

PD-AA6-258

RESEARCH PROJECT PAPER

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April 28, 1980

(app. 38)

A. Project Summary

A. 1. Social Science Research

Project Title: Study of Determinants of Fertility Change, 932-0643

New of Extension: Amendment

Contractor and Address: Center for Policy Studies
Population Council
One Dag Hammerskjold Plaza
New York, New York 10017

Principal Investigator: Charles Keely, Program Manager

Duration: Five years

Total Estimated Cost: \$7,338,300 Approval requested for First Three
Years: \$3,945,700

<u>Funding by First Three Fiscal Years:</u>	FY 1980	805,900
	FY 1981	1,320,100
	FY 1982	1,819,700
	Total	3,945,700

<u>Subsequent Year Funding for Future Approval:</u>	FY 1983	1,881,400
	FY 1984	1,511,200
	Total	3,392,600

Project Manager: William H. Jansen, Office of Population (DS/POP/PDD)

A. 2. Abstract

This project constitutes one element of a research program which appeared before the RAC in July 1979. At that time, the first of three identified program elements was approved, a review and analysis of the existing knowledge about fertility change (to be carried out by the National Academy of Sciences). The second element of the program is a project to seek, process and fund policy-related social science research.

The major objectives of the overall program have not changed. They are still to examine and understand more fully the factors determining changes in birth rates in developing countries. Toward that end, the second element of the program will be one of the primary means for initiating research which will gather new data and for sponsoring innovative approaches for exploring the unknowns of fertility determinants. The research awards program, furthermore, is designed to complement the work done under the first element.

B. Expanded Narrative Statements

B. 1. General Background and Rationale

As described in the earlier research project paper, there has been a decrease in fertility in some developing countries in the past two decades. The reasons for such declines, however, are not well understood. Under the first element of the project, the National Academy of Sciences (NAS) has organized a panel of fertility experts to evaluate and analyze the factors determining fertility rates in developing countries--all based primarily upon existing data. One product of this endeavor is the identification of areas which appear promising for expanding our knowledge of fertility determinants and where the data base is incomplete.

As the second element of the project, the research awards program will become a mechanism for soliciting, reviewing and funding social scientific inquiries into the unknown realms of fertility determinants. Through this mechanism, new data will be collected; innovative analytical approaches will be applied to the problem; and population-policy relevance will remain a guiding theme.

The project's second element complements the work of the first in several ways. For example, voids in the basic data base which may be discovered by the activities of the NAS panel can be the object of primary data gathering efforts to be sought and funded by the awards program. The work of the NAS panel will also suggest approaches or models for analyses which promise to increase our understanding of the processes of fertility. The awards program, similarly, becomes a vehicle for supporting work with such approaches or models. In addition, the awards program will possess the ability to pursue new and changing policy-relevant research issues as they may arise during the life of the project.

For further information and greater detail, see the attached proposal (pages 4-17).

B. 2. Research Proposed and Expected Products

a. Long Range Objectives remain the same as those described in the earlier project paper: "...to determine more precisely what factors contribute in what degree to fertility change in a manner that will be of greatest use for more informed policy decisions, for national governments, international agencies, and technical assistance programs."

b. Immediate Objectives of this second element of the project are:

1. To increase understanding of how and why changes in fertility occur in different cultural settings and under varying socio-economic conditions.
2. To support research of the highest quality on fertility determinants in developing nations, through a program of contract research. Prime consideration will be given to research that applies innovative methods and perspectives

to advance the understanding of fertility behavior and that shows promise of applicability for improving population policy. Wherever possible, research will be conducted in ways that combine talents and expertise of scholars in developing and developed nations.

3. To disseminate the findings of this program to government officials, policy makers, scholars, and others in relevant national and international organizations, through publications, seminars and briefings.

In reaching these more immediate objectives, some of the more tangible products will be research findings in the areas of:

1. The relationships between development programs and fertility behavior
2. The determinants of fertility behavior at the community level, with particular reference to institutional arrangements and socio-cultural factors that affect fertility-related decision making by individuals.
3. The mechanisms by which one or more behaviors affecting fertility (e.g., age at marriage, contraceptive use, breastfeeding) are changed, including responsiveness to efforts to change motivation and to the provision of family planning services. In addition this category will incorporate suggestions for how such specific mechanisms may intervene to enhance fertility change or the utilization of family-planning services.

Research funded by the awards program will also take into account the level of family planning services available to the population under study.

B. 3. Relevance and Significance of Proposed Work to A.I.D.

A.I.D. has the stated policy to assist the developing world in the task of reducing population growth, particularly through reduction in fertility. To this end, the Agency has sought to identify various means to impact on fertility. As stated elsewhere, the approach to fertility reduction regrettably has too often been an either/or approach: either one considers family planning, or one considers other socio-economic determinants to fertility. However, the approach outlined in this project is a holistic one--it includes both family planning and other factors; therefore, it will make a unique contribution to the understanding of the interplay of indirect and direct casual factors in fertility decline. The results of research supported by the project's second element will have long-term utility in guiding A.I.D.'s investments in family planning and other alternatives to family planning.

The Policy Development Division in the office of Population has as a key function the support of high quality, policy relevant, social science research projects. The findings of this project generally will be of crucial importance in: identifying areas where research is needed; seeking out appropriate projects to meet them; and helping to formulate future population policies with an increased potential for influencing fertility patterns.

B. 4. Relation to Existing Knowledge

See pages 5-15, 38-41 of attached proposal.

B. 5. Relation to Similar Projects

In response to Section 104d of the FAA, A.I.D. is required to examine development projects in their indirect impact on fertility levels. To respond to the Agency requirement, several approaches have been followed.

The Population Council Grant AID/otr-G-1702 for the Study of Fertility Impacts of Development Projects on the impact of rural development activities in Comilla, Bangladesh; the impact of a land settlement scheme in Thailand; and Federal Land Development authority in Malaysia. Other project activities include workshops on the relationships between agriculture, fertility, and population and development in Indonesia; and regional fertility relationships in Thailand. Verbal and consultancy contacts are underway for all the countries of the region to develop activities of interest.

Also on the more applied end of the continuum is the study by Research Triangle Institute to elaborate the relationships between rural development projects and fertility. The first phase is a series of state of the art assessments between rural development and seven intervening variables, including cost and value of children, internal migration, health, education, female status, income and wealth, and land holding patterns. The findings of that study have been distributed within A.I.D. and to USAID Missions.

The approach by the the Office of Population in support to Title 104d activities has been twofold. One has been to solicit research proposals and administer directly small research grants on relationships of interest: i.e., fertility and female status and roles, and fertility and infant mortality. In addition, unsolicited proposals have also been funded for similar research proposals. A recent inventory of these activities was conducted by the Office of Population and is contained in the RAC book. The second approach has been the identification of potential areas of 104d studies through the Battelle project (contract AID/pha-C-1169). A field study was conducted in the Cayamarca area of a reforestation project in Peru. Battelle has also been involved in planning workshop/seminars on population impact analysis.

On the more theoretical side of the continuum are two projects. One is the work of the International Review Group (IRG) of Social Science Research on Population and Development board at the Collegio de Mexico. The work of this project was widely supported by international donor groups (Ford, Rockefeller) and indirectly by A.I.D. through its programmatic grant to the Population Council. Through a series of workshops and study sections for each region of the world, the group, headed by Carmen Miro, examined potential social science contributions to understanding

the relationships between population dynamics and social science research. Mortality, internal and international migration are also viewed as important topics for study, with fertility in its several aspects, viewed as only one topic for study. There was particular emphasis on the need for more explicit theories of fertility decline, treating the influences on fertility choices. Specifically identified were: economic costs and benefits, social and administrative pressures and internalized values. The draft report also cited the need for more systematic attention to the effects of family planning programs, particularly where direction of causality can be determined.

The Population Council proposal for a research awards program takes these approaches to the interests of Section 104d a bit further. Not only will it solicit and support new research which will increase our understanding of the forces which largely determine fertility behavior, it will also strive to identify specific factors which may be incorporated into programs designed to influence fertility change. Naturally, care will be exercised not to duplicate these and other similar activities.

B. 6. Project Design and Methods

See attached copy of the Population Council's proposal, pages 19-28.

B. 7. Contribution to Institution Building

As the second element of the project, the awards program, will work directly through a variety of institutions in order to accomplish the tasks of primary research. The major portion of these institutional arrangements will involve research institutions in developing countries. Indeed, two of the categories eligible to submit proposals to the awards program include LDC institutions. The program evidences a conscious effort to have as much of the primary research done through LDC institutions as possible.

An ancillary goal of this effort is the strengthening of the research capabilities of the institutions involved. To achieve this end, the design of the awards program allows for the cooperation of population scholars (who will make up the various committees and staffs of the program) with the institution submitting a proposal. The cooperation can take several forms of technical assistance in the design, implementation and analysis of research activities.

The Population Council is well suited for developing relationships with LDC institutions because of its history of international programs and the stationing of professional staff in regional offices around the world.

B. 8. Plans to Facilitate the Utilization of Research Findings

The actual selection of the research topic areas to be given special consideration was based upon current policy concerns within A.I.D.

Known gaps in our understanding of fertility behavior, voids in our knowledge which have direct relevance to population policy formulation, are represented in the design of the awards program. Therefore, the results of the research funded under the program have a ready market for utilization in A.I.D.

Similarly, the plan to involve LDC research institutions and host country scholars in the research efforts themselves will help to encourage the representation of LDC interests in the research activities. Addressing LDC interests in policy-relevant research should help to make the research findings more utilizable by policy makers in LDCs.

To disseminate the research findings, results will be published and presented in meetings or seminars. This, too, should allow the application of research findings to extend beyond the countries where the research took place. The goal of the awards program is to have the research results reach as large a policy-making audience as possible with information perceived as important by them and by the academic community as well.

B. 9. Research Competence and Resources

The Population Council has a long standing reputation for excellence in the field of population. It is able to attract the foremost experts in the field of fertility determinants and it has a well established pattern of communication with research institutions in developing countries.

For the work of the awards program the Population Council will draw from its own professional staff and from well-known experts outside of the Council. Dr. Charles Keely of the Population Council will manage the program and he will be assisted by at least three other professionals from the Council. The work of the committees in the awards program (see the attached proposal, pages 21 and 23-24) will be done largely by experts from the academic community or other institutions.

For additional information, please refer to the attached proposal (pages 29-37).

B. 10. Overall Cost Estimates, Work Plan and Budget

See the attached copy of the Population Council's proposal, pages 19-28 and 42-46.

b. 11. Management Considerations

For the second element of the project, Dr. Charles Keely will serve as Program Manager and principal contact with the technical office at A.I.D. The Population Council will provide A.I.D. with regular reports concerning the progress and direction of the awards program.

The primary management responsibilities for A.I.D. will be regular monitoring and evaluation of the activities of the awards program. The staff and expertise for these responsibilities are available within the technical office.

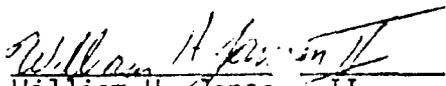
B. 12. Internal and External Reviews

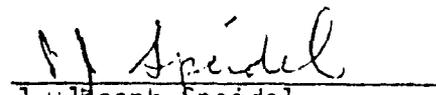
The proposal was received by DS/POP as an unsolicited research proposal. It was reviewed by the Research Review Committee of the Office of Population with representation from some of the regional bureaus. It will be submitted to the DSB review committee for Agency-wide review. There was a concern expressed that the awards program must clearly address policy-relevant issues in the types of research it supports. But, it was recognized that with a continuing communication between A.I.D. and the Population Council, this concern could be met and a valuable contribution made to policy formulation tasks in the years to come.

B. 13. Proposing Office General Appraisal

The Office of Population accords this proposal the highest priority because of the importance of directing selected research activities toward policy-relevant issues. Furthermore, the Population Council has proven quite competent in administering similar activities in the past and has a well established network in the developing world through its regional offices.

The Office strongly supports the awards program as proposed by the Population Council as the second element of the project entitled, "Study of Determinants of Fertility Change." It also asks the support of the RAC in proceeding forward with the proposed activities.


 William H. Jansen, II
 Project Monitor


 J. Joseph Speidel
 Acting Director
 Office of Population

THE POPULATION COUNCIL

An unsolicited proposal to the
Agency for International Development
Department of State

for support of a contract
research program entitled

International Awards for Population Research:
Program on the Determinants of Fertility
in Developing Countries

April 1980

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I. SUMMARY

The Population Council proposes to organize and implement a program entitled International Awards for Population Research: Program on the Determinants of Fertility in Developing Countries, to assist scholars and research institutions in carrying out research projects on the determinants of fertility. The Program will be guided by a policy-making Program Committee comprised of distinguished population scholars and will award contracts on the basis of a peer review process. The principal objective of the program is to increase understanding of how and why fertility declines, increases, or does not change in different cultural settings and under varying socioeconomic conditions. The findings of this program will be disseminated chiefly through published reports that are made available to officials, policy makers, scholars, and other persons in appropriate national and international organizations.

Better understanding is needed about how and why changes in fertility occur and about how and why changes in the number of children born per woman vary among societies and cultures. The information is needed to strengthen the basis for policy development in this critical area, as well as for the general accumulation of scientific knowledge. Scholars and institutions in developing and developed nations should be involved in the process of accumulating and synthesizing this knowledge. The proposed Program on the Determinants of Fertility creates a mechanism to obtain such information by providing research opportunities for qualified scholars in developed and developing nations.

Eligible research will include all aspects of work that have a strong bearing on understanding the determinants of fertility in developing coun-

tries. Research proposals may focus on questions arising from sociological, economic, psychological, anthropological, or other social science perspectives; cultural factors influencing fertility; the proximate determinants of fertility, such as contraception and age at marriage; factors associated with continued high fertility or increases in fertility; and interrelationships among fertility determinants, other population parameters, and economic development. Proposals may be submitted by: (1) an institution in a developing country; (2) two or more institutions in different developing countries, or in developing and developed countries, that agree to collaborate on a project; and (3) an institution in a developed country. A proposal submitted under the second category may include work that takes place in developing countries, or arrangements under which researchers from developing countries work at institutions in developed countries.

The Program on the Determinants of Fertility in Developing Countries will be an open competition for five to ten new research contracts per year; each project may cost up to \$100,000 per year but not more than a total of \$250,000. It is expected that most projects will be completed within three years. A small number of non-open competition pilot study awards may be funded, up to four per year during the first three years of the program, at up to \$7,500 each. A strong outreach activity will be undertaken, particularly during the initial development of the program, to ensure that interested scholars, researchers, and institutions around the world are aware of the program.

The Population Council will establish an expert Program Committee, assisted by Council professional staff, to guide and implement this program. To assess the scientific merit of proposals a Peer Review Committee will be

established. This Committee, or specifically appointed subcommittees of it, will review each individual proposal and make a final evaluation, including ranking decisions on projects considered to merit funding.

The Program will have a close relationship with ongoing work at the Population Council and with work of the Panel on Fertility Determinants in Developing Nations organized by the Committee on Population and Demography of the National Academy of Sciences/National Research Council. (The Panel's Study of Determinants of Fertility Change is funded by AID for a three-year period beginning October 1, 1979.) One or more members of this Panel will be invited (in their individual capacity) to join the Program Committee of the Program on the Determinants of Fertility.

The proposed Program is scheduled for a period of 5 years, at a total cost of approximately \$7.3 million.

II. BACKGROUND INFORMATION

Evidence accumulating over the last decade shows significant fertility declines in many developing countries, including some of the largest and poorest. Data assembled by W. Parker Mauldin and Bernard Berelson for the period 1965-75 show the birth rate of the developing world falling from 41 per 1000 to 35 per 1000 over these years. Declines of 20 percent or more were recorded for countries as disparate as China, Republic of Korea, Colombia, Chile, Thailand and Tunisia. In other countries, however--among them, Bangladesh, Pakistan, and virtually all nations of sub-Saharan Africa--declines have been absent or negligible. On balance, the fertility picture is one of promising but far from consistent movement. Continuation of the trends seen in recent years is by no means assured. With population growth in developing countries still over 2 percent per year (and only slightly below the peak level reached in the 1960s), high fertility unquestionably remains a problem of great urgency on the world's agenda.

A major cause of uncertainty in looking to the future course of fertility and in efforts to design policy measures to adjust trends in socially beneficial directions is quite simply a lack of knowledge of the factors governing these trends. The National Academy of Sciences' Committee on Population and Demography, in the preface to each of its country studies, writes:

"The causes of these reductions in fertility--whether they are the effect primarily of such general changes as lowered infant mortality, increasing education, urban rather than rural residence, and improving status of women, or of such particular changes as spreading knowledge of and access to efficient methods of contraception or abortion--are strongly debated. There are also divergent views of the appropriate national and international policies on population in the face of these changing trends."

In a similar vein, the final report of the International Review Group of Social Science Research on Population and Development (IRG) speaks of the inadequacy of knowledge of the determinants of fertility change, calling this inadequacy "perhaps the most striking aspect of the present state of knowledge on fertility." The situation is attributed not to lack of attention to the subject by social scientists but to the complexity of the relationships involved.

A. State of Fertility Determinants Research

Deficiencies in the present state of knowledge on fertility determinants, pointed to in comments such as these, can be seen in more detail by briefly surveying the major recent contributions to the field. The divisions used below are necessarily somewhat arbitrary, but the review covers the main research activities and accomplishments of the past two decades.

Correlates of fertility change. Empirical research on the determinants of fertility in currently developing countries can be classified according to level of analysis. A macro-level tradition, with countries as the unit of analysis, has attempted to determine threshold values of socioeconomic indicators which presage fertility decline (United Nations, 1965; Kirk, 1971); to test the aggregate fertility effects of variables of particular theoretical significance, such as the distribution of income (Repetto, 1979); and to assess the importance of family planning programmatic effort relative to socioeconomic factors in recent fertility declines (Mauldin and Berelson, 1978). Closely related to this tradition, but carried out at the household level (using the results of sample surveys) are a large number of correlation

and regression analyses of fertility. In these studies fertility is arrayed against one or more explanatory variables, for example, household income, women's employment status, and education (for reviews, see McGreevey and Birdsall, 1974; Ridker, 1976). For the amount of effort that has gone into studies at both levels, the results, in terms of both theoretical insight and policy guidance, are meager. The accumulated empirical findings broadly confirm what one might expect--that there is an inverse relationship between variables measuring some dimension of "modernity" or development and fertility. But the detailed results often show inconsistencies. For example, Graff (1979) gives a skeptical reappraisal of perhaps the most easily accepted generalization--the negative relationship between education and fertility; similarly, the micro relationships between fertility and income (Simon, 1974) and female employment (Standing, 1978) have, on close inspection, proved difficult to make generalizations about. It is not only inconsistency of findings that is unsatisfactory about this genre of research (preventing their straightforward use to indicate points of policy leverage), it is that the theory that led to exploring the relationship in the first place often has little to say about the mechanisms, the social processes, that yield whatever relationship is observed.

Historical demography. The empirical basis for theorizing about fertility determinants has been greatly expanded by research on the historical demographic experience of the now-industrialized countries. The notion of demographic transition which emerged in the 1930s and 1940s (and has since been a central organizing principle for the field) was derived from a cursory analysis of this experience. As historical research deepened, however, the initial

apparent simplicity of the demographic transition in Europe and Japan disappeared, and hence the "lessons" for contemporary high-fertility countries have become much more problematic. (See Glass and Revelle, 1972, for a major collection of historical demographic studies.) This deeper analysis was made possible by the development of the methodology of family reconstruction and of new demographic indices measuring marital fertility, age at marriage, and parity-specific fertility control (Coale, 1965; Coale and Trussell, 1974). Family reconstruction has made the names of villages such as Colyton and Crulai into household words for demographers, but the sparseness of such places where precise demographic trends over long stretches have been ascertained makes general inferences quite risky. The most significant effort to apply demographic analysis to historical data has been in the long-running European Fertility Project of Princeton University's Office of Population Research. Monographs assembling consistent sub-national data on marriage and marital fertility trends (establishing the timing of onset of the modern decline) have been prepared for a dozen European countries and the Soviet Union (Coale, 1975, summarizes the findings). The focus on narrowly demographic analysis in these studies, however, limits their explanatory power. For example, they attribute fertility change essentially to cultural diffusion and to individual responses to shifts in "objective conditions" favoring high fertility; but precisely what is diffusing, what factors govern the lags in adoption of new attitudes and practices, and how the objective conditions interact to modify the process, remain largely matters of speculation. The recent interpretation on these questions drawn by Knodel and van de Walle (1979) is by no means the only possible one consistent with the empirical findings of this project.

Another stream of historical research, essentially independent of these demographic studies but certainly relevant to the explanation of fertility change, is the study of the family in pre-industrial and early-industrializing societies--for example, the work of Stone (1977) and Shorter (1975). Research here has yet to be integrated with knowledge of the immediate demographic conditions underlying changes in the family, and large questions of the relative importance of social structural and cultural explanations for change remain hotly disputed.

Socioeconomic frameworks. Drawing on both correlation results and findings of historical demography, several attempts have been made to develop a comprehensive framework for fertility analysis. The best known and most influential of these are those of Freedman (1975) and Easterlin (1978). Freedman's approach, essentially a sociological model, identifies a series of links relating the environment, social and economic structure, family planning programs, and mortality rates to norms about family size and norms about intermediate fertility variables; to the intermediate variables themselves; and finally to fertility. Using this model, investigations in Taiwan have documented the manner in which indicators of modernization affect fertility and the adoption of family planning prior to and after the development of an intensive family planning program (Freedman, Takeshita, et al., 1969).

The socioeconomic approach, as depicted by Easterlin (1978), outlines the manner in which tastes and economic constraints (prices, incomes, and costs) on the demand side and natural fertility and survival rates on the supply side combine with fertility control practice to determine desired and actual fertility. Within the Easterlin framework, fertility determinants operate by

affecting the demand for surviving children, the potential supply of children, and the costs of fertility regulation or family planning. The framework is a development of earlier empirical research by Easterlin (1961, 1976) on "long swings" in US fertility.

The two approaches have both proved valuable in clarifying thinking about fertility determinants. For example, a modified version of the Easterlin framework is being used as an organizing basis for the research activities of the NAS Panel on Fertility Determinants. But the level of abstraction is such as to offer little help in identifying the factors responsible for fertility decline in different societies.

KAP research and the World Fertility Survey. KAP surveys, undertaken in many countries especially in the 1960s, provided a major source of cross-national data on fertility regulation, practice, and demand. The extent of unmet demand that was revealed gave an important impetus to establishment and growth of family planning programs. Later surveys were valuable for program appraisal (Jain, 1974). KAP studies encountered some criticism, not with their factual investigation of the extent of deliberate birth control in a population, but rather with their efforts to measure the "latent demand" for contraception. A much more elaborate and statistically better-founded survey instrument was developed under the auspices of the World Fertility Survey (WFS) with separate modules focusing on fertility regulation, family planning, abortion, and intermediate or proximate fertility variables. (See Kendall, 1979, for a description of the WFS.) The results of the WFS have radically expanded the data base for research on contemporary fertility; analysis of them, however, is still in the very early stages.

Proximate fertility determinants. Proximate determinants are the behavioral and biological factors through which, and only through which, socioeconomic and other background variables affect fertility. Past research on these factors has focused on two areas: the construction of quantitative models of the relationship between fertility and its proximate determinants (Sheps, 1973; Henry, 1971); and measurement of the proximate determinants in different populations (Leridon, 1977). Much of the modeling, however, has either been highly theoretical or involved large and complex computer simulations. Practical applications have been very limited.

Recent work by Bongaarts has resulted in a simple analytic framework for analyzing proximate determinants (Bongaarts, 1978). It can be demonstrated that variations in just four proximate determinants--marriage pattern, contraceptive use and effectiveness, prevalence of induced abortion, and duration of lactational infecundability--explain nearly all of the variation in the fertility levels among populations. It follows that these four factors should be given most attention. As yet, this attention is still at a rudimentary level. Empirical studies providing measurements of all important proximate determinants are virtually nonexistent in developing countries. In particular, data on prevalence of induced abortion and duration of lactational infecundability are seldom available.

This, then, is a wide open and promising area for empirical research, where a relatively simple but potent methodology exists. What is needed is firstly, more data; secondly, the application of simple models to analyze and project the fertility effects of proximate determinants; and thirdly, the incorporation of proximate determinants in studies of the socioeconomic determinants of fertility.

"New home economics." At the level of the family or household, three approaches to the analysis of fertility behavior (beyond the socio-biological factors just discussed) stand out: economic, institutional, and psychosocial. The first, the microeconomic theory of household choice, is technically the most sophisticated. Developed mainly by Becker (1960, 1965), initially with an eye toward explicating household behavior (including reproductive behavior) in the US, the theory flourished in the 1970s. Two special issues of the Journal of Political Economy were devoted to the subject (reprinted in T.W. Schultz, 1974), and Becker himself has applied the analysis to a wide variety of family-level phenomena. The model has been retcoled for developing country settings, and has been sporadically "tested" when data permitted.

The theory posits that households allocate resources (including their members' time) in such a way as to maximize a common utility function. Formally, the utility function is defined over a collection of "commodities" (including both "quality" and quantity of children), for each of which a demand equation can be derived. From these, predictions can be made concerning the partial effects of a change in one of the price or income variables on the quantity of any one commodity demanded. Econometrically, the empirical applications of this model have represented a substantial advance over the ad hoc specifications of analyses inspired by demographic transition theory. Nevertheless, despite the greater statistical sophistication and more elaborate interpretations that result, one is still dealing with regression coefficients, usually involving the same set of variables as before (Rosenzweig, 1976; Rosenzweig and Evenson, 1977; McCabe and Rosenzweig, 1976; T.P. Schultz, 1974, 1976). While, if one accepts the assumptions of the theory,

the internal workings of the household are revealed (i.e., how change in the behavior or wage of one household member filters through to affect the behavior of others), the theory is silent on what is going on outside the household. Thus the same source of frustration that bedevils the correlation analysis described earlier also plagues this mode of analysis. To some extent, economists of this persuasion are constrained by poor and incomplete data (much time is devoted to rationalizing the various "proxy" variables which are enlisted), and it is quite likely that better tests of the theory and sharper insights would follow from better data. The problems of limited scope and abstraction from institutional setting remain, however, regardless of the quality of data. Finally, it should be noted that critical assumptions of the theory are open to question. In the context of developing countries, these include consumer sovereignty, stable preferences ("tastes"), and the adequacy of generalized notions of price (McNicol, 1978).

Intensive village studies. Another genre of research on the determinants of fertility in less developed countries, which is distinguished by its methodology more than its theoretical underpinnings, is intensive study of the material value of children and the institutional context of fertility behavior in small communities. Beginning with the pioneering work of Nag and his students (White, 1975; Nag et al., 1977; Cain, 1977), these studies have sought to provide empirical measures of the economic benefits and costs of children--characteristics which for long had been relegated to assumption or speculation. Employing laborious field methods, including detailed time use and income and expenditure surveys, they have been able to overcome some of the measurement problems inherent in estimating the economic returns and

costs of children. They represent, for a few scattered communities in Asia and Africa, relatively solid anchors in what is otherwise a sea of speculation.

Beyond the difficult but narrow task of measurement, intensive community studies have also yielded important insights into the institutional setting of fertility behavior. White's analysis of the process of labor absorption in rural Java is an example (White, 1976) as is Cain's work on fertility incentives generated by the pattern of the household life cycle in rural Bangladesh and his analysis of patriarchal authority and its implications for women's work and fertility (Cain, 1978; 1979). Caldwell's work in Africa (the Changing African Family Project) is especially notable. While not strictly based on intensive village studies, it has contributed substantially to our understanding of the material incentives and disincentives for fertility (Caldwell, 1976a; 1976b; and selections in Caldwell, 1977). Methodological problems in estimating the net economic value of children are serious (see Cassen, 1978), and interpretation of such estimates, regardless of how sound the data base, is subject to debate (Mueller, 1976); however, there is a growing consensus that much more research of this kind is needed. To quote from a recent review:

The plea for more research has become a platitude of modern scholarship. But here is an exceptional case where the quantity and quality of data available overall are very meagre and the questions at issue are both clear and important ... The vast grey area of the family economics of the poor peasant, the landless laborer, and the informal sector worker in a partly traditional city has yet to be illuminated (Ware, 1978:25).

Psychosocial fertility research. A model of fertility decision making with a fuller psychological treatment than is possible in the consumer theoretic approach was developed by Hollerbach (1974). The model does not collapse the

"decision" into a single event or point of time, and thus allows for the sequencing and ambivalences of the actual process. It has served as the basis for empirical research on power relations within families and their fertility consequences.

A social psychological perspective can also illuminate the nature of the demand for children well beyond simple economic returns. An elaborate survey instrument investigating the full range of values and disvalues associated with children has been developed by Fawcett (1972), and applied in seven Asian and two Western nations (Arnold et al., 1975). Examining these data as well as additional survey data, Bulatao (1979) has concluded that a transition in the value of children accompanies the transition in fertility. Three major value changes take place: a decline in the perceived economic benefits from children; an increase in the restrictions on parents imposed by children; and an increase in the perceived socioemotional rewards provided by children.

The value of children studies, like the World Fertility Survey, offer comparable cross-cultural data for analysis but are necessarily limited to particular sub-systems of fertility determinants, in particular the demand for children and the costs of fertility regulation. In addition, while some progress has been made associating certain kinds of value shifts with certain parities in the course of fertility decline, much work remains to be done in relating the value transition to changes in the actual number of children desired.

This brief review of the literature has not attempted to be comprehensive, but rather to highlight the limitations as well as the accomplishments of recent research on fertility determinants. Clearly, better understanding is needed about how and why changes in fertility occur and about how such

changes are related to social, economic, and cultural characteristics and trends in different societies. Such understanding is required not just in the interests of general accumulation of scientific knowledge, but as a basis for policy development in this critical area. The proposed Program on the Determinants of Fertility, by its size, focus, and quality standards, can make a substantial contribution to this essential knowledge base for fertility policy.

B. Institutional Efforts

The Program will build on existing knowledge of the determinants of human fertility. In particular, it will draw on the findings of the International Review Group, on the work of the various panels of the NAS/NRC Committee on Population and Demography, and on work of the Population Council itself.

The International Review Group, consisting of eight distinguished population scholars from around the world, investigated in great detail the state of social science knowledge on population and development. Its final report, entitled "Social Science Research for Population Policy: Directions for the 1980s," and the series of lengthy appendices and supporting documents assembled by the IRG, present a valuable analysis of where the knowledge base is weakest and where research efforts potentially will have highest payoff. The Population Council has had close working relations with the Group. The Group's President, Carmen A. Miro, is a trustee of the Council; the late Bernard Berelson, President Emeritus and Senior Fellow of the Council, was a member; and Joseph E. Potter, an Associate of the Council, was on the IRG Secretariat.

The NAS/NRC Committee on Population and Demography, established in April 1977, has undertaken a major program of demographic evaluation. The two primary tasks of the Committee have been

1. To estimate levels and trends of fertility and mortality in selected developing nations.
2. To improve the technologies of estimating fertility and mortality when only incomplete or inadequate data exist (including techniques of data collection).

From its beginning, the Committee has also recognized the importance of evaluating the factors determining changes in birth rates in less developed countries, and in October 1979, a project on the Study of the Determinants of Fertility Change was initiated by a Panel on Fertility Determinants in Developing Nations established by the Committee, with funding from AID. Ansley Coale serves as Chairman of the Committee; the eleven other members include demographers, economists, sociologists, and statisticians.

Population Council staff have been closely involved in the work of the Committee from its inception. W. Parker Mauldin, then a Senior Fellow of the Council, was appointed as a member of the Committee and subsequently as chairman of its Panel on Fertility Determinants. Dr. Paula Hollerbach, an Associate of the Council, is a member of this Panel. The Committee on Population and Demography conducted its work by setting up Panels on particular countries or regions and a Panel on data collection and data analysis. Population Council staff participated on five Country Panels, as indicated below.

Council Staff

G. McNicoll
A. Mundigo
F. C. Shorter
K. S. Srikantan
A. G. Hill

Panel

Indonesia
Brazil
Egypt, Turkey
India
Arab West Asia

Of particular relevance to the proposed Program on the Determinants of Fertility is the work of the NAS Panel on Fertility Determinants referred to above. The work program of this Panel has five components:

1. A review of past and current research, and the development of an agenda for future research;
2. Research on key variables--initially education, health, and family planning program effort;
3. Measurement and analytical improvements;
4. Case studies of the conditions of fertility decline in selected countries; and
5. Study of the proximate determinants of fertility.

The Program on the Determinants of Fertility will take particular account of results of the first component, planned to be a thorough, searching analytical review of what has been learned about the determinants of fertility in less developed countries, the types of research that have been undertaken and what has been learned from each, and the concepts and variables that have been explored, and in what depth, by different disciplinary approaches to the study of fertility change. The other components of the activities planned by the NAS Panel will also provide valuable information for use in the selection and implementation of projects included in the Program on the Determinants of Fertility. In turn, the research projects supported under the Program are likely to contribute relevant findings on these components. Substantive collaboration between the NAS Panel and the proposed Program will be ensured by a degree of overlapping membership between the Panel and the Program Committee of the Program on the Determinants of Fertility, and by continued close professional collaboration between Council staff and the Committee on Population and Demography.

The Council's own work on fertility determinants will also help to establish a firm substantive base for the Program. Of particular note here is the development within the Council of new and analytically more powerful indices of the immediate social and biological determinants of fertility (principally, marriage, lactation and postpartum abstinence, contraception, and induced abortion). The quantitative framework based on these indices, spelling out the magnitudes of the various proximate determinants of fertility change, is the basis of the activity planned in the NAS Panel's fifth workplan component listed above. Three other research activities within the Council are also closely connected to the subject of the proposed Program: (1) Research on family and community demographic behavior, aimed at exploring how fertility is related to local socioeconomic organization and sociocultural patterns at the family and community levels, (2) Work on development of a genre of comprehensive analytical surveys of population-development interrelations in specific countries--depicting fertility change in its broad economic and institutional context, and (3) the Council's program of monitoring and assessment of demographic trends and prospects, family planning program efforts, and patterns of contraceptive use. These various research projects are described further in Section IV.A below.

III. PROGRAM ON THE DETERMINANTS OF FERTILITY

A. Objectives

There are three principal objectives of the proposed Program:

1. To increase understanding of how and why changes in fertility occur in different cultural settings and under varying socio-economic conditions.
2. To support research of the highest quality on fertility determinants in developing nations, through a program of contract research. Prime consideration will be given to research that applies innovative methods and perspectives to advance the understanding of fertility behavior and that shows promise of applicability for improving population policy. Wherever possible, research will be conducted in ways that combine talents and expertise of scholars in developing and developed nations.
3. To disseminate the findings of this program to government officials, policy makers, scholars, and others in relevant national and international organizations, through publications, seminars and briefings.

A by-product of achievement of these principal objectives is expected to be improvement of the research capabilities of institutions involved in the Program through cooperation with the population scholars who will make up the Program Committee, the Peer Review Committee, and Program staff, and through participation in meetings where the work carried out under the contracts is presented and discussed.

B. Scope

Eligible research will include all aspects of work that has a strong bearing on understanding determinants of fertility in developing countries. Research proposals may focus on questions arising from particular social science perspectives; cultural factors influencing fertility; the proximate determinants of fertility, such as contraception and age at marriage; factors

associated with continued high fertility or increases in fertility; and interrelationships among fertility determinants, other population parameters, and economic development. Research funded by the program will take into account the level of family planning services available to the population under study. The Program Committee may set guidelines each year, specifying that certain research topics are encouraged and will receive priority during the evaluation of proposals.

Examples of research topics that will be considered are investigations of:

- 1) The relationships between development programs and fertility behavior;
- 2) The determinants of fertility behavior at the community level, with particular reference to institutional arrangements and socio-cultural factors that affect fertility-related decision making by individuals;
- 3) The mechanisms by which one or more behaviors affecting fertility (e.g., age at marriage, contraceptive use, breastfeeding) are changed, including responsiveness to efforts to change motivation and to the provision of family planning services. This category would include research which explores experimentally how specific mechanisms may intervene to enhance fertility change or the utilization of family planning services.

As the Program develops, the Program Committee will assess early results and parallel work going on elsewhere (including that of the NAS Panel on Fertility Determinants), on the basis of which it may decide that work on certain topics is more necessary or likely to be more productive than other work and redirect the Program accordingly.

The Program on the Determinants of Fertility will be an open competition for five to ten new contracts per year. Each project may cost up to \$100,000 per year but not more than \$250,000 over its full length. It is expected that most projects will be completed within three years, except in

unusual situations. It is anticipated that the average cost per year per contract will be less than the maximum, although approaching it for projects entailing significant primary data collection. As the Program develops, an increasing number of contracts will be underway. The eventual total number of contracts at any one time will be about 15, and the maximum should not exceed 20.

C. The Program Committee

The Program Committee will be composed of nine to eleven scholars who will agree to devote time and effort to this Program. The Committee will represent a variety of disciplines and research experience. It is expected that there will be a small overlapping membership with the NAS Panel on Fertility Determinants, although members of the Program Committee would be appointed in their individual capacities.

Contingent upon the success of this proposal, Professor Ansley J. Coale of Princeton University has agreed to serve as chairman. Members of the Program Committee will be selected after consultation with prominent academics, AID, the NAS Committee on Population and Demography, and other knowledgeable sources.

D. Open Competition for Contracts

The Program will be based on open competition for the research contracts in order to achieve the objective of carrying out the best possible research with available funds. Proposals may be submitted by: 1) an institution in a developing country; 2) two or more institutions in different developing countries, or in developing and developed countries, that agree to collaborate on a project; or 3) an institution in a developed country. A proposal submitted under the second category may include work that takes place in developing

countries, or arrangements under which researchers from developing countries work at institutions in developed countries.

During the initial phase of the Program, scholars and researchers around the world will be made aware of its form and appropriate information and instructions for preparing proposals will be developed and distributed. Program Committee members, Program staff, and Population Council field staff will have major responsibilities in this regard. The Population Council field staff, including the four Senior Representatives of the Council, will provide information and solicit proposals from scholars with suitable research interests within their regions. In addition to Program Staff, in appropriate cases, technical assistance will be provided by field staff and other Council staff in the development of proposals. In the monitoring process, Program staff, or consultants from within or outside the Council, will be available to provide technical assistance as needed during the project, including project visits as described below under "Monitoring." During the review stages and as part of the monitoring process, Council staff who are not members of the Program staff will be called on to provide advice and direction in areas of their particular expertise. The technical assistance and advice provided by Population Council field staff and New York staff who are not part of the proposed Program Staff will be provided through a consultancy arrangement or as part of their ongoing programs of research and technical assistance under the auspices of the Council.

A two-step process for the submission of proposals will be adopted at the beginning of the program, with allowance for modification with program experience under Program Committee guidelines. The first step will be a brief, informal proposal that provides basic information about the proposed activity,

the qualifications of the researchers, a tentative budget, and other relevant information. Following review of these informal proposals by the Program Committee, selected researchers will be invited to carry out step 2, which would be the preparation and submission of a detailed proposal. Invitation to submit a detailed proposal will depend on the criteria of relevance to the understanding of how and why fertility changes, the promise of scientific merit, and the adequacy of staffing, location, or other aspects bearing on the fruitful conduct of the proposed project. The Program Committee may instruct the staff to make specific inquiries before inviting a detailed proposal. A detailed proposal will be reviewed if submitted by an applicant who wishes to by-pass the first step. All detailed proposals will be subjected to the peer review process.

E. Peer Review of Proposals

The Program will include careful review of proposals and selection of contractors by members of the Peer Review Committee or, if necessary, by specifically appointed review groups. Policy guidance for the peer review process will be provided by the Program Committee. Peer review will be the essential principle of proposal evaluation. That is, in each instance highly qualified researchers will assess the individual proposals and together make a final evaluation, including ranking decisions on projects considered to merit funding. This selection process will be based on criteria such as the understanding of the problem and the merit of the research approach or experimental design, the promise of fulfilling the objectives of the project statement, the qualifications of the principal investigator(s), and the adequacy of local facilities if that is a relevant consideration. Decisions by the Program Committee about which contracts to fund under the Program will be

based on this selection process and will be final except for matters of mutual concern to the contract offices at AID and the Population Council. Such matters would be limited to auditing procedures and compliance with existing laws and regulations. Questions concerning the substance of the proposals and the ranking decisions among proposals would be solely the responsibilities of the groups appointed by the Population Council to carry out this Program.

The Peer Review Committee will be appointed by the Program Committee based on the individual expertise needed, given the content of proposals to be reviewed in a given round. The Program Committee has the responsibility to provide policy guidance and review on the overall program and to select the contracts to be awarded. The time demands on the Program Committee in overseeing the program, deciding on inviting detailed proposals, and making the final selection argues in favor of separate peer review groups. The peer review group has the specific task of detailed analysis of the scientific merit according to the criteria outlined above. The separate peer review group also permits the appointment of members with specific expertise to judge proposals which, because of their area focus or some special characteristic such as an innovative methodology, require particular experience or competence. The Program Committee may appoint their own members to the Peer Review Committee if a member is available for the detailed proposal evaluations.

F. Monitoring

There will be careful monitoring of the Program, carried out primarily by Program staff who will receive policy guidance from the Program Committee. The monitoring will take place during three stages of work.

1. Proposal Review and Contract Selection

Staff responsibilities in this stage will be similar to the staff functions in other peer review competitive research programs, such as the National Institute of Child Health and Human Development contract and grant programs. For example, the staff will undertake an initial screening of each proposal to determine if it meets the minimum criteria established by the Program Committee for proposals, and they will organize the materials for the Peer Review Committee. Proposals will be checked for clarity and completeness; missing information will be sought from applicants; when necessary as part of the review process, letters from referees will be solicited.

2. Monitoring Approved Contracts

Contractors will be required to submit periodic substantive and financial progress reports. In addition to careful review of and follow-up on these reports, Program staff will maintain close contact with contractors via correspondence and periodic visits. Each approved project will be visited at least once a year by a professional member of the Program staff based in New York or by an appropriate member of the Council field staff or an expert from outside the Council, acting as a consultant to the Program. This use of consultants will ensure that each new project, when underway, is reviewed by a person with appropriate skills. Evaluation reports will be prepared for the Program Committee by the Program staff or consultants; these reports may include recommendations for improvements and modifications. For multi-year contracts, the Program Committee will determine whether or not the contract should continue, and whether or not changes in the work program are necessary. The materials required to make these determinations, and recommendations regarding each multi-year project, will be prepared by the Program staff.

3. Report Preparation and Dissemination

Each contract will stipulate that one or more reports resulting from the research are to be produced. These reports should concentrate on findings, i.e., new knowledge, with adequate documentation to support the conclusions reached. As part of their monitoring functions, the Program staff will ascertain that reports are being produced during the appropriate phase of each project. The staff will also review the reports and make recommendations to the Program Committee concerning the most useful form of dissemination of contract findings. Alternatives to be considered would include separately published monographs or reports aimed at specific audiences, papers submitted to professional journals such as the Population and Development Review, papers read at professional meetings, or specially prepared monographs digesting and synthesizing the findings of groups of projects funded by the program and complementary research findings which may become available in the future.

G. Other Principles of Operation

Several other principles of operation are important and will be incorporated into this Program:

1. During the initial months of the Program on the Determinants of Fertility, necessary administrative materials and guidelines for the operation of the Program will be developed. These items will include guidelines for the peer review process, including ways of handling bias and conflict-of-interest questions; minimum standards for potential contractors and for research proposals; detailed responsibilities of staff for monitoring contract progress; detailed steps to be followed for the implementation of each approved contract; guidelines to ensure that "accountability" regarding subcontracts is in accord with the regulations and procedures of AID and of the Population

Council. Standard Population Council subcontracting, payment, and accounting procedures already approved by AID will be followed in this Program. The experiences, accumulated knowledge, and materials of other major contract and grant research programs will be drawn on in developing Program materials and guidelines--for example, the guidelines developed by the National Institute of Child Health and Human Development for handling conflict of interest questions, and the experience accumulated within the Population Council. Administrative materials and guidelines for the Program will be consistent with approved procedures of the Population Council and AID.

2. In a few selected cases and on request of the contractor, Program staff may take on a collaborative role in the implementation of research projects, the analyses of data, or the drafting of papers and reports.

3. Prospective contractors will be urged to give particular attention to data analysis, and to the use of existing data, when designing their proposed projects.

4. Attention will be given to the development of ways to publish project reports in the countries to which they pertain and to facilitate exchange of relevant project information and findings among developing country institutions.

H. Length of Program

The Program will be established for five years, July 1, 1980 to June 30, 1985. This is the minimum period necessary in a program that will organize and monitor research contracts so that each may continue for a period up to three years. In order to allow adequate advance planning and the awarding of multi-year contracts during the fourth and fifth years of this program, at the end of year 3 a determination should be made by AID, the

Program Committee, and the Population Council concerning the future of this program beyond year 5.

I. Pilot Study Grants

A small number of non-open competition pilot study grants may be funded, up to four per year during the first three years of the Program, at up to \$7,500 each. It is sometimes useful and cost-efficient to carry out such a pilot study prior to consideration of a larger research contract.

IV. THE POPULATION COUNCIL

A. Structure and Organization

The Population Council is an independent, unofficial and nongovernmental international organization specifically devoted to the search for a better understanding of problems related to population. It was founded in 1952 "to stimulate, encourage, promote, conduct, and support significant activities in the broad field of population."

The Council conducts research and provides professional services in this field. Through its research the Council seeks:

- Fuller understanding of the interrelationships between the social, economic, and political development of societies and nations and the fertility, mortality, and migration of people;
- A more complete knowledge of the processes of human reproduction and the improvement of fertility regulation technology, sterilization, and abortion, and their safety and health effects.

The Council also provides worldwide professional and technical services to assist nations and institutions with the design, implementation, and evaluation of programs intended to influence demographic behavior or to ease adverse consequences of demographic patterns.

Since October 1, 1976, the Population Council has carried out its work in three programmatic divisions: the Center for Policy Studies, the Center for Biomedical Research, and International Programs. The work of the Center for Policy Studies and International Programs are directly related to the proposed Program on the Determinants of Fertility.

The Center for Policy Studies, located at the Council's headquarters in New York, is a multidisciplinary research organization within the Population Council. Established in 1976, its objective is to contribute to the formulation of improved population and population-related development policies. The

Center undertakes a program of social science research aimed at achieving a deeper understanding of relationships between population processes and socio-economic development, disseminating such knowledge, and applying it in analyses of existing policy designs and explorations of alternatives. This substantive work is organized in three program components: policy analysis and evaluation (focusing primarily on country and sectoral studies); monitoring and assessing current population and development trends; and research on family and community demographic behavior.

Policy analysis and evaluation, the first program component, reflects the Center's prime interest in the analysis of population and development relationships and policies. For the most part it addresses problems defined at the national level, focusing on a particular sector or spanning population-related aspects of a country's development strategy as a whole. Cross-national comparative analyses are also undertaken, a major present emphasis being on demographic aspects of rural development policy. The Center's demographic monitoring and assessment program includes preparation of estimates and projections of population trends, drawing on the Council's computerized data bank, and preparation of periodic statistical fact books on family planning programs and induced abortion. The quantitative framework describing the proximate determinants of fertility, referred to above, was also developed under this program. The third program component, family and community demographic behavior, is a coordinated effort to explore how this behavior is influenced by its institutional and cultural setting. It seeks to analyze demographic decision making within families, to investigate the influence on these decisions of local economic organization, and to develop formal models of family demography and community structure.

Results of research by Center staff are disseminated through working papers and through other publications and professional services. In addition to this research activity, the Center has substantive editorial responsibility for the quarterly journal Population and Development Review and manages a competitive fellowship program in the social sciences (described below).

The Center's research staff in 1980 consists of the Director, Deputy Director, 10 Associates (one Associate position is currently vacant), and Visiting Associates who work at the Center on short-term appointments. Three such appointments are scheduled for 1980. The Center also draws on distinguished scholars from universities in the region as University Associates, two such appointments being held in 1980.

International Programs incorporates the overseas activities of the former Biomedical, Demographic, and Technical Assistance Divisions of the Population Council into a new and expanded organizational structure. By decentralizing its operations into area offices around the world, supported by a multidisciplinary staff in New York, the Council recognizes the different needs and priorities of the major geographic areas of the world and seeks to achieve closer and more adequately responsive professional relationships with population and development specialists, research and training institutions, and government agencies in developing countries. International Programs staff play both facilitating and substantive roles by bringing to bear their own professional skills and capacities in project design and implementation, by mobilizing the technical and financial resources available within the Council, and by calling upon technical and other resources from outside the Council as necessary. Professional partnership implies a continuous involvement by Council staff from initial formulation through completion of a project,

including the provision of resident advisory services if appropriate and other forms of close professional cooperation.

The overseas program of the Council is managed by four area offices and a small headquarters unit. The professional staff of International Programs consists of a Director; Deputy Director; four Senior Representatives responsible for area offices (located in Mexico City, Cairo, Bangkok, and Lagos); Representatives responsible for country or area sub-offices; Associates assigned to particular institutions or projects abroad and responsible to their respective Senior Representative; and programmatic Associates with broad interregional duties, based in New York. Senior Representatives have major responsibility for initiation, development, and implementation of Council projects in their areas.

International Programs provides substantive editorial supervision of Studies in Family Planning, the Council's journal dealing with the design, management, and evaluation of fertility regulation delivery systems. International Programs staff in New York also provide substantive support for the International Committee on Applied Research in Population (ICARP), a program established in 1973 to promote and fund action-oriented research projects in family planning/population.

B. Related Council Activities

Aside from research conducted by its own staff, the Council manages several current research awards programs to support social science research on population in developing countries. These include the Middle East Research Awards Program, the Micro-Level Studies Program on Fertility-Development Interactions in Thailand, and the research component of the Fertility Impacts of Development project in South and East Asia. In addition, the Council has

administered an international competitive Fellowship Program since 1954. Also of relevance is the experience gained through the competitive research grants program of the former Demographic Division of the Council. These programs are briefly described below; further details are available on request.

Middle East Research Awards Program. The Population Council and the Ford Foundation jointly established the Middle East Research Awards (MEAWARDS) competition in 1978. From mid-1980, the International Development Research Centre of Canada will become a third co-sponsor. The purpose of the program is to encourage research on the connection between economic and social policy measures and population change, and to anticipate the consequences of possible policy interventions. Research proposals are solicited, both on the impact of the selected aspects of development programs on population processes and on the determinants of fertility. An Advisory Committee consisting of five outstanding Middle Eastern scholars screens applications and selects recipients. The Council's regional office for West Asia/North Africa in Cairo serves as secretariat to the program, provides regular information on it to the research community, encourages qualified people to formulate proposals, organizes the work of the Advisory Committee, administers approved awards on behalf of the funding agencies, and reports to these agencies on program development.

Four features of the MEAWARDS program are directly relevant to the proposed Program on the Determinants of Fertility. These are (1) the central role of the MEAWARDS Advisory Committee, not only in project selection, but in guidance of the overall program; (2) the availability, through the staff

resources of the funding agencies and their regional and international professional contacts, of technical advisory assistance to researchers at each stage of project development and implementation; (3) a series of regional workshops (called "Study Groups") which provide an opportunity for small groups of professionals to focus on specific issues in the population and development field that often yield fundable research proposals and/or contribute to improved research implementation; and (4) sensitive, responsive in-region administration of approved awards.

A total of ten awards have been made to date through three cycles of competition.

Micro-Level Studies Program on Fertility-Development Interactions in Thailand. This program, jointly funded by the Population Council and the Ford Foundation, is similar in its objectives, organization, and technical assistance components to the MEAWARDS program. Its primary objective is to encourage research by Thai investigators on the interrelationships between population and development at a sufficiently disaggregated level to take more fully into account the complexity of the cultural, economic, social and political factors involved. Priority is given to studies of the impact of demographic changes on such key development concerns as income levels and distribution, productivity and employment, and health and nutrition; and on how changes in rural incomes and welfare affect reproductive behavior among different socioeconomic groups and geographic areas. The program also encourages case studies and other forms of in-depth micro-analysis to complement studies using survey methods.

An interdisciplinary Steering and Review Committee, composed of six senior Thai researchers, is responsible for overall program guidance, for

reviewing proposals, and for making research awards. A Population Council Associate based in Bangkok acts as Secretary to the Steering and Review Committee and assists in providing technical advisory assistance to awardees and prospective awardees. A Research Design Workshop is organized for each round of competition at which each proposal is reviewed by the Council Associate and members of the Steering and Review Committee to consider improvements in the research design, data collection plan, or analysis workplan. Seminars on research findings are scheduled after research projects are completed.

Three rounds of competition have been organized to date (since mid-1979) and 15 awards made.

Fertility Impacts of Development in Asia. Under a three-year grant from AID (otr-G-1702), the Council administers a multifaceted program of research awards, technical assistance, and information dissemination on the fertility impacts of development in South and East Asia. The research awards component of this project focuses on the fertility impact of such factors as rural development and agricultural practices (electrification, irrigation, mechanization, land tenure, and multiple cropping); changes in household and family income; infant and child health and mortality; urbanization; education; and women's roles and status.

The program has been widely advertised throughout Asia, and more than thirty proposals have been received to date (since mid-1979). Council staff based in Bangkok have been responsible for the preliminary review of all proposals; providing technical advisory assistance to those judged most promising; submitting promising proposals for review and selection by ad hoc

review panels consisting of Council staff in New York, outside readers as needed, and AID technical staff; and for close monitoring (and occasional assistance) of funded projects. Only two proposals had been funded by the end of 1979; two others are currently in advanced stages of review.

Although the Fertility Impacts program does not have an autonomous peer review panel, as will the Program on the Determinants of Fertility, the Council's experience in soliciting proposals, providing technical advisory assistance, and administering research awards is of direct relevance to the proposed Program.

Fellowship Program. The Population Council has a long-standing competitive fellowship program in the social sciences, aimed at supporting graduate and post-doctoral training in population studies and related social sciences. The program is directed particularly at individuals in developing countries who intend to pursue careers in a population-related field in their own countries. More than 500 fellowship awards have been made over the last 25 years; a substantial proportion of population specialists in the developing world owe their training in population studies to this program. Fellowship awards are decided by an independent committee of distinguished population scientists on the basis of academic merit, proposed course of study, and career plans. The current Fellowship Committee comprises three distinguished academics from universities in California, Pennsylvania and Texas. In 1980 \$422,000 has been budgeted for this program, with some 30 fellowships expected to be awarded.

Demographic Division Research Grant Program. An independent grants program was managed by the Council's Demographic Division (forerunner of the present Center for Policy Studies), until funding constraints curtailed activities in

1975. The grants announcement singled out several subject areas for particular emphasis, and recommended that preliminary contacts be made with the Council before submitting a fully-developed proposal. All proposals went through a formal review process: applications, in a standard format, were reviewed quarterly by an in-house Grant Review Committee; written critiques of each application by professional staff were presented at meetings of this Committee, and recommendations made for final approval of successful applications by the Council's Board of Trustees.

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- International Review Group of Social Science Research on Population and Development. Social Science Research for Population Policy: Directions for the 1980s, The IRG Final Report, prepared by Carmen A. Miro and Joseph E. Potter. Mexico City: IRG, 1979.
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- Mauldin, W.P. and B. Berelson. "Conditions of fertility decline in developing countries, 1965-75." Studies in Family Planning 9 (1978): 90-147.
- McCabe, J.L. and M.R. Rosenzweig. "Female labour force participation, occupational choice, and fertility in developing countries." Journal of Development Economics 3 (1976): 141-160.
- McGreevey, W.P. and N. Birdsall. The Policy Relevance of Recent Research on Fertility. Washington, D.C.: The Smithsonian Institution, 1974.
- McNicoll, Geoffrey. "Population and development: Outlines for a structuralist approach." The Journal of Development Studies 14 (1978): 79-99.
- Mueller, Eva. "The economic value of children in peasant agriculture." In Ridker, Ronald G. (ed.), Population and Development: the Search for Selective Interventions. Baltimore, Johns Hopkins University Press, 1976.
- Nag, Moni, Robert Creighton Peet, and Benjamin White. "Economic value of children in two peasant societies." In International Population Conference, Mexico 1977. Liege: IUSSP, 1977, vol. 1, pp. 123-140.
- National Academy of Sciences, Committee on Population and Demography. Estimation of Recent Trends in Fertility and Mortality in the Republic of Korea, by Ansley J. Coale et al. Washington: National Academy of Sciences, 1980. (Committee on Population and Demography. Report No. 1)
- Repetto, Robert. Economic Equality and Fertility in Developing Countries. Baltimore: Johns Hopkins University Press for Resources for the Future, 1979.
- Ridker, Ronald G. (ed.). Population and Development: The Search for Selective Interventions. Baltimore: Johns Hopkins University Press for Resources for the Future, 1976.
- Rosenzweig, M.R. "Female work experience, employment status, and birth expectations: Sequential decision-making in the Philippines." Demography 13 (1976): 339-356.

- Rosenzweig, M.R. and R. Evenson. "Fertility, schooling and the economic contribution of children in rural India: An econometric analysis." Econometrica 45 (1977): 1065-1080.
- Shultz, T. Paul. Fertility Determinants: A Theory, Evidence and an Application to Policy Evaluation. Santa Monica: Rand Corporation, 1974.
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- Schultz, T. W. (ed.). Economics of the Family. Chicago: University of Chicago Press for the National Bureau of Economic Research, 1974.
- Sheps, M. and J. Menken. Mathematical Models of Conception and Birth. Chicago: University of Chicago Press, 1973.
- Shorter, Edward. The Making of the Modern Family. New York: Basic Books, 1975.
- Simon, Julian L. The Effects of Income on Fertility. Chapel Hill: Carolina Population Center, University of North Carolina, 1974. (Monograph No. 19)
- Standing, G. Labour Force Participation and Development. Geneva: International Labour Office, 1978.
- Stone, Lawrence. The Family, Sex and Marriage in England 1500-1800. New York: Harper and Row, 1977.
- United Nations. Population Bulletin of the United Nations, No. 7. New York, United Nations, 1965.
- Ware, H. "The economic value of children in Asia and Africa: Comparative perspectives." Papers of the East-West Population Institute, No. 50. Honolulu: East-West Population Institute, 1978.
- White, Benjamin. "The economic importance of children in a Javanese village." In Nag, Moni (ed.), Population and Social Organization. The Hague: Mouton, 1975.
- White, Benjamin. "Population, involution and employment in rural Java." Development and Change 7 (1976): 267-290.

VI. BUDGET

The following summary budget is for a period of 60 months beginning July 1, 1980. It envisages a Program Committee of 9 persons, meeting 4 times per year (2 days per meeting). It is assumed that the Chair will make an additional time commitment of 1 day per meeting. The Peer Review Committee (12 persons) would be reimbursed for a total of 36 days in the first year and 48 days per year in subsequent years; with half this time spent in committee in New York. (Clearly, however, precise budgeting for peer review is impossible without knowledge of numbers of proposals that would be generated under the Program.)

The Program staff will consist of a full-time Program Manager and fractional time appointments of four or five senior professionals making up two additional person-years. The duties of these persons will include coordination of the work of the Program Committee, initial review and screening of proposals, some research and writing of direct relevance to overall Program objectives or in response to the needs of selected funded projects, and other duties necessary to initiate, monitor and bring to completion each project (contract) in a timely and efficient way. Qualifications for each Program staff member include a Ph.D. in a social science, training and experience in technical demography and population studies, experience in work directly or indirectly concerned with fertility determinants, and the ability to function in a committee context and to maintain collegial relations with a variety of individual researchers and research institutions around the world. Appointments will be made from both existing Population Council staff and persons newly appointed with joint research and Program staff duties. Given the

intensive planning envisaged during the early months of the Program, it is anticipated that all professional staff would be in place at the time or shortly after the Program commences.

The staff will also include an experienced administrative assistant capable of managing all of the administrative details involved in a program of subcontracted technical research, and two secretaries.

Consultants will be used occasionally to carry out special tasks required by the Program Committee where special expertise may be needed. Such consultants will be drawn both from New York and overseas Council staff not formally part of the Program, and experts from outside the Council.

**International Awards for Population Research
Program on the Determinants of Fertility in Developing Countries**

**Summary Budget
(in thousand dollars)**

	Year 1	Year 2	Year 3	Year 4	Year 5	TOTAL
I <u>Personal Services</u>						
Professional staff	108.0	116.6	130.0	136.1	146.9	637.6
Administrative support staff	42.0	45.4	49.0	52.9	57.1	246.4
	<u>150.0</u>	<u>162.0</u>	<u>179.0</u>	<u>189.0</u>	<u>204.0</u>	<u>884.0</u>
Fringe benefits	36.0	38.9	43.0	45.4	49.0	212.3
A. Total Staff	186.0	200.9	222.0	234.4	253.0	1096.3
B. Consultants	5.0	5.0	5.0	5.0	2.0	22.0
C. Program Committee	15.2	11.4	11.4	11.4	11.4	60.8
D. Peer Review	5.4	7.2	7.2	7.2	-	27.0
TOTAL PERSONAL SERVICES	211.6	224.5	245.6	258.0	266.4	1206.1
II <u>Operating Expenses</u>						
A. Domestic travel and expenses	13.3	16.0	16.0	16.0	12.4	73.7
B. International travel and expenses	22.5	37.5	37.5	37.5	37.5	172.5
Total travel	35.8	53.5	53.5	53.5	49.9	246.2
C. Communications	4.0	4.0	5.0	5.0	6.0	24.0
D. Supplies, services	5.0	15.0	24.0	36.0	38.0	118.0
TOTAL OPERATING EXPENSES	44.8	72.5	82.5	94.5	93.9	388.2
III <u>Total Direct Costs</u>	256.4	297.0	328.1	352.5	360.3	1594.3
IV <u>Indirect Costs</u>	131.6	152.5	168.4	180.9	184.9	818.3
SUBTOTAL (III + IV)	388.0	449.5	496.5	533.4	545.2	2412.6

V <u>Subcontracts</u>	372.0	775.0	1178.0	1200.0	860.0	4385.0
VI <u>Indirect costs</u>	45.9	95.6	145.2	148.0	106.0	540.7
SUBTOTAL (V + VI)	417.9	870.6	1323.2	1348.0	966.0	4925.7
TOTAL	805.9	1320.1	1819.7	1881.4	1511.2	7338.3

Note to Summary Budget on Personal Services

Professional Staff

	<u>Person Years (Years 1-5)</u>
Charles B. Keely (Program Manager)	.8
Mead T. Cain (Program Staff)	.5
Anrudh Jain (Program Staff)	.5
Geoffrey McNicoll (Program Staff)	.25
Senior Associate (Program Staff)	<u>.75</u>
Total Professional Staff	2.8

Appendix I

Curriculum Vitae

CURRICULUM VITAE

March 1980

Charles B. Keely
Center for Policy Studies
The Population Council
One Dag Hammarskjold Plaza
New York, N.Y. 10017
Tel: (212) 644-1780

MARITAL STATUS: Married

CITIZENSHIP: United States

EDUCATION:

- Ph.D. Fordham University, Sociology, February, 1970.
Concentrations: Immigration and Assimilation, Urban Sociology,
Social Change. Dissertation: The Immigration Act of 1965: A
Study of the Relationship of Social Science Theory to Group
Interest and Legislation.
- M.A. Fordham University, Sociology, June, 1966.
Concentrations: Social Change and Modernization.
- B.A. College of Philosophy and Letters, Fordham University,
June, 1965.
Concentrations: Sociology, Philosophy, Classics.

PROFESSIONAL EXPERIENCE:

- 1977- Associate, Center for Policy Studies, The Population Council
1975-78 Associate Professor, Fordham University (on leave 1977-78)
1971-75 Assistant to Associate (1973), Professor and Associate Chair
(1974-75), Department of Sociology, Western Michigan Uni-
versity
- 1973-74 Research Associate, Population Studies and Training Center,
Department of Sociology, Brown University, Providence, Rhode
Island
- 1972 Fulbright Senior Lectureship - Philippines, Summer
- 1971-73 Assistant Director for Research, Grand Rapids Public Schools/
Western Michigan University, Center for Educational Studies,
Grand Rapids, Michigan (half time)
- 1969-70 Assistant Professor of Sociology, Loyola College, Baltimore,
Maryland

PUBLICATIONS:

Books

U.S. Immigration: A Policy Analysis. New York: The Population Council, 1979.

Whom Have We Welcomed? The Adequacy and Quality of United States Immigration Data for Policy Analysis and Evaluation. New York: Center for Migration Studies, 1975 (with S. M. Tomasi).

Journal Articles, Chapters in Books

"Immigration Policy and the New Immigrants, 1965-1975," in Roy S. Bryce-Laporte, Sourcebook on the New Immigration. New Brunswick: Transaction Books. In press.

"Needed Review of Current Immigration Policy," in A. T. Fragomen and L. F. Tomasi (eds.), In Defense of the Alien: Immigration Law and Legal Representation. New York: Center for Migration Studies, 1979, pp. 119-132.

"Recent Net Alien Immigration to the U.S.: Its Impact on Population Growth and Native Fertility," Demography 15, no. 3 (August 1978), pp. 267-283 (with E. P. Kraly).

"The United States of America," in D. Kubat et al. (eds.), The Politics of Migration Policies. New York: Center for Migration Studies, 1979.
German Edition, "Die Vereinigten Staaten von Amerika," in Ausländerpolitik im Konflikt, Bonn: Verlag Neue Gesellschaft, 1978, pp. 55-69.

"Demographic and Political Implications of Immigration Policy," in Milton Himmelfarb and Victor Baras (eds.), Zero Population Growth - For Whom? Westport, Conn.: Greenwood Press, 1978, pp. 41-73.

"Counting the Uncountable: Estimates of Undocumented Aliens in the United States," Population and Development Review 3, no. 4 (December 1977), pp. 473-481.

"Temporary Workers in the United States," International Migration. (Geneva), Vol. XIII (Fall 1975), pp. 106-111.

"Effects of U.S. Immigration Law on Manpower Characteristics of Immigrants," Demography 12, no. 2 (May 1975), pp. 179-191.

"The Estimation of the Immigrant Component of Population Growth," International Migration Review 8, no. 3 (Fall 1974), pp. 431-435.

"Immigrant Composition and Population Policy," Science 185, no. 4151 (August 1, 1974), pp. 587-593. Reprinted in P. Reining and I. Tinker, Population: Dynamics, Ethics and Policy. Washington, D.C.: American Association for the Advancement of Science, 1975, pp. 129-135.

"Elementary Counseling: The Classroom Teacher's Perspective," MPGA Journal 5, no. 2 (Spring 1974), pp. 15-25 (with J. D. Jones, M. Edens, G. Mazer).

"Philippine Migration: Internal Movements and Emigration to the United States," International Migration Review 7, no. 2 (Summer 1973), pp. 177-187.

"Processes of Intergroup Tension and Conflict in Urban Society," Notre Dame Journal (Notre Dame University, Cotabato City, Philippines) 4, no. 2 (October 1972), pp. 137-145.

"Urban Problems," Notre Dame Journal (Notre Dame University, Cotabato City, Philippines) 4, no. 2 (October 1972), pp. 111-118.

"Immigration Recommendations of the Commission on Population Growth and the American Future," International Migration Review 6, no. 3 (Fall 1972), pp. 290-294.

"Immigration: Considerations on Trends, Prospects and Policies," in U.S. Commission on Population Growth and the American Future, Demographic and Social Aspects of Population Growth, Charles F. Westoff and Robert Parke, Jr. (eds.). Vol. I of Commission Research Reports. Washington, D.C.: Government Printing Office, 1972, pp. 179-204.

"Immigration and Population Growth," International Migration Review 6, no. 1 (Spring 1972). Guest Editor.

"Effects of the Immigration Act of 1965 on Selected Population Characteristics of Immigrants to the United States," Demography 8, no. 2 (May 1971), pp. 157-169.

"Measuring the Effects of Labor Certification," International Migration Review 4, no. 2 (Spring 1970), pp. 87-92.

Papers

"International Migration: Canada and the United States," Conference on International Migration, Bellagio, June 1979.

"Policy Perspectives on U.S. Immigration," In Defense of the Alien. A Legal Conference on Immigration Law, Washington, D.C., April, 1979.

"Managing Migration for Development," Study Group on Worker Migration Abroad, Royal Scientific Society, Amman, Jordan, December 1979.

"U.S. Immigration Policy and the New World Order," invited paper, Plenary Session, Annual Meeting of the Society for the Study of Social Problems, San Francisco, September 1978.

"Needed Review of Current Immigration Policy," In Defense of the Alien, A Legal Conference on Representation of Aliens, Washington, D.C., March 1978.

"Undocumented Aliens in New York City: A Profile," Latin American Studies Association, Houston, November 1977 (with P. Early, S. M. Tomasi and A. T. Fragomen). Printed as Occasional Papers and Documentation (No. 5), New York: Center for Migration Studies, April 1978.

"Recent Net Alien Immigration to the United States: Its Impact on Population Growth and Native Fertility in the Stationary Population," Population Association of America Meeting, St. Louis, April 1977 (with E. P. Kraly).

"Immigration: The Emergence of a Political and Demographic Issue," invited paper, Eastern Sociological Association Meeting, New York, March 1977.

"Immigration Policy and the New Immigrants, 1965-1976," invited paper, Smithsonian Institution Conference on the New Immigration, Washington, D.C., November 1976. Also panel member for General Public Session at same conference.

"Studying Undocumented Migrants in the U.S. in the 1970s," invited paper, U.S. Civil Rights Commission Conference on Undocumented Migrants, New York, September 1976.

"Urban Sprawl and the Central City: Housing Speculation and Racial Change in Baltimore," American Sociological Association Meeting, New York, August 1976 (with E. P. Kraly and E. Padilla).

"The Disposable Worker: Historical and Comparative Perspectives on Clandestine Immigration," Population Association of America Meeting, Montreal, April 1976 (with S. M. Tomasi). Printed as Occasional Papers and Documentation (No. 2), New York: Center for Migration Studies, June 1976.

"Demographic and Political Implications of Immigration Policy," invited paper, Conference on Population Stabilization and Intergroup Relations, American Jewish Committee, New York, October 27-28, 1975.

"Filipino Migration to the U.S.: The Demographic and Legal Context of Change," invited paper, Second Conference on International Migration from the Philippines, East-West Center, Honolulu, June 6-10, 1975 (with J. Fox).

"Policy Implications of Contemporary Immigration to the United States," invited paper, Conference on Population Policy, Ford-Rockefeller Foundation Program in Support of Social Science and Legal Research in Population Policy, Lake Como, Italy, May 1975.

"Forecasting Lengths of Stay in a State Mental Hospital on the Basis of Family Structure," North Central Sociological Association Meeting, Columbus, Ohio, May 1975 (with M. B. Lamberts, E. L. Erickson and R. Stanley).

"Accuracy of Data on United States Immigration and the Alien Population: Data from Immigration and Naturalization Service," Population Association of America Meeting, Seattle, April 1975.

"Effects of the Manpower Provisions of Immigration Law," Population Association of America Meeting, New York, April 1974.

"The Demographic Effects of Immigration Legislation and Procedures," Forum on Immigration, The Association of the Bar of the City of New York, New York, April 1974. Printed in Interpreter Releases (American Council for Nationality Services) 51, no. 2 (April 8, 1974), pp. 89-93.

"Teacher Training Institutions and the Formation of Militancy Attitudes," Southwest Sociological Association, March 1974 (with M. H. Walizer and J. F. Wallace).

"Teacher Characteristics and Collective Bargaining Militancy," American Educational Research Association Meeting, February 1973 (with R. G. Emerton and D. L. Keely).

"Immigration and Population Policy," Population Association of America Meeting, April 1972.

"The Delivery System of Black Private Housing: Speculation in Baltimore in the 1960s," American Sociological Association Meeting, August 1971.

"Housing Speculation in Racially Changing Neighborhoods," Midwest Sociological Society Meeting, April 1971.

"Effects of the Immigration Act of 1965 on Selected Population Characteristics of Immigrants to the United States," Population Association of America Meeting, April 1970.

Magazine/Newspaper Articles

"Reforming Immigrant Policy," Op-ed, New York Times, August 18, 1979.

"Haitian and Dominican Undocumented Aliens in New York City: A Preliminary Report," Migration Today 5, no. 5 (December 1977) (with P. Ellwell, A. Fragonen and S. M. Tomasi).

"The Disposable Workers in the United States," Migration Today 3, no. 5 (June 1976) (with S. M. Tomasi)

"Immigration and U.S. Population," Migration Today 2, no. 4 (June 1974).

MEMBERSHIPS

American Sociological Association
Population Association of America
Immigration History Group
International Union for the Scientific Study of Population,
elected 1975

OTHER EXPERIENCE

- Member, National Academy of Sciences-National Research Council, Panel on the Decennial Census, January-June 1978. Report on Census undercount, procedures to reduce it, techniques to estimate it and methods to resolve contested counts by local governments.
- Member, Council on Foreign Relations, Study Group on Immigration and Foreign Policy, March-June 1978.
- Chairman, Subcommittee on Immigration Statistics, Committee on Population Statistics, Population Association of America, 1976-1979.
- American Immigration and Citizenship Conference, Vice-Chairman, 1979-; Member, Board of Directors, 1970-; Executive Committee, 1973-; Research Committee, 1973-
- Member, Board of Directors, Center for Migration Studies of New York, Inc., 1976-Present; Senior Research Associate, 1974-present.
- Co-editor, Section on Review of Reviews (1969-73) and Member of Editorial Board (1969-present), International Migration Review.
- Invited Testimony, U.S. Congress, House Subcommittee on Immigration and International Law, on pending immigration legislation, June 14, 1973; December 11, 1975.
- U.S. Congress, House Select Committee on Population, on immigration policy and its demographic consequences, April 4, 1978.
- Organizer and Chair, Roundtable on Immigration Statistics for Federal Officials, Washington, D.C., November 1977; Historical Perspectives Session, East-West Center Conference on International Migration from the Philippines, June 6-10, 1975.
- Organizer, Bellagio Conference on International Migration (with M. Kritz and S. Tomasi), 1979; Sessions on International Migration for International Sociological Association Meeting, 1978, Uppsala; American Sociological Association Meeting, 1978, San Francisco; American Public Health Association, 1978, Los Angeles.
- Invited Participant, Scholar-Diplomat Seminar on Latin America, U.S. State Department, January-February 1977. Including presentations to Visa Office Staff and address to Consular Officers Association.
- Consultant: Select Commission on Immigration and Refugee Policy, 1979-; Food Foundation, Mexican and Caribbean Migration to the U.S., 1979; Rockefeller Foundation, International Relations, U.S.- Mexico Project, 1978-79; Ford Foundation, Asian Worker Migration to the Middle East, October-December 1978; Immigration and Naturalization

Service, Statistical Program, November 1977; Labor Task Force, President's Domestic Council on Illegal Aliens, April 1976; Association of Immigration and Nationality Lawyers, N.Y. State Department of Labor Survey on Live-In Domestic and Labor Certification, June 1976; TransCentury Corporation, Washington, D.C., U.S. Labor Department Study on Immigrants, 1971; Activists, Inc., Housing and Real Estate Research, Baltimore, Maryland, 1970-71.

Colloquia Presentations: N.Y.C. Planning Commission and Population Division Staff; Fordham University; Brown University; Pennsylvania State University; Massachusetts Institute of Technology; Georgetown University; Princeton University; Cornell University; Florida State University; Association of the Bar of the City of New York; University of Cincinnati (Taft Lecture).

Presenter, Panel on Committee on Population Statistics, Population Association of America, April, 1979; Workshop on Immigration, ZPG Annual Convention, Boston, 1973; Forum on Immigration for Congressional Staff, June 1975.

Referee for Demography, International Migration Review, Science, Social Science Quarterly, Social Forces, American Journal of Sociology.

Book Reviews/Abstracts in Sociological Analysis, International Migration Review, Educational Studies, and Population and Development Review.

WORK IN PROGRESS

Book length manuscript on U.S. immigration policy since 1965 and its demographic effects.

Book length manuscript on the quality and availability of U.S. data on immigrants and the foreign born from six federal agencies with an analysis of the compatibility of U.S. data sources with U.N. recommendations on international migration data (with E. P. Kraly).

Bibliographic review essay on international migration for Population Index (with S. M. Tomasi and M. M. Kritz).

Editing collected papers from 1979 Bellagio Conference on International Migration (with U. M. Kritz and S. M. Tomasi).

CURRICULUM VITAE

NAME: Mead Taylor Cain

MARITAL STATUS: Married

CITIZENSHIP: U.S.

PRESENT POSITION: Associate
Center for Policy Studies
The Population Council

GRADUATE STUDIES: London School of Economics, University of London,
M.Sc. (Demography), 1972
Johns Hopkins University, Ph.D. (Demography), 1975

UNDERGRADUATE STUDIES: Princeton University, B.A., 1968
Major: Economics (with Honors)

EMPLOYMENT:

1968-70 Military service in the U.S. Navy

1971 Economist, U.S. Tariff Commission, Washington, D.C.

1972-75 Research Assistant, Department of Population Dynamics,
The Johns Hopkins University, Baltimore

1975-78 Visiting Scholar, Bangladesh Institute of Development
Studies, and Staff Associate, The Population Council,
Dacca, Bangladesh

1978-79 Staff Associate, Center for Policy Studies, The Population
Council, New York

1980- Associate, Center for Policy Studies, The Population Council,
New York

MEMBERSHIP IN PROFESSIONAL SOCIETIES:

International Union for the Scientific Study of Population
Population Association of America

PUBLICATIONS:

(a) Articles in Books and Professional Journals

- "Family planning in Bangladesh: An empirical investigation," with I. Sirageldin and M. Hossain, Bangladesh Development Studies, Vol. 3, No. 1, 1975.
- "The economic activities of children in a village in Bangladesh," Population and Development Review, Vol. 3, No. 3, 1977. (Reprint forthcoming in H.P. Binswanger, R.E. Evenson, C.A. Florencio, and B.N.F. White (eds.), Rural Household Studies in Asia. Bangkok: Agricultural Development Council, 1980.)
- "The household life cycle and economic mobility in rural Bangladesh," Population and Development Review, Vol. 4, No. 3, 1978. (Reprint forthcoming in R. Srivastava (ed.), Demography and Households: Anthropological Essays, 1980.)
- "Class, patriarchy, and women's work in Bangladesh," with S.R. Khanam and S. Nahar, Population and Development Review, Vol. 5, No. 3, 1979. (Abridged version forthcoming in H. Binswanger and M. Rosenzweig (eds.), Adjustment Mechanisms of Rural Labor Markets in Developing Areas, Yale University Press, 1980.)

(b) Other Papers

- "Village modernization and fertility limitation in Pakistan," with I. Sirageldin. Paper presented at the annual meeting of the Population Association of America, Seattle, 1975.
- "Household structure and fertility in Bangladesh," with W. deVries-Bastiaans. Paper presented at the annual meeting of the Population Association of America, St. Louis, 1976.
- "Objectives and design of the study," VFS Report No. 1, Bangladesh Institute of Development Studies, July 1976.
- "Demographic and socioeconomic profile of the study village," VFS Report No. 2, Bangladesh Institute of Development Studies, July 1976.
- "Pre-independence levels of fertility in Bangladesh: Evidence from the Pakistan National Family Planning Impact Survey, 1968-1969," with D. Norris and I. Sirageldin. Paper presented at a seminar on Fertility in Bangladesh, Cox's Bazaar, Bangladesh, December 21-23, 1976 (Proceedings will be published in 1980).

PUBLICATIONS (continued):

- "Household time budgets," VFS Methodology Report No. 1, Bangladesh Institute of Development Studies, February 1977.
- "Intensive research designs and their application in urban settings." Paper presented at a Workshop on Population Information for City Planning and Management, Cairo, February 1979 (submitted for publication).
- "Pilot surveys to obtain agricultural labor information." Chapter 2 in "Report of a study group: Agricultural labor for the modern (irrigated) schemes, Wad Medani, Sudan," WANA Regional Paper, The Population Council, February 1979.
- "Char Gopalpur revisited." Mimeo, October 1979 (submitted for publication).
- "Rural labor market structure and child employment in Bangladesh." Paper presented at an ILO Informal Workshop on Child Labor, Geneva, October 10-13, 1979.
- "Labor market structure, child productivity, and reproductive behavior in rural South Asia," with A.B.M. Khorshed Alam Mozumder. Forthcoming in ILO volume on Child Labor, 1980.

OTHER PROFESSIONAL ACTIVITIES:

(a) Teaching

- | | |
|----------------|---|
| 1974 | Lecturer in Demography, Department of Social Relations, Johns Hopkins University |
| 1975 | Teaching assistant in Introductory Sociology, Department of Social Relations, Johns Hopkins University |
| 1980 (January) | Visiting Lecturer (Population and Development), Faculty of Economics and Rural Development, University of Gezira, Sudan |

(b) Referee

Demography, Population and Development Review, Studies in Family Planning, Bangladesh Development Studies, East-West Population Center Monographs, Rockefeller Foundation Grant Proposals.

(c) Member, Editorial Committee, Population and Development Review, 1980-

OTHER PROFESSIONAL ACTIVITIES (continued):

(d) Book Reviews

Population and Development Review

(e) Other

Consultant, Bangladesh Fertility Survey, 1975.

Participant (presenter), IUSSP General Conference, Mexico City, 1977.

Participant, Workshop on Time Budget Data, The Asia Society, New York, September 1978.

Participant, Workshop on Data Needs for the Diagnosis of Poverty in Developing Countries, The Asia Society, Washington, D.C., December 1978.

Participant, Workshop on Population Information for City Planning and Management, Population Council Regional Office, West Asia and North Africa, Cairo, February 1979.

Participant, Workshop on Agricultural Labor for the Modern (Irrigated) Schemes, University of Gezira, Wad Medani, Sudan, February 1979.

Consultant, Social Research Center, American University, Cairo, August 1979.

Participant, Conference on Adjustment Mechanisms of Rural Labor Markets in Developing Areas, Agricultural Development Council and ICRISAT, Hyderabad, India, August 1979.

Seminars, Bangladesh Institute of Development Studies and Women for Women, Dacca, Bangladesh, September 1979.

Participant, Workshop on Child Labor, Population and Labor Policies Branch, ILO, Geneva, October 1979.

VITA

April, 1977

Name: Anrudh Kumar Jain

Nationality: Indian

Permanent Residence: United States

Educational Background:

<u>Degree</u>	<u>Institution</u>	<u>Year</u>
Ph.D. (Sociology)	University of Michigan, USA	1968
M.A. (Sociology)	University of Michigan, USA	1965
M.A. (Mathematical-Statistics)	Delhi University, India	1960
B.Sc. (Physics, Mathematics, Statistics)		1958

Awards and Fellowships:

"The Population Studies Center Fellowship" in the Department of Sociology,
The University of Michigan, August 1963-December 1967.

"Merit Scholarship" in Hindu College, Delhi University, India, 1958-60.

Professional Experience:

The Population Council, New York:

Associate, International Programs (November 1976-present). Present duties include, (1) development and support of the Council's international activities in the field of assessment of the impacts of development policies and projects on population dynamics; (2) liaison or backstopping responsibilities for the Council's program in South Asia.

The Population Council, New York: (continued)

Assistant Director, Biomedical Division (December, 1973-November, 1976). Was responsible for designing, management, coordination and analysis of multi-center clinical trials to assess the safety and effectiveness of fertility regulation methods. The work was undertaken as part of the contraceptive development research program sponsored and coordinated by the International Committee for Contraception Research of the Population Council.

Department of Family Planning, India:

Staff Associate (November, 1971-December, 1973). Worked with the Commissioner, Family Planning, Department of Family Planning and the Director, National Institute of Family Planning. Organized the evaluation research to provide information regarding the use-effectiveness of the Copper-T in actual field conditions, which included the selection of the Primary Health Center for the field trials, the proper training of the medical and paramedical staff, a close follow-up of their activities after the training and developing of the motivational strategy. In addition, I was made responsible for organizing the field work, preparing the questionnaire and analysis of the data collected by interviewing women who accepted an IUCD during 1965-69 from Safdarjung Hospital in New Delhi.

The Ford Foundation - Department of Family Planning, India:

Programme Associate - Evaluation - (March 1970 - August 1970).

Programme Associate - Marketing Research (August 1970-October, 1971)

Worked with the Marketing Executive Nirodh (Condom) Marketing Organization in the Department of Family Planning. While organizing marketing research to provide the marketing information for purposes of planning, execution, control and evaluation. I also worked closely with him and the System Development Planner in formulating the overall marketing strategy including the development of the Nirodh (Condom) advertising campaign, the distribution system as well as other matters (e.g. pricing, packaging) connected with the creation of primary demand for Nirodh (Condom) and with improvement of the efficiency of the programme operation. My responsibilities may be summarized as follows:

1. To anticipate information requirements of the Nirodh Marketing Programme, and to take necessary steps to meet these needs.
2. To initiate action-oriented research projects especially to those testing new ways and means for increasing the primary demand for the condom.

3. To provide technical guidance in preparing the study design of, and coordination of the conduct of research work entrusted to outside agencies, such as Operation Research Group, Baroda.
4. To collect, analyze and present all available information to decision makers which would be helpful in planning, execution, control and evaluation of Nirodh Marketing Strategy, for example, (a) the characteristics and attitudes of Nirodh users and non-users; (b) attitudes of trade - retailers, stocklists, distributors - regarding their involvement in Nirodh distribution; and (c) the sale potential of the Nirodh (condom) in India.
5. To keep abreast of experience and research in India and elsewhere, relevant to the effective marketing of Nirodh in particular and Family Planning in general.

The University of Michigan:

Assistant Professor, Department of Sociology, (August 1968-April 1969).
Research Associate, The Population Studies Center, (January 1968-February 1970).

Research Assistant, The Population Studies Center, (January 1967-December, 1967).

Assistant in Research, The Population Studies Center, (1964-1966).

Course Taught: Advance Population Studies II (Sociology 631)

The course focuses on different techniques for studying spatial and temporal aspects of ecological organization, for example, residential segregation, time series analysis, components of change, cohort analysis, flow table, gravity and potential models and path analysis.

Research:

I was associated with a large scale project whose main focus was the evaluation of the mass family planning program in Taiwan. I have had major responsibility in processing and analyzing data collected through clinical records and sample surveys by the Taiwan Population Studies Center. This included: (1) maintenance of data files, (2) analysis socio-economic and demographic characteristics of users and non-users of contraception (3) application of the "life-table technique" in determining the correlates of IUD termination, (4) estimation of fecundity components required for better understanding of the human reproduction process, (5) analysis of contraceptive experience of women after terminating the IUD, (6) fertility comparisons of IUD acceptors and non-acceptors prior to accepting the IUD; and (7) mathematical formulation of the human reproduction process helpful in estimating births averted due to contraceptive use.

During January and February 1970, I was stationed at the Population Studies Center in Taiwan. During this period I gave on the job training to five research associates working with the Family Planning Program in Taiwan. This included the formulation of research problems, data analysis, interpretation of the results and finally writing of the report.

Office of the Registrar General, India

Senior Technical Assistant (1962-63); and Statistical Assistant (1960-62).

Worked with the Deputy Registrar on designing the schedule, field work, tabulation plans, and analysis of the "Sample Census of Births and Deaths," "Post Enumeration Check of 1961 Indian Census." Also worked with him in the analysis and preparation of the "Age Tables from the 1961 Census of India."

Delhi University, India

Investigator in "Socio-economic Survey of Delhi University Students" conducted by the Delhi School of Economics, India (November 1958-March 1959).

Professional Membership

Population Association of America
International Union for the Scientific Study of Population - Member
of the Committee for Comparative Analysis of Fertility.
Indian Association for the Study of Population
Editorial Board of Demography - India
Associate Editor of Contraception

Publications:

"Lactation and Natural Fertility" (with Albert I. Hermalin and Te-Hsing Sun). Paper presented at the Seminar on Natural Fertility organized by the International Union for the Scientific Study of Population and Institut National d'Études Démographiques, Paris (March 1977).

"Non-Medicated Intrauterine Devices: Review and Assessment". WHO Symposium on Advances in Fertility Regulation, Moscow, USSR, 16-19 November, 1976.

"Fecundability following the Discontinuation of IUD use Among Taiwanese Women" (with Baron Moots). Journal of Biosocial Science, 9, April 1977.

"Mortality Risk Associated with the Use of Oral Contraceptives" Studies in Family Planning, 8 (3), March 1977.

"Life Table Analysis of IUDs: Problems and Recommendations". (with Irving Sivin). Studies in Family Planning, 8 (2), February, 1977.

"Identification of Target Group for Vasectomy". Economic and Political Weekly, XI (51), December 18, 1976.

"Management and Outcome of Pregnancies Associated with the Copper T Intrauterine Contraceptive Device". (With Howard J. Tatum and Frederick H. Schmidt). American Journal of Obstetrics and Gynaecology. 126 (7), December 1, 1976.

"Cigarette Smoking, Use of Oral Contraceptives, and Myocardial Infarction". American Journal of Obstetrics and Gynaecology. 126 (3), October, 1976.

"India Country Profile." (With Pravin Visaria). The Population Council, New York, May 1976.

"Comparative Performance of Three Types of IUDs in the United States" in Hefnawi F. and Segal S. J., (Eds.) Proceedings of the Third International Conference on Intrauterine Contraception. North-Holland Publishing Company, Amsterdam, 1975.

"Safety of Effectiveness of Intrauterine Devices". Contraception. 11 (3), March 1975.

"An Appraisal of Family Planning in India". In Population in India's Development 1947-2000. (Eds.) A. Bose, P. B. Desai, Asok Mitra and J. N. Sharma. Vikas Publishing House Pvt Ltd. Delhi 1974.

"Preference about Sex of Children and Use of Contraception Among Women Wanting No More Children in India". (With D. V. N. Sarma). Demography - India, III (1), 1974.

"Post Insertion Contraceptive and Fertility Behavior of IUCD Acceptors",
New Delhi: National Institute of Family Planning. Technical Paper
No. 18, 1973.

"Marketing Research in the Nirodh Program". Studies in Family Planning,
4 (7). 1973.

"Relative Effectiveness of Different Fertility Control Methods in Reducing
Community Reproduction Rates". Proceedings of the International Population
Conference. IUSSP Liege 1973.

"Interrelation between Lactation, Postpartum Amenorrhea and Socio-economic
and Demographic Characteristics of Taiwanese Women" (with T. H. Sun).
Demography-India 1 (1), 1972.

"Fertility After Insertion of An Intrauterine Device in Taiwan's Family
Planning Program". (with R. Freedman, A. I. Hermalin and T. H. Sun)
Social Biology, Vol. 18, No. 1, (March, 1971).

"Change in Knowledge, Attitude, and Practice: 1965-67 . (With M. C.
Chang). Taiwan Family Planning Reader. Edited by George P. Cernada.
The Chinese Center for International Training in Family Planning, Taichung,
Taiwan, 1970.

"Correlates of Family Limitation in Taiwan After IUD Insertion". (With
R. Freedman and T. H. Sun). Taiwan Family Planning Reader, edited by
George P. Cernada. The Chinese Center for International Training in
Family Planning, Taichung, Taiwan, 1970.

"Net Delay of Next Conception by Contraception: A Highly Simplified
Case". (With R. G. Potter and B. McCann). Population Studies. 24 (2),
July 1970.

"Demographic Aspects of Lactation and Post Partum Amenorrhea". (With
T. C. Hsu, Ronald Freedman, and M. C. Chang). Demography 7 (2), May
1970.

"Pregnancy Outcome and the Time Required for Next Conception". Population
Studies, 23 (3), November 1969.

"Fecundity Models for Estimating Fertility over the Reproductive Period"
(With Albert I. Hermalin) International Union for the Scientific Study
of Population. London, September 1969.

"Fetal Wastage in a Sample of Taiwanese Women". Milbank Memorial Fund
Quarterly, 47 (3), July 1969.

"Relative Fecundability of Users and Non-Users of Contraception".
Social Biology, 16 (1), March 1969.

"Fecundability and Its Relation to Age in a Sample of Taiwanese Women."
Population Studies, 23 (1), March 1969.

"Socio-Economic Correlates of Fecundability in a Sample of Taiwanese Women".
Demography 6 (1), February 1969.

"Effectiveness of Intrauterine Contraception: Termination Levels and Correlates". (With R. G. Potter, L. P. Chow, and C. H. Lee), Family Planning in Taiwan: Tradition and Change, R. Freedman and J. Y. Takeshita. Princeton University Press, Princeton, N.J. 1969.

"Predicting Duration Specific Averages and Variances of Live Births: Application of a Stochastic Model of Human Reproduction", Proceedings of the Social Statistics Section of the American Statistical Association, 1968.

"Fecundity Components in Taiwan: Applications of a Stochastic Model of Human Reproduction". Ph.D. dissertation published on microfilm, University of Michigan, 1968.

"Correlates of IUD Termination in a Mass Family Planning Program: The First Taiwan IUD Follow-up Survey". (With L. P. Chow, R. Freedman, and R. G. Potter, Jr.). Milbank Memorial Fund Quarterly, 46 (2), April 1968. Condensed version in Studies in Family Planning No. 24, December 1967.

"Taiwan: IUD Effectiveness in the Taichung Medical Follow-up Study". (With R. G. Potter, Jr., L. P. Chow and C. H. Lee). Studies in Family Planning. No. 18, April 1967.

"Social and Demographic Correlates of IUD Effectiveness: The Taichung Medical Follow-up Study". (With R. G. Potter, Jr., L. P. Chow and C. H. Lee). Proceedings of the Social Statistics Section of the American Statistical Association, 1969.

CURRICULUM VITAE

March 1980

Geoffrey McNicoll

The Population Council
1 Dag Hammarskjold Plaza
New York, N.Y. 10017
Tel: (212) 644-1780

MARITAL STATUS: Married

CITIZENSHIP: Australian

PRESENT POSITION: Deputy Director
Center for Policy Studies
The Population Council

FIELDS OF INTEREST: Population Policy; Economic Development;
Population Economics; Demography

GRADUATE STUDIES: Department of Demography, University of
California, Berkeley, Degrees: M.A., 1970,
Ph.D., 1972

Dissertation Title: Optimal Policies in Economic-Demographic
Growth Models

UNDERGRADUATE STUDIES: University of Melbourne, Australia,
Degree: B.Sc., 1964

Majors: Pure Mathematics, Mathematical Statistics

RESEARCH AND TEACHING EXPERIENCE:

1965-67 Statistician, Central Bureau of Statistics, Jakarta
1968 Staff, Philippine Project, Center for Development
Planning, National Planning Association,
Washington, D.C.
1971-73 Research Associate, East-West Population Institute,
East-West Center, Honolulu
1973 Assistant Professor of Population Studies,
University of Hawaii
1974- Associate (1974-77), Senior Associate and Deputy
Director (1978-), Center for Policy Studies
(formerly Demographic Division), The Population
Council, New York

OTHER PROFESSIONAL EXPERIENCE.

1972 Consultant, Ford Foundation, Jakarta
1973 Member, I.L.O. Comprehensive Employment Strategy
Mission, Manila ("Ranis Mission")
1975 Consultant, Bangladesh Institute of Development
Studies, Dacca

OTHER PROFESSIONAL EXPERIENCE (Cont'd)

- 1977- Editorial Board, Population and Development Review
 1978-79 Member, Indonesia Panel, National Research Council
 Committee on Population and Demography
 1979 Member, Joint UN/UNFPA Consultative Group on Population-
 Development Modelling

MEMBERSHIP IN PROFESSIONAL SOCIETIES:

International Union for the Scientific Study of Population;
 American Economic Association; Population Association of
 America

PUBLICATIONS:

(a) Books and Monographs

Trade and Growth in the Philippines: An Open Dual Economy, with G. L. Hicks,
 Cornell University Press, Ithaca, 1971, 244 pp.

Recent Population Growth of Indonesia, with Lee-Jay Cho, S.G.M. Mamas and S.
 Suharto, Kyoto University Institute of Southeast Asian Studies, Kyoto, forth-
 coming.

(b) Articles in Books and Professional Journals

"Internal Migration in Indonesia," Indonesia (Cornell University Modern
 Indonesia Project), No. 5, April 1968, pp. 29-92.

"On Demographic Turnpikes," in Proceedings of the International Population
 Conference, Liege, International Union for the Scientific Study of Popula-
 tion, Liege, 1973, Vol. 1, pp. 463-475.

"Community-Level Population Policy: An Exploration," Population and Devel-
 opment Review, Vol. 1, No. 1, September 1975, pp. 1-21.

"Large-Scale Simulation Models in Population and Development: What Use to
 Planners?" with W. B. Arthur, Population and Development Review, Vol. 1,
 No. 2, December 1975, pp. 251-265.

"Economic-Demographic Models," in Population Growth and Economic Develop-
 ment in the Third World, ed. Leon Tabah, Ordina Editions, Dolhain, Belgium,
 for International Union for the Scientific Study of Population, 1976, pp.
 649-676.

PUBLICATIONS (Cont.):

"The Borrie Report: Issues of Population Policy in Australia," Population and Development Review, Vol. 2, No. 1, March 1976, pp. 79-89.

"Optimal Time-Paths with Age Dependence: A Theory of Population Policy," with W. B. Arthur, Review of Economic Studies, Vol. 44, No. 1, February 1977, pp. 111-123.

"Samuelson, Population, and Intergenerational Transfers," with W. B. Arthur, International Economic Review, Vol. 19, No. 1, February 1978, pp. 241-246.

"An Analytical Survey of Population and Development in Bangladesh," with W. B. Arthur, Population and Development Review, Vol. 4, No. 1, March 1978, pp. 23-80.

"Population and Development: Outlines for a Structuralist Approach," Journal of Development Studies, Vol. 14, No. 4, July 1978, pp. 79-99. Also in Population and Development, ed. Geoffrey Hawthorn, Frank Cass, London, 1978.

"On Fertility Policy Research," Population and Development Review, Vol. 19, No. 4, December 1978, pp. 681-693.

"The Demography of Post-Peasant Society," in Proceedings of the Conference on Economic and Demographic Change: Issues for the 1980's, Helsinki, 1978, Liege, International Union for the Scientific Study of Population, 1979.

"Institutional Determinants of Fertility Change," in Proceedings of the Seminar on Determinants of Fertility Trends: Major Theories and New Directions for Research, Bad Homburg, 1980, forthcoming.

(c) Other Papers, Bibliographies, Book Reviews, etc.

The Indonesian Economy, 1950-1965: A Bibliography, and Bibliographic Supplement, with G. L. Hicks, Yale University Southeast Asia Studies, New Haven, 1967-68, 248 and 211 pp.

"Research in Indonesian Demography: A Bibliographic Essay," Working Paper No. 6, East-West Population Institute, Honolulu, 1970, 50 pp.

"On Aggregative Economic Models and Population Policy," Working Paper No. 18, East-West Population Institute, Honolulu, 1971, 87 pp.

"Optimal Population Policy: A Report on Work in Progress," with W. B. Arthur, paper presented at the Fourth Conference on the Mathematics of Population, Honolulu, 1971, 18 pp.

PUBLICATIONS (Cont.):

"Optimal Population Policy," with W. B. Arthur, paper presented at the XIX International Conference of the Institute of Management Science, Houston, 1972; also issued as Working Paper No. 24, East-West Population Institute, Honolulu, 1972, 54 pp.

The Demographic Situation in Indonesia, with S. G. M. Mamas, East-West Population Institute, Honolulu, 1973, 60 pp. Indonesian translation published by Institute of Population Studies, Gadjah Mada University, Yogyakarta, 1976.

"Final Report," in Proceedings of the Seminar on Demographic Research in Relation to Population Growth Targets, St. Augustine, Trinidad, 1973, Committee for International Coordination of National Research in Demography, Paris, 1973, pp. 93-99.

Asian Universities and Population Policy; Report for the Conference Held in Yogyakarta, 4-7 April 1972, co-edited with H. J. Koesoemanto, Gadjah Mada University Press, Yogyakarta, 1973, 107 pp.

[Review of C. Goldscheider, Population, Modernization, and Social Structure], Economic Development and Cultural Change, Vol. 23, No. 1, October 1974, pp. 190-192

"Notes on Demographic Transition from a Transfer Perspective," paper presented at the Seminar on Demographic Transition in Asia and the Pacific, East-West Population Institute, Honolulu, 1976.

Estimates of Fertility and Mortality in Indonesia Based on the 1971 Population Census, with L. J. Cho, S. Suharto, and S. G. M. Mamas, Central Bureau of Statistics, Jakarta, 1976, 67 pp.

"For and Against Large Scale Simulation Models in Population and Development: Review of an Exchange," paper prepared for the Workshop on Country Reports on Population and Development, Bergen, Norway, 1977; also issued as Working Paper no. 13, Center for Policy Studies, The Population Council, New York, 20 pp.

[Review of R. Ridker, Population and Development: The Search for Selective Interventions]. Human Ecology, Vol. 6, No. 3, September 1978.

"Technology and the Social Regulation of Fertility," paper presented at the Conference on Science in the Service of Life, Vienna, 1979; also issued as Working Paper no. 46, Center for Policy Studies, The Population Council, New York, 22 pp.

"Notes on Population-Development Modelling and Policy Formation," paper prepared for the Meeting of the Joint UN/UNFPA Consultative Group on Population-Development Modelling, Geneva, 1979.

PROGRAM COMMITTEE CHAIRPERSON

CURRICULUM VITAE

NAME: Ansley J. Coale

ADDRESS: Office of Population Research
Princeton University
Princeton, New Jersey

MARITAL STATUS: Married

CITIZENSHIP: USA

PRESENT POSITION: Professor of Economics, Princeton University

EDUCATION: B.A. Princeton University, 1939

M.A. Princeton University, 1941

Ph.D. Princeton University, 1947

EXPERIENCE:

Social Science Research Council, 1946-47
Princeton University, 1947- ; Professor of Economics, 1959-
Director, Office of Population Research, Princeton, 1959-75
U.S. Representative, U.N. Population Commission, 1961-67
Chairman, Committee on Population and Demography, National
Academy of Sciences, 1978-

MEMBERSHIPS:

Fellow, American Statistical Society
Population Association of America (President 1967-68)
American Economic Association
International Union for the Scientific Study of Population,
President, 1977-
National Academy of Sciences
American Academy of Arts and Sciences

MAJOR PUBLICATIONS:

Population Growth and Economic Development in Low Income Countries,
1958 (with Edgar M. Hoover)
New Estimates of Population and Births in the United States, 1963
(with Melvin Zelnik)
Regional Model Life Tables and Stable Populations, 1966
(with Paul Demeny)
The Growth and Structure of Human Populations, 1972
Human Fertility in Russia Since the Nineteenth Century, 1979

MEMORANDUM

June 19, 1979

TO: See Distribution

FROM: DS/PO, W. E. Allie *W.E. Allie*

SUBJECT: Minutes of Review Meeting on NAS Proposal: Studies of Fertility Determinants

DAA/DS, Dr. Stephen Joseph presided over an agency-wide meeting on May 30 in Room 3886 N.S. to discuss the subject Project Paper.

Conclusions

- The NAS's past work, especially thru the use of panels, has been supported by Missions in each geographic region.
- RAC should be given a description of the research agenda for comment, when NAS has developed it.
- A state-of-the-art study is needed and should be completed, i.e., go beyond just what A.I.D. has been involved in.
- A.I.D.-funded fertility determinants research work requires special coordination because it involves both DS and PPC funding.
- Research funding must be translated into practical, actionable steps that A.I.D. can take in its program.

Actions to be Taken

A mid-term evaluation of the current NAS project (932-0649) should be scheduled by DS/POP.

The NAS proposal should be submitted to RAC for its July meeting.

Miscellaneous

The NAS's proposal would fit in with the first task planned under "Population Policy Research." Three major tasks are envisioned: (1) further development of methodology (theoretical); (2) filling the gaps in research (which would entail a program of grants); and (3) providing a funding arrangement to respond to Mission and other proposals.

Current work by NAS is under project no. 932-0649, Compilation and Analysis of Population Data has focussed on development of country panels to examine demographic data on Bangladesh, India, Indonesia, Korea, Thailand, Brazil, Egypt, Tunisia, Turkey and Tropical Africa (7 ldc's).

Some concern was expressed that no evaluation had been made of NAS's past work prior to consideration of the current proposal.

Much of the meeting was devoted to trying to clarify relationships between the NAS proposal and other work being done on fertility determinants. The proposal isn't clear on whether it is a 3 year project or the first phase of a continuing relationship. The state-of-the-art study was supported but the implementation of a research agenda cannot be discussed adequately until after the study is done.

For the July meeting, RAC's focus should be on the proposal because the broader program has not yet been defined. Further RAC review will be sought early in the project.

Attachment: Issues Paper

Issues Paper for Review of Studies of Determinants
of Fertility Project Statement (932-0643)

Wednesday, May 30, 1979, 2:30 p.m. Room 3886 N.S.

DSB is committed to developing and funding a strong program of research on the determinants of fertility. In its December 1978 report, the House Select Committee on Population strongly supported research on the interrelationships of population and development. The Int'l. Development and Food Assistance Act of 1978 calls for particular assistance to be given to these interrelationships (Sec. 104 (d)). The issues listed below are raised to evoke discussion on the specific NAS proposal and on DS/POP's strategy for its overall fertility research program.

Documents in addition to the NAS proposal are (1) the attached project data sheet contained in the FY 1981 DS/POP ABS and (2) supplementary materials on the NAS implementation plan and on the office's strategy to be handed out at the meeting.

1. Is the NAS proposal a three year project or the first phase of a continuing relationship on fertility determinants research? Has its work under the Compilation and Analysis of Population Data been evaluated?
2. DS/POP says this proposal could set the parameters for the Agency's overall research efforts on fertility determinants. Will the proposed "research agenda" do this? When would it be available? Will it also cover the areas which PPC has been most interested in? The proposal identifies three variables to focus research on - education, health, and family planning. How different would the "research agenda" be after the state-of-the-art review? Is there really the need for a state-of-the-art review?
3. How does one distinguish the country research which NAS wants (to do) from the research which AID would be responsible for? Is there enough information in the proposal on which to base an approval of any NAS research at this time?
4. The NAS proposal represents only a part of the activities on fertility determinants research identified under the project data sheet for Population Policy Research. How does DS/POP plan to cover the other activities and when will the regional bureaus be asked to review them?
5. Should PAC focus only on this NAS proposal or should it also focus on broader program issues?
6. Is there any serious overlap between the research analysis efforts under the DS/POP/DEMO projects and the policy division's fertility research efforts?

DS/PO

NATIONAL ACADEMY OF SCIENCES

File 0693

OFFICE OF CONTRACTS AND GRANTS
1101 CONSTITUTION AVENUE
WASHINGTON, D. C. 20418

August 9, 1979

AUG 10 1979

Dr. R. Joseph Speidel
Acting Director
Office of Population
Agency for International Development
Department of State
Washington, D.C. 20523

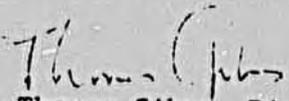
Dear Dr. Speidel:

Pursuant to the discussions between Dr. Sarah Green and Dr. Robert Lapham concerning the proposal by the Committee on Population and Demography for the Study of the Determinants of Fertility Change submitted to you by letter dated April 27, 1979 from Mr. John S. Coleman, Executive Officer, National Academy of Sciences, we would be pleased to add an addendum to the proposal and its accompanying budget specifying an "end of project conference". This conference would be held in Washington, D.C. for a period of approximately one week, with about 50 participants from outside the Washington area for whom travel and per diem support would be necessary. This conference may be co-sponsored with one or more other organizations, i.e. the United Nations Fund for Population Activities.

The estimated cost of this end-of-project conference is described in the attached budget addendum for project year 3. The total estimated cost of this addendum is \$64,500, and the total estimate of costs for the project is increased to \$1,299,800.

Your assistance in this matter is appreciated.

Sincerely yours,



Thomas Gikas, Director
Office of Contracts and Grants

FG:pt
Enclosure

NATIONAL ACADEMY OF SCIENCES

Assembly of Behavioral and Social Sciences
Committee of Population and Demography
Study of the Determinants of Fertility Change

Addendum

Estimate of Costs

Third Year-12 Months

(September 1, 1981 - August 31, 1982)

Travel Expense

End of Project Conference \$59,450

General and Administrative Costs

(8.5% of \$59,500) 5,050

Total \$64,500

UNITED STATES GOVERNMENT

Memorandum

TO : Bureau Review Committee Members

DATE: 30 May 1979

FROM : DS/POP/PDD, Sarah C. Green *SCG*

SUBJECT: Committee Review of Program Proposal, Office of Population/DSB.

The Program Office, DSB, has asked me to provide additional information to assist in your review of the NAS Proposal for the Study of Determinants of Fertility Change. This additional information involves two points: 1) the role the NAS Proposal will occupy in the Office of Population project for Population Policy Research (project 932-0643) for the Research on the Determinants of Fertility, and 2) the role of this project in the overall Agency stance in regard to social science research. In addition, I have provided supplementary information on the implementation of the project by the NAS and a schedule for obligating the additional funds by the close of this fiscal year, requested by the Contracts Office.

The NAS Proposal in the Context of the Office of Population Project for Population Policy Research (932-0643).

As stated in our presentation of the FY 1981 program, we anticipate that our Population Policy Research project (932-0643) will have three components in furtherance of the aim of policy guidance for socio-economic determinants of fertility. 1) The first component is the NAS study as described herein. We expect that it will contribute in two ways: through the state of the art assessment, it will assist AID in identifying five or six broad areas of fertility determinants in which to solicit research proposals; and through direct research on several specific topics, such as measurement of program effort, it will advance the state of the art. We are approaching this project by letting the NAS effort provide a spearhead for the applied research program, and have therefore decided to delay its implementation until FY 80. The additional activities anticipated under the project are: 2) to seek, process and fund studies of policy relevant social science research by developing country institutions, and 3) to respond to unsolicited USAID-forwarded proposals on the determinants of fertility. Depending on their size, we anticipate that 4 to 6 research proposals will be funded each fiscal year beginning in FY 80 when the mechanism is in place. The contractor to be selected should provide sufficient technical assistance to assure the quality of the proposals and the feasibility of the research. Preliminary reports from the work of the NAS panel will identify major areas of research needs from a scientific point of view. AID will provide inputs from a programmatic point of view. Procurement of the contractor to undertake tasks two and three under the project will then proceed.



Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

The Office of Population is not asking for the authority to proceed to procure these two additional tasks under the present project statement, but will do so through an amendment to the project when the outlines of the project are more clearly defined. The model for the project will be that of the PARFR project--Program of Applied Research in Fertility Regulation with Northwestern University. It involves a small core staff of professional employees and support staff, supplemented by a Technical Advisory group which meets periodically to conduct reviews of research project proposals.

Overall Agency (and beyond) Approach to Social Science Research

In response to Section 104d of the FAA, AID is required to examine development projects in their indirect impact on fertility levels. To respond to the Agency requirement, several approaches have been followed; these are sketched briefly on pages 10-11 of the project statement.

The Population Council Grant AID/otr-G-1702 for the Study of Fertility Impacts of Development Projects in Asia is dedicated to sponsoring studies of the impact of development projects on fertility. Currently underway or under review are projects on the impact of rural development activities in Comilla, Bangladesh; the impact of a land settlement scheme in Thailand; and Federal Land Development authority in Malaysia. Other project activities include workshops on the relationships between agriculture, fertility, and population and development in Indonesia; and regional fertility relationships in Thailand. Verbal and consultancy contracts are underway for all the countries of the region to develop activities of interest.

Also on the more applied end of the continuum is the study by Research Triangle Institute to elaborate the relationships between rural development projects and fertility. The first phase is a series of state of the art assessments between fertility and seven intervening variables, including cost and value of children, internal migration, health, education, female status, income and wealth and land holding patterns. Preliminary reports on the findings are being presented on 30 May 1979, just prior to this project review.

The approach by the Office of Population in support of Title 104d activities has been twofold. One has been to solicit research proposals and administer directly small research grants on relationships of interest: i.e., fertility and female status and roles, and fertility and infant mortality. In addition, unsolicited proposals have also been funded for similar research proposals. The second approach has been the identification of potential areas of 104d studies through the

Battelle project (Contract AID/pha-C-1169). Field work is just underway in the Cayamarca area of a reforestation project in Peru. Battelle has also been involved in planning workshop/seminars on population impact analysis.

On the more theoretical side of the continuum are two projects. One is the work of the International Review Group (IRG) of Social Science Research on Population and Development board at the Colegio de Mexico. The work of this project was widely supported by international donor groups (Ford, Rockefeller) and indirectly by AID through its programmatic grant to the Population Council. Through a series of workshops and study sections for each region of the world, the group headed by Carmer Miro examined potential social science contributions to understanding the relationships between population dynamics and social science research. Mortality, internal and international migration are also viewed as important topics for study, with fertility in its several aspects, viewed as only one topic for study. There was particular emphasis on the need for more explicit theories of fertility decline, treating the influences on fertility choices. Specifically identified were: economic costs and benefits, social and administrative pressures and internalized values. The draft report also cited the need for more systematic attention to the effects of family planning programs, particularly where direction of casualty can be determined.

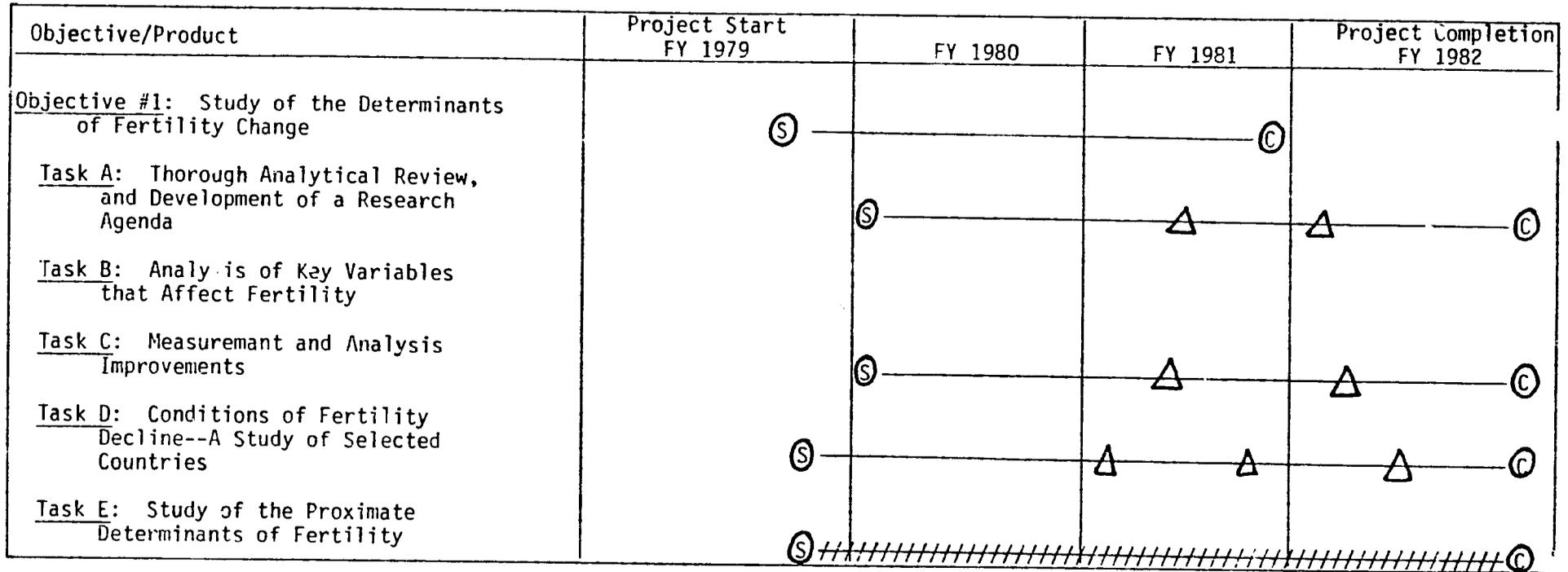
The proposal by the NAS is specifically addressed to the subset of the fertility topics - the measurement of program effect (in conjunction with the ongoing work at the Population Council by Mauldin and Berelson) and the impact of health and education as variously measured in specific country settings. Taking off from the IRG report, these relationships will be measured and examined in much greater detail than possible therein. The detailed country studies will permit the examination of the interplay of determinants of research in greater detail than possible in the overview work of the IRG.

The two reports of the NAS and IRG taken together will identify the important directions for AID's program of social science research in fertility will take for the next several years.

Contract Implementation Schedule

The NAS Proposal is scheduled to be reviewed at the July meeting of the RAC, 12-13 July. At that time, the PAF, PIO/T amending the present Contract, Sole Source Waiver, and other required program documents will be submitted for final approval and implementation.

MILESTONE LIFE-OF-PROJECT SCHEDULE
National Academy of Sciences Project
Study of the Determinants of Fertility Change



- Key
- (S) Starting Event
 - (C) Completion Event
 - △ Interim Target/Milestone

//// No specific product envisaged; the study of the proximate determinants of fertility will be included as appropriate and necessary in Tasks A, B, C and D.

Format for Workplan/Contract Budget and Life-of-Project Cost Estimate

	<u>First Two Project Years</u>		<u>Workplan</u>	<u>To Project</u>	<u>Total</u>
	<u>Year 1</u>	<u>Year 2</u>	<u>Subtotal</u>	<u>Completion</u>	<u>Estimated</u>
<u>INPUTS</u>				<u>(Project year 3)</u>	<u>Life-of-Project</u>
					<u>Research Cost</u>
(SEE DETAILED ANNUAL BUDGETS)					
<u>OUTPUTS</u>					
Research Objective #1: Study of the Determinants of Fertility Change					
<u>Task A: Thorough Analytical Review, and Development of a Research Agenda</u>	\$ 99,350	\$ 99,350	\$198,700	--	\$ 198,700
<u>Task B: Analysis of Key Variables that Affect Fertility</u>	91,900	128,500	220,400	129,800	350,200
<u>Task C: Measurement and Analysis Improvements</u>	89,450	130,250	219,700	157,800	377,500
<u>Task D: Conditions of Fertility Decline-- A Study of Selected Countries</u>	<u>80,500</u>	<u>104,200</u>	<u>184,700</u>	<u>174,200</u>	<u>308,900</u>
Total Costs by Outputs	\$361,200	\$462,300	\$823,500	\$411,800	\$1,235,300

Assembly of Behavioral and Social Sciences
 Committee on Population and Demography
 Study of the Determinants of Fertility Change

Estimate of Costs
 First Year - 12 Months
 (1 May 1979 - 30 April 1980)

Personal Services

Professional Staff

Senior Research Associate (FT @ \$38,000/yr.)	\$38,000		
Research Associate (9 mos. @ \$26,000/yr.)	19,500		
Research Associate (10 mos. @ \$24,000/yr.)	20,000		
Editor (1 mo. @ \$30,000/yr.)	2,500		
Research Assistants (6: non-payroll)	31,800		
Computer Programmers (4: non-payroll)	8,000		
Consultants (120 days @ \$150/day)	18,000	\$137,800	

Secretarial-Clerical

Secretary (FT @ \$12,600/yr.)	12,600		
Statistical Clerk (FT @ \$12,200/yr.)	12,200		
Secretaries (6: non-payroll)	11,000		
Borrowed Personnel (32 days @ \$50/day)	<u>1,600</u>	<u>37,400</u>	\$175,200

Fringe Benefits (19% of \$104,800)			19,912
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Overhead (45% of \$124,712)			56,120
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Travel Expenses

Domestic Travel

Panel (3 meetings x 12 members x \$300)	10,800		
Staff (10 trips @ \$200)	2,000		
Workshops (2 x 15 participants @ \$300)	<u>9,000</u>	21,800	

International Travel

Panel members/consultant (2 trips @ \$2,000)	4,000		
Staff (1 trip @ \$2,000)	<u>2,000</u>	<u>6,000</u>	<u>27,200</u>

279,032

(continued)

Year 1 - continued

\$279,032

Communications and Shipping

Telephone	\$2,500	
Postage and Cables	<u>2,000</u>	4,500

Materials and Services

Reproduction and Duplication

Report printing (150 pages, 500 copies)	\$2,400	
Papers, agenda, etc.	<u>1,000</u>	3,400

Other Supplies and Services	6,000	
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Data Processing (470 hours @ \$85/hr.)	<u>39,950</u>	49,350
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General and Administrative Costs

(8.5% of \$332,882)		<u>28,318</u>
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Total		<u>\$361,200*</u>
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It is understood that the contract will provide for advance payment.

Assembly of Behavioral and Social Sciences
 Committee on Population and Demography
 Study on the Determinants of Fertility Change

Estimate of Costs
 Second Year - 12 Months
 (1 May 1980 - 30 April 1981)

Personal Services

Professional Staff

Senior Research Associate (FT @ \$40,500/yr.)	\$40,500		
Research Associate (FT @ \$27,800/yr.)	27,800		
Research Associate (FT @ \$25,700/yr.)	25,700		
Editor (1 month @ \$32,000/yr.)	2,667		
Research Assistants (8: non-payroll)	46,200		
Computer Programmers (3: non-payroll)	10,000		
Consultants (160 days @ \$150/day)	<u>24,000</u>	\$176,867	

Secretarial-Clerical

Secretary (FT @ \$13,500/yr.)	13,500		
Statistical Clerk (FT @ \$13,000/yr.)	13,000		
Secretaries (6: non-payroll)	13,000		
Borrowed Personnel (45 days @ \$50/day)	<u>2,250</u>	<u>41,750</u>	\$18,617

Fringe Benefits (19% of \$123,167) 23,402

Overhead (45% of \$146,569) 65,956

Travel Expenses

Domestic Travel

Panel (3 meetings x 12 members x \$300)	10,800		
Staff (10 trips @ \$200)	2,000		
Workshops (2 x 15 participants @ \$300)	<u>9,000</u>	21,800	

International Travel

Panel members/consultant (2 trips @ \$2,000)	4,000		
Staff (2 trips @ \$2,000)	<u>4,000</u>	<u>8,000</u>	<u>29,800</u>

337,775

(continued)

Year 2 - continued

\$337,775

Communications and Shipping

Telephone	\$2,500	
Postage and Cables	<u>2,200</u>	4,700

Materials and Services

Reproduction and Duplicating		
Report printing (400 pages, 1,000 copies)	\$12,800	
Papers, agenda, etc.	<u>1,500</u>	14,300
Other Supplies and Services	3,000	
Data Processing (780 hours @ \$85/hr.)	<u>66,300</u>	83,600

General and Administrative Costs

(8.5% of \$426,075)		<u>36,225</u>
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Total		<u>\$462,300*</u>
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*It is understood that the contract will provide for advance payment.

Assembly of Behavioral and Social Sciences
 Committee on Population and Demography
 Study of the Determinants of Fertility Change

Estimate of Costs
 Third Year - 12 Months
 (1 May 1981 - 30 April 1982)

Personal Services

Professional Staff

Senior Research Associate (FT @ \$43,300/yr.)	\$43,300		
Research Associate (FT @ \$29,750/yr.)	29,750		
Research Associate (FT @ \$27,500/yr.)	27,500		
Editor (2 mos. @ \$34,000/yr.)	5,666		
Research Assistants (3: non-payroll)	19,250		
Computer Programmers (2: non-payroll)	5,000		
Consultants (115 days @ \$150/day)	<u>17,250</u>	\$147,716	

Secretarial-Clerical

Secretary (FT @ \$14,500/yr.)	14,500		
Statistical Clerk (FT @ \$13,900/yr.)	13,900		
Secretaries (4: non-payroll)	7,000		
Borrowed Personnel (40 days @ \$50/day)	<u>2,000</u>	<u>37,400</u>	\$185,116

Fringe Benefits (19% of \$134,616) 25,577

Overhead (45% of \$160,193) 72,087

Travel Expenses

Domestic Travel

Panel (3 meetings x 12 members @ \$300)	10,800		
Staff (12 trips @ \$200)	<u>2,400</u>	13,200	

International Travel

Panel members (4 trips @ \$2,200)	8,800		
Staff (4 trips @ \$2,200)	<u>8,800</u>	17,600	<u>30,800</u>
			313,580

(continued)

\$313,580

Communications and Shipping

Telephone	\$2,500	
Postage and Cables	<u>2,400</u>	4,900

Materials and Services

Reproduction and Duplication

Report printing (300 pages, 1,500 copies)	\$14,400	
Papers, agenda, etc.	<u>1,500</u>	15,900

Other Supplies and Services	4,800	
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Data Processing (475 hours @ \$85/hr.)	<u>40,375</u>	61,075
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General and Administrative Costs

(3.5% of \$379,555)		<u>32,245</u>
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Total		\$411,800*
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*It is understood that the contract will provide for advance payment.

PROGRAM: CENTRALLY FUNDED

Attachment A

TITLE Population Policy Research		FUNDS Population Planning		Project Manager:		Proposed Obligation		Proposed Life of		Init.		Proposed Ent. Finnci		Proposed Completion	
NUMBER 932-0643	New []	PRIOR REFERENCE FY 1980		FY 81 Oblig. Auth.		FY 1981 2,600		Project Cost 12,500		Oblig. FY		Oblig. FY 83		Date FY 84	
Grant [] Loan []	Continuing [X]	Annex V Centrally funded Programs P. 77		by FF N/A		Life of Project per App. FF N/A		FY		Final Obligation per FF FY N/A		Completion Date per FF FY N/A			

PURPOSE: To study the population policy implications of socio-economic determinants of fertility and the consequences of fertility decline in health and well-being of populations.

FY 1981 PROGRAM: The NAS study of determinants will be well underway by that time and four to six projects for research will be underway. Six new projects will be identified and solicited during FY 81.

BACKGROUND & PROGRESS TO DATE: This project is designed to build on A.I.D.'s experience in various means of sponsoring research on determinants and consequences of rapid population growth, including child spacing, and to identify through these studies government actions in addition to family planning that will encourage lower fertility. The project is conceived in three major areas: 1) A continuation and reformulation of the work by the National Academy of Sciences, Committee for Population and Demography, to identify the most promising areas for applied fertility determinants research. 2) To seek, process and fund studies by host country institutions to meet these identified needs solicited competitively through such institutions. The contractor(s) are expected to provide technical assistance in design and implementation of the projects to assure that the highest scientific standards are adhered to, that results are appropriately directed toward target audiences of policy makers, and that local research institutions are strengthened. 3) This project will provide the capacity to respond to and administer unsolicited proposals from USAID Missions on fertility determinants research.

MAJOR OUTPUTS:

	Thru FY 1979		CUMULATIVE	
	Actual	1/ Per Approved FF	Life of Project Proposed	1/ Per Approved
Major fertility determinants study, worldwide	Underway	N/A	1	N/A
Research projects with host country institutions	3	N/A	26	N/A

A.I.D. FINANCED INPUTS: (\$ Thousands)

	Minimum/Current	AAPI
Personnel: technical and support staff and consultants	350	350
Travel and other costs associated with technical assistance	150	250
Support for in-country studies	1,250	2,000
	1,750	2,600

HOST COUNTRY & OTHER DONORS: Host countries will provide some government researchers and data. Other donors may provide funding for additional phases of the studies.

BENEFICIARIES: Immediate beneficiaries are the host country and A.I.D. officials who gain information on the ways in which development programs can encourage lower fertility. This project will be worldwide, and will have the secondary impact of benefiting local research institutions.

TECHNICAL OFFICE SUPPORT (in person months):

FY	DI	IPA	Consult.	RSSA	Total
FY 1979	2				2
FY 1980	5				5
FY 1981	8				8

	Obligations (\$000)	Expenditures (\$000)	Unliquidated (\$000)	Funding Period	Principal Contractors or Agencies & Contract Number
Through September 30, 1978	-	-	-	XXXXXXXXXXXXXXXXXXXX	
Estimated FY 1979	1,300	-	-	9/28/79 - 3/31/80	
Estimated through FY 1979	1,300	-	-	XXXXXXXXXXXXXXXXXXXX	
Proposed FY 1980	1,000	-	1,300	4/1/80 - 6/30/81	To be selected
Estimated through FY 1980	4,300	2,300	2,000	XXXXXXXXXXXXXXXXXXXX	
Proposed FY 1981	2,600	2,300	2,000	7/1/81 - 6/30/82	
		Future Yr. Obligation	Entire Total Cost		
		5,600	12,500		

BEST AVAILABLE DOCUMENT

Title Fertility Determinants Policy Studies	Number 932-0643
--	------------------------

OUTPUTS	<u>Minimum/Current</u>	<u>INCR</u>	<u>AAPI</u>	<u>Total</u>
Major fertility determinants study Research projects	Underway 8	Underway 4	Underway 12	

BEST AVAILABLE DOCUMENT

UNITED STATES GOVERNMENT

Memorandum

TO : CM/COD/PE, Mr. Gerald Gold

FROM : DS/POP/DIR, J. J. Speidel

SUBJECT: Justification for Non-Competitive Selection of Contractor for the
"Study of Determinants of Fertility Change" under AID Project 932-0643.

*Per instructions of M. Hayden,
this memo was not sent to
the Non-Compet. Source Procurement
Rev. Bd.; only the Certification
of Unsolicitation was sent on
Aug. 10, 1979. WE. Alli*

DATE: 19 July 1979

The Office of Population recommends that the Agency negotiate solely with the National Academy of Sciences (NAS) to fund their original proposal for the "Study of the Determinants of Fertility Change."

The work proposed here by the NAS is an outgrowth of the work presently underway at the NAS, by the Committee on Population and Demography (CPD). Under that contract (AID/pha-C-1161), the NAS has established panels and working groups to examine the current demographic rates and situation of demographic measurement in key countries of the developing world in which there have been dynamic changes in the demographic rates. Because of the success of this work and the importance of understanding the causal mechanisms behind the changing situation, the NAS first established a working group on fertility determinants under the CPD, then developed the proposal for the expansion of that work to be considered by the Assembly of Behavioral and Social Sciences and the governing council of the NAS for submission to A.I.D. and other donors. The new scope of work was designed to take full advantage of the methodological and substantive findings of the Committee. It will further that work by expanding the scope of work of the group beyond the measurement of fertility to a careful examination of issues implicit in the measurement of the key socio-economic variables and the intermediate or proximate variables associated with fertility change.

Their research proposal was submitted as an unsolicited research proposal and received the review and recommendation for approval by the Research Advisory Committee (RAC) of A.I.D. in its meeting of July 12-13, 1979. The discussion of the RAC particularly emphasized the benefits to be derived by the Agency from bringing together by the NAS of the best analytical minds available in the related areas of statistics, psychology, and economics. There was particular desire that the findings of the Panel be directed toward formulating a research agenda, one of the identified subtasks which may guide the Office and the Agency in examining the demographic, economic, social and program elements of fertility change. The RAC felt that this area had been minimized by prior efforts.



As was presented to the RAC, the Agency does support several projects which touch on the related questions of the socio-economic determinants of fertility, but there has been no coherent strategy and framework for pointing out either the theoretical lacunae or future directions for support to research. Emphasis on this aspect is a unique feature of the NAS proposal.

Clearance:

DAA/DS/HRD, S. Joseph _____ Date _____
DS/PO, R. Simpson _____ Date _____

UNITED STATES GOVERNMENT

Memorandum

TO : CM/COD/PE, Mr. Gerald Gold

DATE: 19 July 1979

FROM : DS/POP/DIR, J. J. Speidel *J. J. Speidel*

SUBJECT: Justification for Non-Competitive Selection of Contractor for the
"Study of Determinants of Fertility Change" under AID Project 932-0643.

The Office of Population recommends that the Agency negotiate solely with the National Academy of Sciences (NAS) to fund their original proposal for the "Study of the Determinants of Fertility Change."

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Clearance:

DAA/DS/HRD, S. Joseph Date
DS/PO, R. Simpson Date

AGENCY FOR INTERNATIONAL DEVELOPMENT PROJECT AUTHORIZATION AND REQUEST FOR ALLOTMENT OF FUNDS PART I	1. TRANSACTION CODE <div style="border: 1px solid black; display: inline-block; padding: 2px;">C</div> A - ADD C - CHANGE D - DELETE	PAF <hr/> 2. DOCUMENT CODE <div style="border: 1px solid black; display: inline-block; padding: 2px;">5</div>
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3. COUNTRY/ENTITY Interregional	4. DOCUMENT REVISION NUMBER <div style="border: 1px solid black; display: inline-block; padding: 2px;">1</div>
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5. PROJECT NUMBER (7 digits) <div style="border: 1px solid black; display: inline-block; padding: 2px;">932-0643</div>	6. BUREAU/OFFICE A. SYMBOL <div style="border: 1px solid black; display: inline-block; padding: 2px;">DS</div>	B. CODE <div style="border: 1px solid black; display: inline-block; padding: 2px;">07</div>	7. PROJECT TITLE (Maximum 40 characters) <div style="border: 1px solid black; display: inline-block; padding: 2px;">Population Policy Research</div>
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8. PROJECT APPROVAL DECISION ACTION TAKEN <div style="border: 1px solid black; display: inline-block; padding: 2px;">A</div> A - APPROVED D - DISAPPROVED DE - DEAUTHORIZED	9. EST. PERIOD OF IMPLEMENTATION YRS. <div style="border: 1px solid black; display: inline-block; padding: 2px;">03</div> QTRS. <div style="border: 1px solid black; display: inline-block; padding: 2px;"> </div>
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10. APPROVED BUDGET AID APPROPRIATED FUNDS (\$000)									
A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. 1ST FY <u>79</u>		H. 2ND FY <u>80</u>		K. 3RD FY	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	I. GRANT	J. LOAN	L. GRANT	M. LOAN
1. PN				1,235		88			
2.									
3.									
4.									
TOTALS									

A. APPROPRIATION	N. 4TH FY		Q. 5TH FY		LIFE OF PROJECT		11. PROJECT FUNDING AUTHORIZED		
	O. GRANT	P. LOAN	R. GRANT	S. LOAN	T. GRANT	U. LOAN	(ENTER APPROPRIATE CODE(S)) 1 = LIFE OF PROJECT 2 = INCREMENTAL LIFE OF PROJECT	A. GRANT B. LOAN	
1) PN					1,323			1	
2)									
3)									
4)									
TOTALS								C. PROJECT FUNDING AUTHORIZED THRU FY <div style="border: 1px solid black; display: inline-block; padding: 2px;">80</div>	

12. INITIAL PROJECT FUNDING ALLOTMENT REQUESTED (\$000)	13. FUNDS RESERVED FOR ALLOTMENT												
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>A. APPROPRIATION</th> <th colspan="2">B. ALLOTMENT REQUEST NO.</th> </tr> <tr> <td></td> <th>C. GRANT</th> <th>D. LOAN</th> </tr> </thead> <tbody> <tr> <td>PN</td> <td>1,323</td> <td></td> </tr> <tr> <td colspan="3" style="text-align: center;">TOTALS</td> </tr> </tbody> </table>	A. APPROPRIATION	B. ALLOTMENT REQUEST NO.			C. GRANT	D. LOAN	PN	1,323		TOTALS			14. FUNDED NAME (Chief, SER/FM/FSD) <hr/> SIGNATURE <hr/> DATE <hr/>
A. APPROPRIATION	B. ALLOTMENT REQUEST NO.												
	C. GRANT	D. LOAN											
PN	1,323												
TOTALS													

15. SOURCE/ORIGIN OF GOODS AND SERVICES

000
 941
 LOCAL
 OTHER _____

16. FOR AMENDMENTS, NATURE OF CHANGE PROPOSED

This amendment adding \$23,000 to the originally authorized \$1.3 million permits the implementation of the grant activities as approved by A/AID and the add-on final conference subsequently approved by DAA/DS/HRD.

	X\$000
Negotiated Grant Activity Cost	\$1,258
Add-On Conference	65
Total Life-of-Project Cost	\$1,323
Total Approved Funds per Original PAF	1,300
Additional Funds to be Authorized	\$ 23

ES/PO OFFICIAL FILE

FOR PC, PIAS USE ONLY	16. AUTHORIZING OFFICE SYMBOL	17. ACTION DATE MM DD YY	18. ACTION REFERENCE (Optional)	ACTION REFERENCE DATE MM DD YY
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PROJECT AUTHORIZATION AND REQUEST FOR ALLOTMENT OF FUNDS

PART II

Name of Country/Entity: Interregional
Name of Project : Population Policy Research
Number of Project : 932-0643

I hereby approve grant funding of not-to-exceed one million three hundred twenty three thousand United States Dollars (US \$1,323,000) for the period FY 1979 through FY 1982 to fund a) activities described in the project summary as reviewed by the Research Advisory Committee and approved by A/AID, and b) the add-on final conference as approved by DS/HRD. I authorize additional funding to the life-of-project cost in the amount of \$23,000.


Deputy Assistant Administrator
for DS/HRD

12/13/79
Date

AGENCY FOR INTERNATIONAL DEVELOPMENT
**PROJECT AUTHORIZATION AND REQUEST
 FOR ALLOTMENT OF FUNDS PART I**

1. TRANSACTION CC

A ADD
 C CHANGE
 D DELETE

PAF

2. DOCUMENT CODE
 5

COUNTRY/ENTITY

Interregional

4. DOCUMENT REVISION NUMBER

PROJECT NUMBER (7 digits)

[932-0643]

6. BUREAU/OFFICE

A. SYMBOL B. CODE
 DS [07]

7. PROJECT TITLE (Maximum 40 characters)

[Population Policy Research]

PROJECT APPROVAL DECISION

ACTION TAKEN

A APPROVED
 D DISAPPROVED
 DE DEAUTHORIZED

9. EST. PERIOD OF IMPLEMENTATION

YRS. [0] [3]

QTRS. []

10. APPROVED BUDGET AID APPROPRIATED FUNDS (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. 1ST FY <u>79</u>		H. 2ND FY		K. 3RD FY	
		C GRANT	D. LOAN	F GRANT	G. LOAN	I. GRANT	J. LOAN	L. GRANT	M. LOAN
PN	JY 20	420		1,300					
TOTALS									

A. APPROPRIATION	N. 4TH FY		Q. 5TH FY		LIFE OF PROJECT		11. PROJECT FUNDING AUTHORIZED (ENTER APPROPRIATE CODE(S)) 1 = LIFE OF PROJECT 2 = INCREMENTAL LIFE OF PROJECT	A. GRANT	B. LOAN
	O. GRANT	P. LOAN	R. GRANT	S. LOAN	T. GRANT	U. LOAN			
					1,300				
TOTALS							C. PROJECT FUNDING AUTHORIZED THRU	FY [8] [2]	

INITIAL PROJECT FUNDING ALLOTMENT REQUESTED (\$000)

APPROPRIATION	B. ALLOTMENT REQUEST NO.	
	C. GRANT	D. LOAN
PN	1,300	
TOTALS		

13. FUNDS RESERVED FOR ALLOTMENT

TYPED NAME (Chief, SER/FM/FSD)

SIGNATURE

DATE

SOURCE/ORIGIN OF GOODS AND SERVICES

000 941 LOCAL OTHER

FOR AMENDMENTS, NATURE OF CHANGE PROPOSED

[Faint, illegible stamp]

OR / PIAS ONLY	16. AUTHORIZING OFFICE SYMBOL	17. ACTION DATE	18. ACTION REFERENCE (Optional)	ACTION REFERENCE DATE
		MM DD YY		MM DD YY

PROJECT AUTHORIZATION AND REQUEST FOR ALLOTMENT OF FUNDS

PART II

Name of Country/Entity: Interregional
Name of Project: Population Policy Research
Number of Project: 932-0643

I hereby approve grant funding of not to exceed one million three hundred thousand United States Dollars (\$1,300,000) for the period FY 1979 through FY 1982 to finance the project described in the attached Project Paper subject to the conditions specified by the Research Advisory Committee in the Action Memorandum approved by the Administrator on August 17, 1979. I authorize funding of the full amount in FY 1979.


Assistant Administrator
for Development Support

8/21/79
Date

August 20, 1979

ACTION MEMORANDUM FOR THE DEPUTY ASSISTANT ADMINISTRATOR, DAA/HRD

THRU: DS/POP/DIR, J. Joseph Speidel

FROM: DS/POP/PDD, Sarah C. Green

Problem: To approve additional funding of \$65,000 to cover conference costs not included in the National Academy of Sciences proposal, "Study of the Determinants of Fertility Change" (Project No. 932-0643), approved by the Research Advisory Committee.

Background and Discussion: The Agency-wide review of the National Academy of Sciences (NAS) project suggested that the dissemination plan for the results of the various research activities undertaken in the project be strengthened. One suggestion, discussed favorably at that time, was to include a final international conference which would draw together approximately 50 participants from several disciplines for one week. The NAS Committee and staff have informally agreed to include this activity in their Scope of Work and will modify their proposal accordingly. However, there was not sufficient time to include it in the formal proposal before consideration by the Research Advisory Committee (RAC) on 12 July 1979.

The RAC meeting voted approval of the project at that time and the recommendation to that effect was approved by the Administrator on August 17. However, we seek additional approval for the conference since it was not included in the RAC package. We would like to cover all aspects of the project in one program implementation action; therefore, we request your prompt attention.

Recommendation: That you approve the additional funding of \$65,000 to be included in the NAS contract for a final conference which is included in the attached PAF.

Clearance: DS/PO, R. Simpson _____