey Methods Branch, National Center for Health Statistics, Department of Health, Education & Welfare, Rockville, Maryland
Huizenga, Ann, M.P.H. (MCH)	Chief, Maternal Health and Family Planning Section, North Carolina State Board of Health, Raleigh, N. C.
Jain, S.K., M.S.P.H.: (BIOS)	Doctoral Student in Demography, Australian National University, Turner, Canberra, Australia

Former Population Students: 1968

Kaul, S.J., M.P.H.: (MCH)	Director, Urban Family Planning Clinic, District of Godranwala, West Pakistan
King, David R., M.A.: (SOCT)	Instructor of Sociology, Department of Sociology and Anthropology, University of South Carolina, Columbia
Kohli, Krishnan, L., M.S.P.H.: (BIOS)	Doctoral Student, Population Studies Center, University of Pennsylvania, Philadelphia
Krusa, Hans E., M.S.P.H.: (HADM)	Deputy Director (Administration), Carolina Population Center, University of North Carolina, Chapel Hill
Kurz, Richard S., No Degree: (SOCT)	Instructor, Department of Sociology, St. Olaf's College, Northfield, Minnesota
Lee, Kyung-Sik, M.P.H.: (MCH)	Associate Professor in Nursing and Family Planning, Woo-Sok University, Seoul, Korea
Mathew, P.M., Certificate (GENET)	Senior Research Officer, Department of Botany, University of Kerala, Trivandrum, India
Nelson, Steven S., M.P.H.: (HADM)	Executive Director, Planned Parenthood Association of Columbus, Ohio, Inc.
Paulson, Wayne C., M.A.: (SOCT)	Assistant Professor, Department of Sociology, Augsburg College, Minneapolis, Minnesota
*Porapan, Varavej, M.P.H.: (MCH)	Member, Faculty of Public Health and Behavioral Epidemiologist for Population and Social Research Center, Mahidol University, Bangkok, Thailand
Qureshi, Bilqis, No Degree: (HEED)	Training Officer, Training and Research Institute of Family Planning, Lahore, West Pakistan
*Rampai, Suksawasdi, M.S.P.H.: (BIOS)	Instructor, School of Public Health, Mahidol University, Bangkok, Thailand
Rashida Shaikh, Gul, No Degree: (HEED)	Physician, Training and Research Institute of Family Planning, Lahore, West Pakistan
*Sakornpan, Chira, M.S.P.H.: (MCH)	Head, Department of Medical Social Work, Maternal and Child Health Center, Departmen of Health, Bangkok, Thailand

Former Population Students: 1968

Shimoni, Kitty, M.P.H. : (MCH)	Research Associate, Health Services Research Center, University of North Carolina, Chapel Hill
Singh, Rambir, M.S.P.H. : (BIOS)	Statistician, State Family Planning Bureau Hazratganj, Lucknow, India
Swezy, Curtis, M.S.P.H. : (HADM)	Population Program Officer, U.S.A.I.D. Mission, Korea
Tabbassum, M., No Degree: (RTVMP)	Family Planning Officer, Pakistan Department of Family Planning, Sargodha, West Pakistan
Tamblyn, Peter B., M.S.P.H. : (HADM)	Assistant Coordinator for Family Planning; Metropolitan Atlanta Council for Health, Atlanta, Georgia
VomLehn, Walter, M.S.P.H. : (HADM)	Peace Corps Physician Dominican Republic
Yates, Sue T., M.S.P.H. : (HADM)	Family Planning Consultant, Westinghouse Learning Corporation of Bladensburg, Maryland (residing in Seattle, Washington)
*Yawarat, Porapakkharn, M.S.P.H. : (BIOS)	Lecturer in Biostatistics, School of Public Health, and Staff Member of Population and Social Research Center, Mahidol University, Bangkok, Thailand

*In accordance with national custom, Thais are listed by first name

FORMER STUDENTS IN THE POPULATION PROGRAM
UNIVERSITY OF NORTH CAROLINA
Chapel Hill

1969

Adams, Jacob B., M.P.H. : (MCH)	Director Obstetric and Family Planning Clinics Grady Memorial Hospital, Atlanta, Georgia
Agrawal, R. D., M.S.P.H. : (BIOS)	Research Officer, Population Statistics, Office of the Registrar General, New Delhi, India
Allen, James E., M.S.P.H. : (HADM)	Associate Professor, Department of Health Administration, and Coordinator of Family Planning Administration Program, School of Public Health, University of North Carolina, Chapel Hill
*Banchong Suepsaman, M.P.H. : (MENH)	Lecturer in Maternal and Child Health, School of Public Health, and Staff Member, of Population and Social Research Center, Mahidol University, Bangkok, Thailand
Bashar, Kairul, M.A. : (RTVMP)	Communications Specialist, Bangladesh Family Planning Board, Dacca
Basu, Amitabha, Post Doctoral : (GENET)	Anthropological and Human Genetics, Unit, Indian Statistical Institute, Calcutta, India
Bhatia, Pritam S., M.S.P.H. : (BIOS)	Research Officer, Demography and Statistics Division, Central Family Planning Institute, New Delhi, India
Boyd, Joan, M.P.H. : (MCH)	Neighborhood Youth Corps, Office of Economic Opportunity, East Palo Alto, California
Bradshaw, Lois, M.S.P.H. : (HADM)	Frederiksen Fellow Candidate for either Malaysia or the Philippines; on leave from Doctoral Program, School of Public Health, Tulane University, New Orleans, Louisiana
Brown, Donald L., M.S.P.H. : (HADM)	Consultant, Florida Statewide Family Planning Program, University of Florida, Gainesville, Florida
Burgess, Paul, M.S.P.H. : (HADM)	Director, Florida Statewide Family Planning Program, Department of Obstetrics-Gynecology, College of Medicine, University of Florida, Gainesville, Florida
Chandorkar, Kusum, M.S.P.H. : (MCH)	Senior Research Officer, Family Planning Research and Training Program, Safdarjang Hospital, New Delhi, India

Former Population Students: 1969

David, Lessel H., M.S.P.H.: (HADM)	Director, Agricultural Institute Clinic and Rural Family Planning Center, Allahabad, India
David, Pramila, M.S.P.H.: (MCH)	Physician, Family Planning Center, Allahabad Agricultural Institute, Allahabad, India
Davis, Lee W., M.S.P.H.: (MCH)	Director, Newark Family Planning Program, College of Medicine and Dentistry, Department of Obstetrics and Gynecology, Trenton, New Jersey
Diefenbach, Nancy, Ph. D. (pending) (now Pearce) (SOCT)	Staff Assistant, Data Access and Use Laboratory, U.S. Census Bureau, Washington
Dukuly, Memah, Certificate: (HADM)	Assistant Minister of Health & Welfare for Research and Development, Ministry of Health, Monrovia, Liberia
Early, Carolyn P., M.S.P.H.: (HEED)	Education Program, Cornell-UPCA Graduate College, Laguna, Las Banos, Philippines
Gamon, David L., M.S.P.H.: (HADM)	Counselor of Embassy, U.S. Department of State, Monrovia, Liberia
Hyde, Eileen, M.P.H.: (MCH)	Director, Maternal Health and Family Planning Nursing Services Greenville County Health Department Greenville, South Carolina
Kachirayan, M., M.S.P.H.: (BIOS)	Statistician, Institute of Rural Health and Family Planning, Gandhigram, Tamil Nadu State, India
Kanade, Vyankatesh, M.S.P.H.: (BIOS)	Statistical Officer, Bureau of Economics and Statistics, Bombay, India
Kangas, Lenni W., M.S.P.H.: (HADM)	Chief, Near East/South Asia Bureau, Office of Population, U.S.A.I.D., Washington
Khan, Razia, M.A.: (RTVMP)	Health Education Officer, Central Evaluation Unit, Family Planning Council and Lecturer in Sociology, University of the Punjab, Lahore, West Pakistan
Landry, Amedee S., M.S.P.H.: (HADM)	Chief, Human Resources and Social Development Division, U.S. La Paz, Bolivia, U.S.A.I.D.

Former Population Students: 1969

Layton, Robert, M.S.P.H.: (HADM)	Operations Officer, Office of Population Programs, Near East/South Asia Bureau, U.S.A.I.D., Washington
Lecomte, Jean, M.P.H.: (EPID)	Field Staff, Technical Assistance Division, Population Council, Taipei, Taiwan
MacCorquodale, Donald, M.S.P.H.: (HADM)	Population Officer, U.S.A.I.D., Manila, Philippines
Moore, Allen, Post-Doctoral: (ZOOI)	Assistant Professor, Department of Biology, Western Carolina University, Cullowee, North Carolina
Morris, J. Watson, No Degree: (SOCl)	Project Director, ECOS, Chapel Hill, N.C.
Mulvihill, Michael, M.S.P.H.: (EPID)	Instructor of Public Health, Hunter College; Epidemiology Staff, Department of Community Medicine, Mt. Sinai Hospital; Doctoral Student Department of Epidemiology, Columbia University, New York City
Okediji, Zacheus R., M.S.P.H.: (HEED)	Medical Care Administrator, Department of Family and Community Health, Matthew Walker Health Center, Nashville, Tennessee
Pandit, V.Y., M.S.P.H.: (BIOS)	Biostatistician, Family Planning Training and Research Center, Ministry of Health and Family Planning, State of Maharashtra, Bombay, India
Patel, Vinod M., M.P.H.: (HEED)	State Health Education Officer, Family Planning Directorate of Health, Gujarat State, India
Ramarao, D., M.S.P.H.: (BIOS)	Population Statistician, Rural Health Unit and Training Center, Singur, India
Richardson, Russell H., M.S.P.H.: (MCH)	Director, Governor's Special Council on Family Planning, State of Georgia, Atlanta
Roof, Wade C., M.A.: (SOCl)	Assistant Professor, Department of Sociology, University of Massachusetts, Amherst
Ruoff, Edward G., M.S.P.H.: (HADM)	Associate Chief for Institutional Development, Division of Manpower and Institutional Development, Office of Population, U.S.A.I.D., Washington
Russia, Kunjitham, M.S.P.H.: (MCH)	Now residing in London, England (position unknown)

Former Population Students: 1969

Sallam, Sunny, M.P.H.: (EPID)	Member, Faculty of Medicine, Department of Public Health, Alexandria University, Alexandria, U.A.R.
Sampoornam, N., M.S.P.H.: (MCH)	Principal, Regional Family Planning Training Centre, Egmore, Madras State, India
Sastry, K.R., M.S.P.H.: (MCH)	Doctoral Student, Department of Sociology, University of North Carolina, Chapel Hill
Selvaraj, B.K., M.P.H.: (HEED)	Health and Family Planning Educator, Gandhigram Institute of Rural Health and Family Planning, Tamil Nadu State, India
Shuttleworth, Clare, M.P.H.: (MCH)	Chief Consultant Nurse in Maternal Health and Family Planning Prairie Region, Department of National Health and Welfare, Edmonton, Alberta, Canada
*Suphot Chasiri, M.S.P.H.: (MCH)	Chief of In-service Training Division, Maternal and Child Health Centre, Khonkaen, Thailand
Vascones, Jorge, M.A.: (SOCl)	Assistant for Social Research, Center of Social Research, Catholic University, Lima, Peru

*In accordance with Thai custom, Thais are listed by first name

FORMER STUDENTS IN THE POPULATION PROGRAM
UNIVERSITY OF NORTH CAROLINA
Chapel Hill

1970

Abruquah, Samuel K., Certificate: (MCH)	Lecturer, School of Social Work, University of Ghana, Accra
Altman, Diana L., M.S.P.H.: (HADM)	Family Planning Administrator, Population Services, Inc., Chapel Hill North Carolina
Andrews, Norma G., M.S.P.H.: (MCH)	Director of Maternal and Child Health and Family Planning, Government of Trinidad and Tobago
Berry, Sandra L., M.S.P.H.: (MCH)	Associate Professor of Nursing (Family Planning), School of Nursing, University of North Carolina, Chapel Hill
Black, Timothy, M.S.P.H.: (MCH)	Associate Director, Population Services Inc. Offices, Nairobi
Blumenstock, Edward, M.S.P.H.: (EPID)	Medical Student, University of California School of Medicine, San Francisco, California
*Boongium Tragoolvongse, M.S.P.H.: (HEED)	Instructor, School of Public Health and Staff Member of Population and Social Research Center, Mahidol University, Bangkok, Thailand
deVoursney, Hair, No Degree: (nee Jones) (POLI SCI)	Housewife, Syracuse, New York
Farag, Zaher, Ph. D.: (EDUC)	Public Health Advisor, Comprehensive Health Planning, Office of Regional Director (Region 3), Department of Health, Education & Welfare, Philadelphia, Penna.
Feliciano, Aurora, M.S.P.H.: (MCH)	Faculty Member of Institute for Study of Human Reproduction and Department of Pediatrics and Preventive Medicine, School of Medicine, University of St. Thomas Philippines
Fergany, Nader A., Ph. D: (BIOS)	Population Statistician, Institute of Statistics, Cairo University, Cairo, U.A.R.
Guad, William S., Ph. D.: (ZOO)	Assistant Professor of Biology, Department of Biological Sciences, Northern Arizona University, Flagstaff, Arizona

Former Population Students: 1970

Gunasekaran, Subbian, M.S.P.H.: (BIOS)	Statistical Analyst, Gandhigram Institute of Rural Health and Family Planning, Tamil Nadu State, India
Harvey, Philip D., M.S.P.H.: (HADM)	Director, Population Services, Inc, and Population Planning Associates, Inc., Chapel Hill, North Carolina
Hern, Warren M., M.P.H.: (EPID)	Chief, Demonstration Projects Branch, Family Planning Program, Office of Economic, Opportunity, Washington, D. C.
Kanaka-Devi, M., M.S.P.H.: (HEED)	Health Educator, Training Division, Gandhigram Institute of Rural Health and Family Planning, Tamil Nadu State, India
Knauff, Lynn K., M.S.P.H.: (MCH)	Director, N.C. Family Planning Program, Carolina Population Center, University of North Carolina, Chapel Hill
Lee, Che-Fu, Ph. D.: (SOCL)	Instructor, Department of Sociology, Catholic University of America, Washington, D. C.
Macey, Anne M., M.S.P.H.: (HADM)	(waiting for overseas assignment)
Measham, Anthony R., Dr. P.H. (HADM)	Medical Advisor, Colombia Association of Medical Schools and National School of Public Health, Bogota, Colombia
Montague, Joel, M.S.P.H.: (HADM)	Regional Director (Pakistan), Population Council, New York City
Mooney, Peter J., Ph. D.: (ECON)	Department of Finance, Dublin, Ireland
Mills, Karen, M.A.: (nee Massengill) (SOCL)	Demographic Statistician, Population Division, U.S. Census Bureau, Suitland, Maryland
Nu, Liet Vo, Certificate: (BIOS)	Maternal and Child Health Planning Services, Ministry of Health, Saigon, Vietnam
Pani, V. Kothanda, Ph. D.: (PSYCH)	Assistant Professor of Psychology, Franklin College, Franklin, Indiana
Park, Dai Kyoan, Certificate: (BIOS)	Supervisor and Research Member, National Family Planning Evaluation Team, Ministry of Health, Seoul, Korea
Russell, Jerry, M.S.P.H.: (HADM)	Administrative Director, International Postpartum Program Population Council, New York, New York

Former Population Students: 1970

Schonfeld, Warren, M.S.: (BIOS)	Biostatistician, Office of Program Analysis, Health Services and Mental Health Administration, Public Health Service, Rockville, Maryland
Singerman, Leonard J., M.S.P.H.: (HADM)	Associate Professor of Pediatrics, Division of Family Medicine, University of Miami School of Medicine, Miami, Florida
Spangler, Carol, M.S.P.H.: (nee Konlowski) (HEED)	Teacher of Family Life and Human Development, Oxen Hill Junior High School, Oxen Hill, Md.
Talvar, Prem P., Ph. D.: (BIOS)	International Institute of Human Reproduction Columbia University, New York, New York
Upton, Donna, M.S.P.H.: (HEED)	Program Planner, North Carolina Heart Association, Chapel Hill, North Carolina
White, Billy G., M.S.P.H.: (BIOS)	Biostatistician, Office of Program Analysis, Health Services and Mental Health Administration, U.S. Public Health Service, Rockville, Maryland
Brooks, Jane T., M.A.: (ANTH)	Doctoral Student, Department of Anthropology, University of North Carolina, Chapel Hill
Lowenbach, Trude, M.A.: (ANTH)	Doctoral Student, Department of Anthropology, University of North Carolina, Chapel Hill

*In accordance with national custom, Thais are listed by first name.

FORMER STUDENTS IN THE POPULATION PROGRAM
UNIVERSITY OF NORTH CAROLINA
Chapel Hill

1971

Asayesh, Kabil, M.S.P.H.: (HADM)	Deputy Director, Family Planning Division Ministry of Health Building #11, Aryamehr Street Tehran, Iran
Azordegan, Firooz, M.S.P.H.: (BIOS)	Assistant Professor of Biostatistics, School of Public Health, Tehran University, Tehran, Iran
Benz, Charity (No degree): (GEOG)	Social Science Analyst, Data Access and Use Laboratory, U.S. Bureau of the Census, U.S. Department of Commerce, Suitland, Md.
Bergman, Elihu, Ph. D.: (POLI SCI)	Assistant Director, Center for Population Studies, Harvard University, Cambridge, Mass.
Bhatnagar, K.M., M.A.: (EDUC)	Frederiksen Fellow, Center For Population Studies, School of Social Work, University of Isfahan, Isfahan, Iran
Biggar, Jeanne, Ph. D.: (SOCI)	Assistant Professor, Department of Sociology University of Virginia, Charlottesville
Bond, James T. (No Degree): (ANTH)	Research Associate, High Scope Educational Research Foundation, Ypsilanti, Michigan
Chaichana Suvanavejh, M.S.P.H.: (MCH)	Medical Officer and Chief of Family Planning Section, Maternal and Child Health Center, Region 4, Khon-Kaen Province, Thailand
Chang, Kung-Kong, Dr. P.H.: (HADM)	Specialist, Rural Health Division, Joint Commission on Rural Reconstruction, Taipei, Taiwan
Clinton, Richard, Ph. D.: (POLI SCI)	Visiting Assistant Professor, Department of Political Science, And Research Associate, Carolina Population Center, University of North Carolina, Chapel Hill
Davis, Dona, M.A.: (ANTH)	Instructor of Sociology and Anthropology, Methodist College Fayetteville, N. C.
Davis, Dorothy, M.A.: (ANTH)	undecided
Djamhoer, M., M.S.P.H.: (MCH)	Director of Demographic Research, Hasan Sadikin Teaching Hospital, University of Padjadjaran, Bandung, Indonesia

Former Population Students: 1971

Fassai-Rezhad, Oranus, M.S.P.H.: (HEED)	Director, Division of Social Work and Publications, Family Planning Unit, Ministry of Health, Tehran, Iran
Gibson, Betty, M.S.P.H.: (HADM)	Unknown
Gl, Angelina, M.S.: (BIOS)	Professor of Biostatistics, School of Public Health, University of Antioquia, Medellin, Colombia
Gnecco, Gilda, M.S.P.H.: (MCH)	Professor of Social Hygiene and Preventive Medicine, University of Santiago, and Director of Ismael Valdes Clinic, Santiago
Greene, Brian, M.S.P.H.: (BJOS)	Assistant Director, Guilford County Family Planning Center, Greensboro, N. C.
Gupta, Ram K., M.S.P.H.: (BIOS)	Research Officer, Office of the Registrar General, Government of India, New Delhi, India
Hashim, Mohammed, M.A.: (HEED)	Head Information Division Family Planning Board, Kuala Lumpur, Malaysia
Herbert, Mayling, M.A.: (ANTH)	On leave from doctoral program, Dept. of Anthro., Univ. of N. C., Chapel Hill
Hibbard, H. David, M.S.P.H.: (MCH)	Frederiksen Intern, Chogoria Hospital Chogoria, Kenya, Africa
Hibbard, Kathie, M.S.P.H.: (HEED)	With husband, H. David, in Chogoria, Kenya, Africa
Holme, Paul, M.A.: (EDUC)	Frederiksen Fellow, Philippines
House, Dennis E. (no degree)	Statistician, Environmental Protection Agency, Research Triangle Park, N.C.
Jacobs, Judith, M.S.P.H.: (Dr. P.H. pending, MERN) (HEED)	Health Coordinator for Planned Parenthood League of Massachusetts, Boston, Mass.
Jain, Pawan, K., M.S.P.H.: (BIOS)	Statistician, National Family Planning Institute, New Delhi, India
Jalali, G.H., M.S.P.H.: (HADM)	Professor and Director of Family Planning Education and Research, School of Public Health, Tehran University, Tehran, Iran
Johnson, Bradford, M.S.P.H.: (BIOS)	Statistician, National Center for Health Statistics, Dept. of Health, Education & Welfare, Research Triangle Park, N.C.
Kasarda, John D., Ph. D.: (SOCl)	Assistant Professor of Sociology, Univ. of Chicago, Chicago, Illinois
Kay, Lynn, M.A.: (ANTH)	undecided

Former Population Students: 1971

Kelly, Robert, Ph. D. : (ZOOL)	Visiting Scholar, Resources for the Future, Inc., Washington, D. C.
Khalifa, Atef M., Ph.D. : (SOCL)	Assistant Professor of Sociology Institute of Statistics, Cairo University Cairo, UAR
Khattab, Moushira, M.A. : (POLI SCI)	Third Secretary, Ministry of Foreign Affairs, Cairo, UAR
Konanc, Judith, Ph.D. : (PSYCH)	Assistant Professor of Psychology Dept. of Psychiatry, School of Medicine Univ. of North Carolina, Chapel Hill, N.C.
Land, Sandra H., M.S.P.H. : (MCH)	Population Program Specialist, Charleston County Health Department Charleston, S. C.
Lasprilla, Enrique, M.S.P.H. : (BIOS)	Demographer, Department of Administrative Nacional de Estadistica, Bogota, Colombia
Loddengaard, Robert, M.S.P.H. : (HADM)	Coordinator, International Program in Family Planning Administration Carolina Population Center, UNC-CH Chapel Hill, N. C.
Long, John F., M.A. : (SOCT)	Instructor, Dept. of Sociology, University of California, Riverside, Calif.
McNellis, Donald, M.S.P.H. : (MCH)	Assistant Professor, Dept. of Obstetrics & Gynecology, Bowman-Gray School of Medicine Wake Forest University, Winston-Salem, N.C.
Martin, Jean F., M.S.P.H. : (HADM)	World Health Organization Consultant New Delhi, India
Merrill, Henry D., M.S.P.H. : (HADM)	Director of Evaluation and Development Planned Parenthood Association of Columbus, Ohio, Inc., Columbus, Ohio
My, Vu Thi, M.S.P.H. : (BIOS)	Chief, Bureau of Statistics, Ministry of Health, Saigon, South Vietnam
Nadim, Abolhassan, Dr.P.H. : (EPID)	Associate Professor, Dept. of Epidemiology School of Public Health, Tehran University Tehran, Iran
Nelson, Theodore C., M.S.P.H. : (HADM)	U.N. Development Program, Population Program Officer, Tehran, Iran
Packtor, Daniel, (no degree) : (SOCL)	Administrator, Office of Criminal Justice, Plans & Analysis Division Government of the District of Columbia, Washington, D. C.

Former Population Students: 1971

Pisharoti, K.A., Dr. P.H.: (HADM)	Director, Institute of Rural Health and Family Planning, Gandhigram, India
Rengert, George, Ph. D.: (GEOG)	Assistant Professor, Department of Geography Temple University, Philadelphia, Penn.
Saltonstall, Caroline, (EDUC)	Frederiksen Intern, Teheran, Iran, and Doctoral student, School of Education University of North Carolina, Chapel Hill
Sarkar, Khuku, M.S.P.H.: (HADM)	India Fertility Research Program 8, Rowden Street Calcutta 17, India
Sarma, R.S.S., Ph. D.: (BIOS)	Statistician, Rural Health Research Project, Ludhiana, India and Faculty Associate, Department of International Health, Johns Hopkins University, Baltimore, Maryland
Sehgal, Jag M., Ph. D.: (BIOS)	Statistician, Gandhigram Institute of Rural Health and Family Planning, India
Shah, Ketki B., M.P.H.: (HEED)	undecided
Sheikh, Maqbool, M.S.P.H.: (MCH)	Social Worker, Hampton Health Department, Hampton, Virginia
Stillman, Jeanne, M.S.P.H.: (HADM)	Coordinator, African Health Training Institute Carolina Population Center and Instructor, Dept. of Health Administration, UNC-CH Chapel Hill, N. C.
Sudersanam, Vijay, M.S.P.H.: (HEED)	Research Associate, Population Services Inc., Chapel Hill, N. C.
Thangadorai, M., M.S.P.H.: (HEED)	Health Education Instructor, Gandhigram Institute of Rural Health and Family Planning, Tamil Nadu State, India
Tompkins, Forrest G., M.S.P.H.: (MCH)	Chief of Professional Services and Director of Family Planning, Dewitt Army Hospital, Fort Belvoir, Virginia
Williams, Sara, M.S.: (EDUC)	Not yet employed
Van Valey, Thomas, Ph.D.: (SOCl)	Assistant Professor, Department of Sociology, Colorado State University, Fort Collins, Colorado
Yarnell, Peter, M.S.P.H.: (HADM)	Chief, Community Services Branch, Emergency Health Manpower Program, Health Services & Mental Health Administration, U.S. Public Health Services, Rockville, Maryland
Ziai, Lotfollah, M.S.P.H.: (HADM)	Director General, Office of Family Planning; Ministry of Health, Tehran, Iran

FORMER STUDENTS IN THE POPULATION PROGRAM
UNIVERSITY OF NORTH CAROLINA
CHAPEL HILL

1972

Afrasiabi, Farajollah, M.P.H.: (MCH)	Resident, Dept. of Preventive Medicine, and Asst. Instructor, Medical College of Wisconsin
Bennard, Bruce, M.A.: (EDUC)	Frederiksen Intern, Regional Health Training Center, Davao City, Philippines
Brinton, Louise, M.P.H.: (EPID)	Research Assistant, International Fertility Research Project, Carolina Population Center, Chapel Hill, N.C.
Broome, Betty, M.P.H.: (HEED)	Health Educator, State Health Department Renton, Washington
Carey, Moses, M.P.H.: (HADM)	Director, Community Health Services Project Carrboro, North Carolina
Collier, Phyllis, M.S.P.H.: (nec Lehman) (MCH)	Nursing Consultant in Maternal Health and Family Planning, N.C. State Board of Health, Raleigh, N. C.
Dotterer, William H., M.S.P.H.: (HADM)	Family Planning Program Consultant, CPC/OEO Rural Project, Western Region North Carolina, Asheville, North Carolina
El-Katsha, Samiha F. (Spec. Student): (ANTH)	Research Assistant, Social Research Center American University of Cairo, Egypt
El-Tayeb, Bahia A., (Spec. Student): (ANTH)	Research Assistant, Social Research Center, American University of Cairo, Egypt
Everett, Peter B., Ph. D.: (PSYCH)	Research Associate, Division of Man and Environmental Relations, Pennsylvania State University
Flynn, Cynthia, Ph. D. (pending): (SOCl)	Department of Sociology, State University of New York, Genesio, New York
Foxx, Virginia A., M.A.C.T.: (EDUC)	General College, Appalachian State University, Boone, N. C.
Frisbie, W. Parker, Ph. D.: (SOCl)	Asst. Professor, Dept. of Sociology, Universit of Texas, Austin, Texas
Fry, Robert E., M.S.P.H.: (BIOS)	Statistician, Family Evaluation Program, Center for Disease Control, Atlanta, Georgia

Population Students: 1972

Gamble, George A., M.A.: (ANTH)	Doctoral Student, Department of Anthropology, University of North Carolina, Chapel Hill, N. C.
Gantz, Elaine, M.P.H.: (MCH)	Consumer Board Training in Family Planning Programs, Office of Economic Opportunity, Denver, Colorado
Gardner, Lytt, M.P.H.: (HEED)	Cortland Health Department, Cortland, N.Y.
Goldberg, Marshall F., M.P.H.: (EPTD)	Medical Student, School of Medicine, Dept. of Obstetrics and Gynecology, University of North Carolina, Chapel Hill, N.C.
Griffith, Mary Hayward, M.S.P.H.: (HEED)	Family Planning Consultant, Family Planning Training Center, Comilla, Bangladesh
Harrell, Betty J, M.P.H.: (HEED)	Health Educator, Wake County Family Planning Program, Raleigh, N.C.
Hedgecock, Joan, M.S.P.H.: (HADM)	Systems & Procedures Technician, Public Health Statistics Section, N. C. State Board of Health, Raleigh, N.C.
Hiday, Virginia A., Ph. D.: (SOCIO)	Assistant Professor, Sociology Department, University of Colorado, Boulder, Colorado
Howell, Embry M., M.S.P.H.: (BIOS)	Research Assistant, Georgetown University Hospital, Washington, D. C.
Huang, Charles, M.S.P.H.: (HEED)	Resident in Taiwan, position unknown
Huber, Sallie C. Tuton, M.S.P.H.: (MCH)	Research Assistant International Planned Parenthood Federation, Evaluation Unit, London, England
Huey, Mary Schon, M.A.: (GEOG)	Undecided
Jeyaram, S. A., M.S.P.H.: (MCH)	Medical Officer, Family Planning Center, Kasturba Hospital, Gandhigram, S. India
Jordan, John W., M.S.P.H.: (HADM)	Deputy Director for Planning & Organization, Philadelphia Family Planning Coordinating Council, Philadelphia, Pennsylvania
June, Mary D., M.S.P.H.: (HADM)	Manpower & Institutions Division, Office of Population, U.S. Agency for International Development, Washington, D. C. (Part-time) (Law School also)

Population Students: 1972

Khan, Jahangir, Dr. P.H.: (HADM)	Assistant Professor, Department of Sociology, University of Karachi, Pakistan
Kukuk, Cris R., Ph. D. (pending): (SOCIO)	Department of Sociology, University of Missouri, Kansas City, Missouri
Lalu, N. M., Ph. D.: (SOCIO)	Department of Sociology University of Missouri St. Louis, Missouri
Laraqui, Rachida, (Spec. student): (EDUC)	Advanced Studies, University of Massachusetts, Amherst, Mass.
Lazarus, Wendy, M.S.P.H. (HADM)	Research Assistant, State Services Office Carolina Population Center, Univ. of North Carolina at Chapel Hill, N. C.
MacManus, Elizabeth, M.P.H. (HADM)	Chief, South American Branch, Latin American Division, Office of Population, U.S. Agency for International Development, Washington, D. C.
McIntyre, Robert J., Ph. D.: (ECON)	Assistant Professor of Economics, Pennsylvania State University, Pennsylvania
McKeithen, Edwin T., III. M.S.P.H.: (HADM)	Office of Population, U. S. Agency for International Development, Washington, D.C.
Millen, James S., M.A.: (SOCL)	Returned to England, Position unknown.
Outen, Ronald, M.S. (pending): (ZOO)	Staff Assistant, Council on Environmental Quality, Washington, D. C.
Pedersen, Christine O., M.P.H.: (HEED)	Family Planning Health Educator, Albemarle Regional Planning and Development, Commission Edenton, N. C.; and, Instructor of Community Health, East Carolina University
Poddar, Amal K., M.P.H.: (MCH)	Biomedical Division, National Institute of Family Planning, New Delhi, India
Rajbanshi, Bhabani S., M.S.P.H.: (BIOS)	Trichandra University, Department of Statistics Kathmandu, Nepal
Riley, James, Ph. D.: (ANTH)	Frederiksen Intern, Institute for Population and Social Research, Bangkok, Thailand
Rolett, Ronald D., M.S.P.H.: (MCH)	Medical Director, Family Planning Services, Wake County, North Carolina
Sainju, Mohan Man, Ph. D.: (POLI SCI)	Returned to India, position unknown
Samuel, John, Ph. D.: (EDUC)	Undecided
Sarangapani, V. D., M.E.D.: (EDUC)	Health Educator, Population/Family Planning Institute for Rural Health and Family Planning, Chandhigran, Tamil Nadu, India

Population Students: 1972

Bayegh, Juliette, M.P.H.: (MCH)	Doctoral Student, Johns Hopkins University, School of Hygiene and Public Health, Baltimore, Maryland
Shordt, Kathy, M.A.: (EDUC)	Director, High School Program/Student Project Population Institute, Washington, D.C.
Siddique, C. Muhammed, M.S.P.H.: (BIOS)	Acting Chief, Demographic Research Section Central Statistical Office, I-S.M.C.H. Society Karachi 3, Pakistan
Suchindran, Chirayath, M., Ph. D.: (BIOS)	Visiting Assistant Professor, Department of Biostatistics, University of North Carolina, Chapel Hill, N. C.
Tuncer, Ali, M.P.H.: (HEED)	Residing in Turkey, position unknown
Wells, Elizabeth, M.P.H.: (HEED)	Undecided

FORMER STUDENTS IN THE POPULATION PROGRAM
UNIVERSITY OF NORTH CAROLINA
CHAPEL HILL

1973

Lott, William C., M.A.: (ANTH)	Community Development Planner Wilmington-New Hanover County Planning Department New Jersey
Rhada Devi, D., M.A.: (ANTH)	Senior Research Assistant Family Planning Communications and Action Research Program University of Kerala, India
Srisuphan, Wichit, M.P.H.: (MCH)	Instructor, Maternal and Child Health Nursing School of Nursing University of Chiang Mai Chiang Mai, Thailand
Trainer, Edward S., M.S.P.H., Dr. P.H.:	United Nations Fund for Population Activities United Nations, New York
Van Wie, William, M.S.P.H., Dr.P.H. (pending) (HADM)	Population Council New York, New York
Wansorn, Sommai, M.Ed.: (EDUC)	Doctoral Student University of Chicago Chicago, Illinois
Wardell, John, Ph.D: (SOCl)	Assistant Professor, Dept. of Sociology Washington State University Pullman, Washington

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SHORT-TERM TRAINEES AND VISITORS
Carolina Population Center

July 1, 1972 - June 30, 1973

VISITORS (Continued)

July 1972

- Dr. S. A. Dass, Professor and Head, Department of Obstetrics and Gynecology,
Maulana Azad Medical College, New Delhi, India (Prostaglandin Fellow)
- Dr. Milan Kupresanin, Department of Obstetrics and Gynecology, University of
Novi Sad, Medical School, Novi Sad, Yugoslavia (Prostaglandin Fellow)
- Ms. Jean King, Librarian, National Family Planning Board of Jamaica (Library Training)
- Ms. Libia Victoria Cerezo, Professor and Coordinator
Maternal and Child Health and Family Planning Program, School of
Nursing, University del Valle, Cali, Colombia
- Dr. E. E. Galal, Director General
Drug Research and Control Center, Professor of Pharmacology, Cairo,
Egypt
- Dr. Mehdi Amani, Director
Demographic Section of the Institute of Social Studies and Research,
University of Teheran, Teheran, Iran
- Dr. Boonlert Leoprapai
Institute of Population and Social Research, Mahidol University,
Bangkok, Thailand
- Mr. John Saunders, Ph.D.
Professor of Sociology, University of Florida, Gainesville, Florida
- Dr. Gerold Van Der Vlugt, M.D., Dr. P.H.
Family Planning Consultant, Office of Population, U.S. Agency for
International Development, Washington, D.C.

Special Program:

July 7 - August 15

- Mr. Humberto Cordona
Regional Director of Rural Extension, Colombian Agricultural
Institute, Bogota, Colombia
- Ms. Graciela Gutierrez, Director
Department of Social Promotion, Ciudad Kennedy, INEM, Bogota,
Colombia
- Mr. Jesús R. Londazabal
National Coordinator of Rural Extension, Colombian Agricultural
Institute, Bogota, Colombia
- Ms. Ligia Neira, Chief
Division of Social Promotion of Youth and Family, Institute of
Family Welfare, Bogota, Colombia
- Mr. C. Gabriel Ojeda
Department of Extension Division, Colombian Agricultural Institute,
Bogota, Colombia

August 1972

- Mrs. Raj Kumari Sood
Assistant Principal Nurse Advisor for India, New Delhi, India
- Dr. William Parson
Rockefeller Foundation Consultant, New York, New York

VISITORS (Continued)

- Dr. Higinio Ables
Institute of Mass Communications, University of the Phillipines,
Diliman, Quezon City, Philippines
- Miss Thelma E. Thomas
Program Officer for Education, Information, and Communication,
National Family Planning Board, Kingston, Jamaica
- Dr. Adenola A. Igun, Director
Demographic Research and Training Unit, Faculty of Social Sciences,
University of Ife, Ife-Ife, Nigeria
- Dr. Subdahara Devi
Post Graduate Fellow in Gynecology, University of Miami, Miami, Florida
- Mr. R. M. Dhaworikar
Health Education Officer, Government of Maharashtra, Family Planning
Publicity Unit, Bombay, India
- Mr. G. Kittue Rao
Technical Assistant Director, Office of the Director, Health
Services and Family Planning, Madras, India
- Dr. A. M. Zikry, Head
Demographic Unit, Ahmadu Bello University, Zaria, Nigeria
- Mr. Jeremiah I. Ohifowosho, Director
Research and Evaluation Unit, Nigerian Family Planning Council,
Nigeria
- Mrs. Sigrid G. Deeds, M.P.H.
Associate Director, Education, Training and Communication, Westinghouse
Population Center, Columbia, Maryland
- Mr. Steven Nelson, Executive Director
Planned Parenthood of Columbus, Ohio, Inc., Columbus, Ohio
- Mr. Bruce D. Carlson, Program Officer
The Ford Foundation, Accra, Ghana
- Abdul Ghafar Aziz, M.D.
Secretary General, Afghanistan Family Guidance Association, Kabul,
Afghanistan
- September 1972
- Dr. R. Orraca-Tetteh
Department of Nutrition and Food Sciences, University of Ghana,
Ghana, Africa
- Dr. P. S. Menon
Demographic Division, United Nations, New York, New York
- Dr. Henry P. David, Director
Transnational Research Institute, American Institutes of Research,
Silver Spring, Maryland
- Dr. Sam X. Charles, Department of Obstetrics and Gynecology, Christian Medical
College Hospital, Vellore, India (Prostaglandin Fellow)
- Dr. Arie Doodoh, Department of Obstetrics and Gynecology, Faculty of Medicine,
University of Indonesia, Djarkarta, Indonesia (Prostaglandin Fellow)

VISITORS (Continued)

- Mr. John Palmer Smith, Director
Family Planning, International Assistance, International Division,
Planned-Parenthood Federation, New York, New York
- Dr. D. Gale Johnson
Professor and Chairman, Department of Economics, University of
Chicago, Chicago, Illinois
- Mr. Martin Essis, Professor
School of Law and Science of Economics, University of Abidjan,
Ivory Coast, Africa
- Mr. Apichat Chamaratthirong, Rockefeller Fellow
Department of Demography, Brown University, Providence, Rhode Island
- Mr. Pramote Prasartkul, Rockefeller Fellow
Department of Rural Sociology, Cornell University, Ithaca, New York
- Dr. Robert G. Burnight
Center for Population and Social Research, Faculty of Public Health,
Mahidol University, Bangkok, Thailand

October 1972

- Dr. Kesuma Halim
Medical Officer, Provincial Health Services, Indonesian Planned
Parenthood Association, East Java, Indonesia
- Dr. Jorge Deju, Director
Division of Maternal and Child Health, Department of Health,
Frankfort, Kentucky
- Dr. Morris Dixon
Pediatrician, Wooster, Ohio
- Dr. Hugo Corvalan
Department of Social and Preventive Medicine, University of Chile,
Santiago, Chile
- Col. Jamil Bishara Kawar
Senior Training Assistant, U.S. Agency for International Development,
Amman, Jordan
- Mrs. Jamil Bishara Kawar, Chairwoman
Welfare Committee of Save the Children Fund, Amman, Jordan
- Dr. Aaron Segal
Visiting Associate Professor, Department of Government, Cornell
University, Ithaca, New York
- Ms. Harriet Pilpel, Senior Partner
Greenbaum, Wolff & Ernst, Attorneys-at-Law, New York, New York
- Dr. Belquis Malik, Consultant, Department of Obstetrics and Gynecology, Liaquat
National Hospital, Karachi, Pakistan (Prostaglandin Fellow)
- Dr. Virgilio Oblepias, Department of Obstetrics and Gynecology, Mary Johnston
Hospital, Manila, Philippines (Prostaglandin Fellow)

VISITORS (Continued)

November 1972

- Ms. Patricia Ribeiro, Librarian, Population Dynamics Department, Johns Hopkins University, Baltimore, Maryland (Library Training)
- Dr. Dusan Dimulovic, Department of Obstetrics and Gynecology, University Clinic of Obstetrics and Gynecology, Ljubljana, Yugoslavia (Prostaglandin Fellow)
- Dr. D. Vengadasalam, Department of Obstetrics and Gynecology, Kandang Kerbau Hospital, Singapore (Prostaglandin Fellow)
- Mme. J. Forget
Information System Specialist, UNESCO Consultant to International Planned Parenthood Federation, London, England
- Mr. Robert W. Wickham
Program Officer, Population, The Ford Foundation, New York, New York
- Dr. H. T. Croley
Ford Foundation Population Program Advisor, Cairo, Egypt
- Mr. Bahlbi Kiflom
Deputy Health Officer, Ministry of Public Health, Gondar, Ethiopia
- Mr. Stephen L. Salyer, President and Co-Chairman
Citizens Committee on Population and the American Future, Inc.
Washington, D.C.
- Dr. Daniel Callahan, Director
Institute of Society, Ethics and the Life Sciences, Hastings On Hudson, New York
- Dr. K. G. Koshi, Director (and Mrs. Koshi)
Christian Medical College and Hospital, Vellore, South India
- Mr. Ernest Attah
Assistant Professor of Sociology, Brown University, Providence, Rhode Island

December 1972

- Mr. Robert W. Wickham, Program Officer
Population, The Ford Foundation, New York, New York
- Dr. N.V. Raghu Ram, Senior Fellow
East-West Center, East-West Population Institute, Honolulu, Hawaii
- Dr. F. Shafii, Assistant Professor
Federal City College, Washington, D.C.
- Dr. I.A. Akintoye
Professor of Political Science, University of Ife, Ife-Ife, Nigeria
- Mrs. Leonor Jiminez Zamora
Health Education Adviser, Office of Health Education and Personnel Training, Department of Health, Manila, Philippines
- Mr. William Flexner, Chief
Division of Health and Community Development, U.S. Agency for International Development, c/o Embassy San Salvador, El Salvador, Central America
- Mrs. Manu Kumari Bangdel
Matron, Kathmandu Maternity Hospital, Coordinator of Nursing Services and Nursing Education, Kathmandu, Nepal

VISITORS (Continued)

January 1973

- Mr. Donald Chauls
Harvard School of Education
Cambridge, Massachusetts
- Mr. H. Donald Harrison
Regional Program Director
National Center for Family Planning Services
Atlanta, Georgia
- Dr. Jean Audrey Wight
Pontifical University Javeriana
Bogota, Colombia
- Dr. Jaime Baquero
Coordinator of Graduate Programs in Health
Pontifical University Javeriana
Bogota, Colombia
- Rector Alfonso Borrero, S. J.
Pontifical University Javeriana
Bogota, Colombia
- Mr. Donald Fisher
Policy Analyst
Center for Family Planning Program Development
Washington, D. C.
- Mr. Piya Leimsombat, Senior Faculty Member
Department of Sanitary Engineering
Mahidol University
Bangkok, Thailand
- Mr. George C. Worth
Population Council Representative
Seoul, Korea
- Mr. Garth N. Jones
Chief Consultant in Family Planning
Public Administration Division
United Nations
New York, New York
- Mr. George Varke and Mr. Charles Patterson
Family Planning International Assistance
New York, New York
- Dr. Everett S. Lee
Professor of Sociology
University of Georgia
Athens, Georgia

January - May 1973

Library Trainees

- Ms. Joung Im Kim, Librarian, Korean Institute for Family Planning, Seoul, Korea
- Ms. Eugenia Labbe-Norris, Librarian, CELADE, Santiago, Chile

VISITORS (Continued)

February 1973

Dr. Alfonso Mejia, Chief Medical Officer
Division of Health Manpower Development
World Health Organization
Geneva, Switzerland

Mr. Randall Backlund
Deputy Director, Operations
Office of Population
U.S. Agency for International Development
Washington, D. C.

Dr. John Maier, Associate Director
Biomedical Sciences
The Rockefeller Foundation
New York, New York

Mr. Leonard Maynard and Mr. Monroe Burk
AID Audit General Operations Appraisal Staff
Washington, D. C.

March 1973

Mr. Frank Dobbins, Executive Director
ARCA Foundation
New York, New York

Dr. V. Mahesh, Director
Center for Population Studies
Augusta, Georgia

Dr. Jarold A. Kieffer, Assistant Administrator and
Mr. George Coleman, Program Analyst
Office of Population and Humanitarian Assistance
U. S. Agency for International Development
Department of State
Washington, D. C.

Ms. Wilhelmenia Adams
Citizens Committee of Population
Charlotte, North Carolina

Mrs. John Numa (and Mr. Numa)
President
Jesse Smith Noyes Foundation
New York, New York

Ms. Lidia Celis, Chief Midwife
Catholic University
Santiago, Chile

Dr. Evalyn S. Gendel, President
Sex Information and Education Council of the United States
Washington, D. C.

VISITORS (Continued)

April 1973

- Dr. Eugene Confrey
Associate Director, Policy Studies
Bureau of Health Manpower Education
Department of Health, Education, and Welfare
Bethesda, Maryland.
- Dr. Clifford Pease, Director
Technical Assistance Division
The Population Council
New York, New York
- Dr. Juan Zarnatu
Professor of Reproductive Biology
University of Chile
Santiago, Chile
- Ms. Louise Prefontaine
WHO Project Nurse
Maternal and Child Health Family Planning Project
Gabon, Africa
- Mr. Jose L. Olivia
Teachers College
Columbia University
New York, New York
- Professor Dmitri Valentei, Head
University Center for the Study of Population Problems
Faculty of Economics
Moscow State University
Lenin Mountains
Moscow, Russia

April - June 1973

Library Trainee

- Ms. Petrina Amonoo, Librarian, Population Dynamics Programme, University of Ghana
Accra, Ghana

May 1973

- Dr. Elizabeth Connell
Director, Family Life Services
International Institute for the Study of Human Reproduction
Columbia University
New York, New York
- Dr. Joseph E. Davis
Professor and Chairman
Department of Urology
New York Medical College
New York, New York
- Ms. T. Adegoroye
Editor
Nigerian Nurse
Nigeria, Africa

VISITORS (Continued)

- Ms. Funlayo Adewole, Head
Public Health Nursing
Federal Ministry of Health
Nigeria, Africa
- Ms. Mary Owusu
Chief Nursing Officer (Nursing Division)
Ministry of Health
Ghana, Africa
- Ms. Sola Sogbola, Senior Health Sister
Lagos City Council
Public Health Department
Nigeria, Africa
- Ms. Sophia Walter-Holtz, Senior Nursing Tutor
Ministry of Health
Ghana, Africa
- Ms. Ayo Vaughn-Richards, Head
Lagos State School of Nursing
Nigeria, Africa
- Mr. Gholam Ali Liaghat
St. Johns University
Jamaica, New York
- Mr. Yoneji Kuroyanagi
Research Fellow
Japan Institute of International Affairs (JIIA)
Tokyo, Japan
- Dr. Henry Gómez, Dr. Federico Joubert, Dr. Juan Bustillo, Dr. Rodolfo Araujo,
Dr. and Mrs. J. Rojas, Dr. and Mrs. José Antonio Gil, Dr. and Mrs. Alejo Planchart,
Institute of Higher Administration Studies (IESA)
Caracas, Venezuela
- Pao Kung Jui
Taiwan College of Arts & Sciences
Tansui Campus
Taiwan
- Dr. Janki Mirchandani, Assistant Professor
Obstetrics & Gynecology
Lady Harding Medical College
New Delhi, India
- Dr. Ahmed M. El-Hassan
Professor of Pathology
University of Khartoum
Khartoum, Sudan
- Dr. Michael Bamberger
Technical Consultant
Center for Social Studies
Caracas, Venezuela

VISITORS (Continued)

Mr. Edward Mudiack
U. S. Agency for International Development
Department of State
Washington, D. C.

June 1973

Mrs. Maxine Kumekpor
Research Fellow
Institute of Statistical, Social and Economic Research
University of Ghana
Ghana, Africa

Dr. Jay K. Satia, Professor
Indian Institute of Management
Coordinator, Population Unit
Ahmedabad, India

Dr. Fouad Hefnawi, Chairman
Department of Obstetrics and Gynecology
Head, Human Reproduction Unit
Al Azhar University
Cairo, Egypt

Ms. Theresa Panlilio
Philippines

Mr. Dave Finnigan
Population Adviser (Research)
U. S. Agency for International Development
Philippines

Mrs. Norma de Acosta, Statistician
Maternal-Child Program
Ministry of Health
Bogota, Colombia

Dr. Claudio Ceron, Chief
Medical Attention Division
Ministry of Public Health
Bogota, Colombia

Dr. Norberta Martinez, Acting Chief
Maternal-Child Group
Ministry of Public Health
Bogota, Colombia

Miss Dolores J. Ortiz, National Nurse Supervisor
Maternal-Child Care Group
Ministry of Public Health
Bogota, Colombia

Dr. Jorege E. Pelaez, Doctor in Medical Attention
School of Public Health
Medellin, Colombia

Ms. Lina Espitaleta de Villegas, Director of the Library, Pontifical University
Javeriana, Bogota, Colombia

VISITORS (Continued)

Miss Sofia Protilla

Nurse-Coordinator of Public Health Services
Ministry of Public Health
Bogota, Colombia

Mrs. Aixa de Sotomonte, National Education Supervisor
Ministry of Public Health
Bogota, Colombia

Dr. Julio Trejos, Chief Doctor
Administration Department
School of Public Health
Medellin, Colombia

Mr. Timothy Yu
Asia Foundation
Hong Kong Baptist College
Hong Kong

Mr. Frank Wilder
Asia Foundation
San Francisco, California

THE UNIVERSITY OF NORTH CAROLINA
AT CHAPEL HILL

CAROLINA POPULATION CENTER
UNIVERSITY SQUARE
CHAPEL HILL, NORTH CAROLINA 2751

TELEPHONE: (919) 956-2157
CABLE: POPCENTER, CHAPEL HILL, N. C.

Conferences and Workshops

July 1, 1972 - June 30, 1973

July 12 - 16, 1972	International Workshop on Population Program Administration
September 17 - October 13, 1972	International Workshop for Nursing Educators in Population and Family Planning
October 4 - 6, 1972	International Population Policy Consortium Meeting, Dubrovnick, Yugoslavia
October 20 - 21, 1972	Intercampus Workshop on Population Studies in University Programs
October 31, 1972	Symposium on Incidence and Costs of Pregnancies in Industry
March 9 - 11, 1973	International University Population Program Project Conference of University Heads, Tehran, Iran
March 19 - 23, 1973	Conference on Abortion Research
May 11 - 17, 1973	Planning Conference on Population Program Development for Faculty Members of the Institute of Higher Administration Studies (IESA), Caracas, Venezuela
June 17 - July 8, 1973	First Annual International Workshop in Family Planning/Population Program Administration
June 25 - July 13, 1973	Population Program Development Workshop for Faculty Members of Javeriana University, Bogota, Colombia

CAROLINA POPULATION CENTER

Foreign Travel for the Fiscal Year
July 1, 1972 - June 30, 1973

(No 211(d) funds used)

<u>Name</u>	<u>Dates</u>	<u>Place</u>	<u>Reason for Travel</u>
Abernathy, James R.	September 16 - October 15, 1972	Philippines	To give technical assistance to POPLAB project
Addo, Nelson	May 14-20, 1973	Liberia	Followup on December 1972 Regional Population Seminar, Univ. of Ghana
Adelman, Irma	November 30 - December 4, 1972	Ghana	Participant in W. Africa Regional Population Conf. in Accra, Ghana
Ahmed, Osman S.	May 5-10, 1973	Ethiopia	To attend third meeting of Non-U.N. Organizations Population Work in Africa
	June 14-20, 1973	Ghana	To confer with officials re Univ. of Ghana Population Dynamics Programme
Allen, James E.	October 26-29, 1972	Nicaragua	To plan 1973 L.A. Seminar for POPCASE project.
	January 24 - February 7, 1973	Venezuela	To further develop contacts for POPCASE Seminar
	May 6-12, 1973	Nicaragua	Assist in directing POPCASE project at INCAE, Managua
Anderson, R. K.	November 30 - December 4, 1972	Ghana	To participate in W. Africa Regional Population Conference in Accra
	April 20 - May 2, 1973	Kenya, Tanzania	To attend meeting of Assn. of Medical Schools in Nairobi; to evaluate Dr. Wood's project at the University of Dar es Salaam
	May 2-7, 1973	Turkey	To meet with Director of Population Institute, Hacettepe University in Ankara and Istanbul
	June 10-18, 1973	Indonesia	To participate in a World Bank Mission to Indonesia

<u>Name</u>	<u>Dates</u>	<u>Place</u>	<u>Reason for Travel</u>
Bacon, T. J.	May 23 - June 22, 1973	Ghana	To consult on Population Dynamics Programme, University of Ghana
Baquero, Jaime	January 14-18, 1973	Colombia to Chapel Hill and return	To consult on institution building proposal under Univ. Services Agreement
Bernard, Roger P.	July 29 - August 25, 1972	Egypt, Bangladesh, India, Malaysia, Sri Lanka	To consult with present and potential contributors to International Fertility Research Program
Berryhill, E.	January 27 - February 9, 1973	Nigeria	Followup consultation on Int. Workshop for Nursing Educators in Population and Family Planning
Bilsborrow, R. E.	January 15 - March 12, 1973	Ecuador, Puerto Rico	To assist in POPIAB project; to confer with Univ. of Puerto Rico on training resources
	May 23 - June 21, 1973	Ecuador	To assist in present work of POPIAB and plan FY 74 research program
Borrero, E. H.	January 14-18, 1973	Colombia to Chapel Hill and return	To consult on institution building proposal under Univ. Services Agreement
Boyer, M. F.	January 31- February 19, 1973	Philippines, Taiwan	Followup consultation on Int. Workshop for Nursing Educators in Population and Family Planning
	May 9-20, 1973	Mexico	To attend International Council of Nurses Convention and conduct a pilot survey re teaching family planning in nursing schools abroad
Buckner, Bates	October 14 - November 3, 1972	Switzerland	To consult with WHO and assist in medical documentation training course
	March 13-28, 1973	Venezuela	To consult with IESA on population library development
	May 1-7, 1973	Colombia	To consult with Javeriana University on establishment of a regional population library

<u>Name</u>	<u>Dates</u>	<u>Place</u>	<u>Reason for Travel</u>
Birdsall, S. S.	June 23 - July 7, 1973	Kenya	To review and consult on mapping done by Demographic Studies Unit
Chanlett, Eliska	October 22 - November 4, 1972	Ecuador, Colombia	To assist in development of materials for POPIAB
	March 1-7, 1973	Chile, Colombia	To work on two manuscripts and a contract renewal
	May 13-17, 1973	Colombia	To meet with AID and POPIAB officials
	June 17 - July 6, 1973	Morocco, The Netherlands, France	To discuss publication matters, 1974 POPIAB Conf. in Morocco, and budget
Clinton, R. L.	July 20 - August 3, 1972	Peru, Paraguay, Bolivia, Brazil	To develop contacts for Population Policy Seminar segment of International Pop. Policy Consortium
	October 2-7, 1972	Yugoslavia	To consult on research strategies and population policy topics
Chirot, Daniel	November 3-10, 1972	Togo	To consult with National Institute for Scientific Research, Lome, re Univ. Services Agmt. proposal
Cogswell, B. E.	December 16-22, 1972	Puerto Rico	To attend the Gerontological Society meetings
David, A. S.	August 1-8, 1972	Ghana	To plan for joint UNC-CH and Univ. of Ghana program
	October 12-18, 1972	Liberia, Sierra Leone	To arrange for West African Regional Population Seminar December 1-4, 1972
	November 5-6, 1972	Togo	To meet in Lome re Population Dynamics Programme at University of Ghana
	November 7, 1972	Cape Coast, Ghana	To meet at Univ. of Cape Coast re Population Dynamics Programme, Ghana
	November 13-19, 1972	Ghana	To begin residence as UNC-CH representative at University of Ghana Population Program

<u>Name</u>	<u>Dates</u>	<u>Place</u>	<u>Reason for Travel</u>
David, A. S.	May 14-20, 1973	Sieria Leone, Liberia	To follow up on December 1972 Population Seminar
David, Brent	September 13-19, 1972	Ghana	Brent (18 months old) accompanied father, A. S. David, to Ghana
David, Gwen	September 13-19, 1972	Ghana	Gwen (10 years old) accompanied father, A. S. David, to Ghana
David, Ronalie	September 13-19, 1972	Ghana	Accompanied her husband, Dr. A. S. David, to Ghana
de Graft-Johnson, K. E.	March 8-12, 1973	Iran	To attend second meeting of University Population Program International Study Group
Edmands, Elizabeth	February 22 - March 15, 1973	Iran	Followup consultation on Int. Workshop for Nursing Educators in Population and Family Planning
	May 10-20, 1973	Mexico	To attend International Council of Nurses Con- vention and conduct a pilot survey re teaching family planning in nursing schools abroad
Felligi, Ivan	March 24 - April 2, 1973	Canada to Morocco and return	To perform basic work re new Moroccan POPIAB sample and to advise UNC-CH and Moroccan POPIAB of the implications
Fogle, Catherine	June 10-27, 1973	Thailand	To arrange for International Library Conference to be held in Bangkok in 9/73
Fulk, Worth W.	January 28 - February 3, 1973	Venezuela, Colombia	To discuss and implement phases of joint programs between UNC-CH and IESA and Javeriana University
Garland, Steven	February 25 - March 15, 1973	Rhode Island to Puerto Rico & return	To consult with collabora- tors on Puerto Rican part of IPPC research
Gattis, D. R.	January 28 - February 3, 1973	Venezuela, Colombia	To discuss implementation of joint programs between UNC-CH and IESA and Javeriana University

<u>Name</u>	<u>Dates</u>	<u>Place</u>	<u>Reason for Travel</u>
Goodman, Helen	August 8, 1972	Colombia	To join her husband, Dr. Roe Goodman, in Bogota
Goodman, J. Roe	June 1 - July 31, 1972	Colombia	Began residence as UNC-CH POPIAB Advisor
	December 12-15, 1972	Colombia	To consult on long-range plans of POPIAB-Colombia
	March 30 - April 4, 1973	Colombia to Chapel Hill	To consult with UNC-CH and AID re POPIAB-Colombia
Hall, Thomas L.	June 3-6, 1973	Colombia	To discuss pending UNC-CH/Javeriana University proj.
	June 28 - July 21, 1973	Philippines	To meet with WHO officials re Health Manpower Seminar to be held in Manila 9/73
Horvitz, D. G.	May 13-17, 1973	Colombia	To confer with AID and POPIAB officials
Kaluzny, A. D.	March 31 - April 7, 1973	Pakistan, Malaysia	To discuss potential research projects with family planning officials
	April 8-11, 1973	Thailand	To meet with Dr. Burnight, CPC Resident Representative, re Rockefeller Foundation
	April 11-21, 1973	Taiwan, Philippines	To discuss potential research projects with family planning officials
Kessel, Elton	July 28 - August 25, 1972	Egypt, India, Bangladesh, Malaysia, Ceylon, Iran, Australia	To consult with present and potential IFRP contributors
	Nov. 14-19, 1972	Panama, Peru, Colombia, Ecuador, Chile	To consult with IFRP collaborators
	Dec. 1-25, 1972	U.K., Holland, Turkey, Iran, India	To consult with IFRP collaborators
	Feb. 23 - March 1, 1973	U.K., Switzerland	To consult with IFRP collaborators
	June 2-19, 1973	U.K., India, India, Iran	To consult with IFRP collaborators

CPC Foreign Travel

<u>Name</u>	<u>Dates</u>	<u>Place</u>	<u>Reason for Travel</u>
Lee, Luke T.	November 30 - December 4, 1972	Ghana	To participate in West Africa Regional Population Conference in Accra
Linder, F. E.	May 13-17, 1973	Colombia	To confer with AID and POPIAB officials
Lingner, Joan W.	December 13, 1972- January 18, 1973	Philippines, India	To consult on data analysis of Philippine POPLAB; to consult on potential India POPLAB publication
Losee, Craig	August 3, 1972	Colombia to Wash., D.C.	To return to U.S. with father
Losee, Jr., G.	August 3, 1972	Colombia to Wash., D.C.	To return to U.S. with father
Losee, Garrie	August 3, 1972	Colombia to Wash., D.C.	To resume residence in U.S. after having been Resident POPLAB Advisor
Losee, Mary Ann	August 3, 1972	Colombia to Wash., D.C.	To return to U.S. with her husband
Lucas, Carolina	March 3-25, 1973	Morocco	To assist Moroccan POPIAB in setting up a library
Lynton, Rolf	November 7-10, 1972	Canada	To consult re further development of the Univ. Population Program proj.
	November 25 - December 11, 1972	Ghana, Nigeria	To confer with population program directors re Univ. Population Program proj. Attend 1st W. African Reg. Seminar on Interdis. Res. in Population, and 1st Reg. mtg. of Pop. Program Directors, U. of Ghana
	March 7-19, 1973	Iran, Turkey	2nd mtg., Int. Study Group, UPP project; dev. of USA project in Turkey
Marshall, John F.	November 29 - December 3, 1972	Canada	To attend American Anthropological Assn. meeting and to assist AID in the development of initial phase of AAAS contract.
Myers, R. J.	August 11-24, 1972	Kenya and return	To assist in initiating the Kenya POPLAB
	September 3-7, 1972	Kenya, Morocco	To consult with AID and POPLAB officials
	March 13-30, 1973	France, Morocco	To confer with French demographers; and with AID and Moroccan officials re Moroccan POPLAB

CPC Foreign Travel

<u>Name</u>	<u>Dates</u>	<u>Place</u>	<u>Reason for Travel</u>
Omran, A. R.	October 1972	Switzerland, Egypt	Consultant for WHO
	March 8-12, 1973	Iran	To attend UPP Second International Study Group Meeting
Omran, Khairia	January 19-28, 1973	Libya	Medical education consultant
Paydarfar, A. A.	September 19 - October 29, 1972	Iran	Discuss proposals with Ministry of Health and three Universities and visit Frederiksen Internus
	March 1-19, 1973	Iran	Consult on USA project (Secretariat) and attend UPP Study Group Meeting
Polgar, Steven	October 20 - November 16, 1972	Kenya, Ghana, Tanzania, Zambia, Nigeria, Togo, Ivory Coast,	To consult with officials re USA project in Togo and Nigeria; to explore sites in other countries for African project programs
	November 29 - December 3, 1972	Canada	To attend American Anthro- pological Assn. meeting and to assist AID in the development of initial phase of AAAS contract.
	January 16-25, 1973	Kenya	To explore potential site for program under African Univ. Pop. Dev. Project
	March 11-18, 1973	Switzerland	Member of WHO Task Force on acceptability of fertility regulating methods.
Rose, J. Hugh	November 5-11, 1973	Kenya to Chapel Hill and return	To attend POPIAB conference in Chapel Hill and to visit Census Bureau, Washington
Sheps, Cecil G.	March 4-13, 1973	England, Iran	To attend UPP Second International Study Group Meeting
Sabagh, Georges	March 20 - April 1, 1973	Los Angeles to Morocco and return	To review field operations of POPIAB project
Smallegan, Marian	June 28 - July 21, 1973	Philippines	To meet with WHO officials re Health Manpower Seminar to be held in Manila 9/73

CPC Foreign Travel

<u>Name</u>	<u>Dates</u>	<u>Place</u>	<u>Reason for Travel</u>
Thomlinson, Elizabeth	August 14-21, 1972	Los Angeles to Paris	To join father in Paris for trip to Morocco
	August 21 - September 3, 1972	Paris to Morocco	Accompanied father to Morocco
Thomlinson, Margaret	August 21 - September 3, 1972	Paris to Morocco	Accompanied husband to Morocco
Thomlinson, Ralph	August 21 - September 3, 1972	Paris to Morocco	To assume duties as Resident Advisor to Moroccan POPIAB
	May 3 - 13, 1973	Morocco to Kenya and return	To promote exchange of information between Moroccan and Kenyan POPIAB
Thomlinson, William	August 21 - September 3, 1972	Paris to Morocco	Accompanied father to Morocco
Thompson, Vaida D.	July 23 - September 7, 1972	England, Switzerland, Egypt, Iran, India, Thailand	To explore teaching and training needs at institutions abroad affiliated with CPC
Vanderwalle, Etienne	January 29 - February 7, 1973	Morocco	Consult with Moroccan POPIAB officials
Wells, H. B.	July 16 - August 8, 1972	Manila and Cagayan de Oro, Philippines	To consult with POPIAB at Xavier University
	August 8 - 24, 1972	India, Kenya	To attend planning session on Kenyan POPIAB
	January 7 - February 4, 1973	Philippines	To consult with POPIAB officials
Wight, J. Audrey	January 14 - 18, 1973	From Colombia to Chapel Hill and return	To consult with CPC officials on USA-Javeriana proposal

