A.I.D. Program Evaluation Report No. 1

Family Planning Program Effectiveness: Report of a Workshop

December 1979
Agency for International Development
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FAMILY PLANNING PROGRAM EFFECTIVENESS:
REPORT OF A WORKSHOP

A.I.D. Program Evaluation Report No. 1

Office of Evaluation
Bureau for Program and Policy Coordination
Agency for International Development

December 1979

This report was prepared by the Office of Evaluation as a summary of the proceedings of a workshop held in April 1979. The views and interpretations in this report should not necessarily be attributed to the Agency for International Development.
Summary

A study synthesizing a large amount of available material on family planning program effectiveness culminated in a workshop held in April, 1979. The objective of the study and workshop was to identify from research and experience when and under what circumstances direct family planning services and/or other development activities are most appropriate for reducing population growth in specific country situations.

It was recognized that both the availability of family planning services and progress in other areas of development are important factors in fertility decline. Available data are insufficient to support one or the other factor as being most influential, but rather suggests the importance of interactive effects. Three broad sets of country conditions were identified as crucial in determining family planning effectiveness: political commitment, administrative capability and socioeconomic and cultural acceptability. Political and administrative conditions can influence, for example, the extent to which programs can be decentralized; the focus, location, and accessibility of services; and the mix of contraceptive methods. The workshop examined experience in various countries categorized, on the basis of demographic and socioeconomic trends, as being "certain", "probable", "possible" and "unlikely" candidates for achieving an annual crude birth rate of 20 per 1,000 by the year 2000. Political and administrative characteristics and developments in these countries were discussed as to their influence on family planning programs.

The study and workshop discussions illustrated the wide array of political, economic, administrative and social circumstances in countries in which population program efforts have been made. These varied and distinctive circumstances, within and between countries, imply a need for intervention strategies creatively adapted to individual country circumstances in their sequencing, in their mix of family planning services, and their relationship to other development actions, including efforts to enhance the status of women and to upgrade the quality and availability of demographic and related information.

A consensus on the following points emerged from the discussion.

-- a country-specific approach to family planning policy and programs should be adopted, similar to the approach taken in the Bureau for Asia, in which realistic long-term goals are established based in individual country conditions.

-- policy should differentiate conditions within individual countries (e.g., regions, subgroups) which present opportunities for specific program strategies.

-- there should be greater variety and flexibility in the services made available, in order to allow for easier adaptation to individual and family needs.

-- program planners should look for opportunities to work with local governments and institutions to support a decentralized program.
-- particularly in Africa, AID officials should invest more time in promoting awareness among politicians, planners, and decision makers of the links between population and development.

-- AID should recognize the large number of adult nonmarried women of reproductive age and the high rates of adolescent pregnancy, and should revise policy statements that emphasize provisions of family planning services to couples and contraceptive use by married women.
PREFACE

This is the first report in a series dedicated to bringing the lessons from AID's development experience around the world to development planners. AID conducts a significant number of evaluations at the project level. This series examines development activities from a program, national or inter-country perspective.

A great deal has been written about the subject of family planning. Numerous evaluations have taken place gauging the effectiveness of individual activities. Because of this unusual amount of activity, AID's Office of Evaluation was in the position to sponsor a study of family planning program effectiveness aimed at synthesizing a large amount of available material and drawing policy conclusions from this without further field work. This will not be AID's usual approach to program evaluations, but was possible in this case.

The approach of the study was conceived and directed by Dr. Steven W. Sinding when he was Deputy Chief of the Studies Division, Office of Evaluation. His work culminated in a workshop held April 3, 1979, at which senior A.I.D. Washington executives met with experts involved in the preparatory work of the study with the aim of drawing policy conclusions from the work. The attendees at the workshop are given in Appendix 1, and the workshop agenda in Appendix 2.

The Office of Evaluation wishes to express its deep gratitude to Dr. Sinding for his thoughtful and careful shepherding of this effort. We believe the following report is important, not only because of the substantive conclusions of the study but because it demonstrates a relatively cost-effective way of drawing lessons from development aimed not at bookshelves but at definitive steps to improve development performance.

The Office of Evaluation alone is responsible for the content of this report, including the unfortunate delay in its publication. Readers are encouraged to comment both on the substance and methodology involved.

Robert J. Berg
Associate Assistant Administrator
for Evaluation
Bureau for Program and Policy Coordination

December, 1979
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INTRODUCTION

The objective of the Family Planning Program Effectiveness Study and of the workshop held April 3, 1979, at which the study's results were discussed was to identify when and under what circumstances direct family planning services and/or other development activities are appropriate to specific country circumstances to reduce population growth. From the outset, it was recognized that both the availability of family planning services and progress in other areas of economic development are important factors in fertility decline. The purpose of the study, then, was to go beyond the debate within the population and development communities as to which factor was the more important and to attempt to develop guidelines that A.I.D. program administrators and technical project managers could apply in order to make more effective use of scarce development and population program resources.

Four background papers provided an initial framework for discussion during the workshop. Three of these were prepared specifically for the study:


A typology for categorizing developing countries as to their potential for achieving a specified crude birth rate by the year 2000 was presented in a fourth paper, already published:


The Westinghouse and Battelle papers are included as appendices to this report. The Sinding paper has been published separately and is available from the Office of Evaluation, Bureau for Program and Policy Coordination, Agency for International Development, Washington, D.C. 20523.
In addition, data on specific countries in the Near East and Africa were prepared and presented at the workshop.

The background papers set the stage for a discussion of specific country case studies by suggesting ways in which the appropriateness of program action in a particular setting can be determined. The Sinding paper, which provides an overview and summary of the findings of the study, identifies three broad sets of country conditions as crucial in determining family planning effectiveness: political commitment, administrative capability, and socioeconomic and cultural acceptability. These factors reflect the extent to which a government is seriously interested in altering fertility and to which, within a society, individual couples in the aggregate appear to be ready to limit their fertility. The Berelson paper, after examining determinants of fertility trends in 29 developing countries, categorizes these countries as being "certain", "probable", "possible", or "unlikely" candidates for achieving a crude birth rate of 20 per 1,000 per year by the year 2000. Strategies for responding to these predictions are developed.

The discussion of country cases during the workshop was organized within the frameworks provided by the two papers. Briefly, the review of these country experiences and the discussion of them resulted in the following:

-- Rejection of the strictly deterministic argument that development alone causes fertility to decline and that family planning programs in and of themselves make little difference. It seems clear that family planning efforts can make a real difference in determining the rate at which fertility declines. (The unprecedented drops in birthrates experienced by Colombia, Costa Rica, Indonesia, and Thailand were cited as cases in point.)

-- Illustration of the wide array of political, economic, administrative, and social circumstances in countries all over the world in which population program efforts exist.

-- Recognition of the implications of these varied and distinctive circumstances, between and within countries, for:

(i) the identification of the kinds of program interventions, and the sequence of such interventions, that A.I.D. may be involved in supporting;

(ii) particular ways in which a mix of direct family planning services and other kinds of action in development fields (e.g., enhancing the status of women) can contribute to more effective approaches to the population problem.

Respectively, by Lenni Kangas, Near East Bureau, Agency for International Development; and Aaron Segal, International Programs, National Science Foundation.
This report of the workshop follows essentially the format of the proceedings. Part I summarizes the background papers, including current data on the comparative impact on fertility of socioeconomic and family planning variables; the important role of political commitment and administrative capability in determining the success of family planning programs; and the Berelson typology. Part II summarizes the workshop discussion of individual country experiences and policy-related issues. Areas of consensus emerging from the workshop and several concluding statements are summarized in Part III.
PART I

FRAMEWORK FOR PROGRAM APPRAISAL

A. Comparative Impact of Socioeconomic and Program Variables

Policy makers, in an effort to determine the most cost-effective way to lower fertility, want to know which has relatively the greater impact on fertility declines in Third World countries--family planning or development efforts. The debate between proponents of each approach is now focused on more specific questions: How should resources be allocated between the two? What is the relative cost effectiveness of family planning versus development in achieving reductions in fertility? Should resources for family planning programs be reallocated to more general development programs? If so, which development programs are likely to promote the most cost-effective declines in fertility?

At present, research generally does not address itself to this policy issue. Most empirical studies focus on either one or the other factor, not both. Those studies that do attempt to determine the relative impact of family planning and development are hindered by such problems as inadequate methodological and statistical techniques, and insufficient and/or inaccurate data. Studies also are complicated by the fact that the effects of such socioeconomic variables are incorporated into the statistical equations, thereby causing inconsistencies in findings. An additional complication is that discrepancies in findings among country-level studies are, in part, a function of variations in program efforts within countries and differences in developmental efforts.

In an attempt to address the questions posed above, findings were reviewed of empirical studies conducted on a cross-cultural or country level that take into account both service availability and socioeconomic factors. The cross-cultural studies show that family planning and development taken together have by far the greatest impact on fertility declines: the proportion of variance explained by either factor alone is greatly reduced. Findings from national-level studies are generally inconsistent and do not lead to the rejection of one or the other hypothesis.

Also reviewed were three country studies that utilized programs developed by the Community and Family Study Center (CFSC) at the University of Chicago that estimate births averted due to various birth control methods. The

This section summarizes in general terms materials presented by William McGreevey and Barbara Von Elm in Battelle Population and Development Policy Program, Socioeconomic Change and Family Planning: Their Impact on Fertility, op cit. The reader is referred to this work, included in Appendix 4, for the description and analysis of specific research studies as well as for the useful bibliography.
conclusions of these studies are as follows: in Java, family planning alone without prior socioeconomic development lowered fertility; in Thailand, the National Family Planning Program was probably responsible for about 90 percent and no less than 50 percent of Thailand's observed fertility decline since 1964; and in Colombia, probably not less than 32 percent and more probably greater than 60 percent of the observed fall in fertility between 1964-1975 was due to family planning. However, the programs developed by CFSC generally do not directly consider factors other than contraception—specifically factors related to socioeconomic development. Thus, for example, they do not provide adequate information as to why women are demanding family planning services now more than before.

In sum, the current data do not lead to the rejection of one hypothesis over the other. Rather, these studies acknowledge the importance of interactive effects between socioeconomic change and service availability in yielding fertility change. It is concluded that there is a need for policy-oriented research on family and individual decisionmaking processes with regard to fertility, as it is at this level that choices with regard to fertility are made. Unfortunately, the existing evidence does not provide an adequate basis for practical decisions regarding the relative allocation of funds between family planning services and general development programs.

B. The Roles of Political Commitment and Administrative Capability

Attention to the influence of political commitment and administrative capability on program effectiveness has arisen from recent experience in several countries where family planning programs have been successful in lowering the birth rate. These experiences indicate that fertility is a good deal more sensitive to public action than was previously thought, and that political commitment to these programs plays an important role in their success. The study and workshop examined the following questions: What are the elements of political commitment and administrative capability which lead to fertility reduction? What role do these elements play in successful family planning programs? What are the experiences of countries where the political commitment to family planning has been strong compared to those countries where the commitment has been weak, nonexistent, or has broken down? And, finally, what are the policy implications of these experiences? The related roles of political commitment and administrative capability are illustrated in the following summaries of country experiences in Asia and Latin America.

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4This section is based principally on the Westinghouse and Sinding papers, op. cit. The Westinghouse work, to which the reader can refer in Appendix 3, comprises analyses of regional case studies by Jason L. Finkle, Gayl D. Ness and Lindsay M. Robinson for Asia; Richard L. Clinton and R. Kenneth Godwin for Latin America; by Aaron Segal for Africa; and a literature review and analysis by Barbara G. Furst.
1. Overview for Asia

In developing countries it is more difficult to separate political elements from administrative elements than it is in industrialized countries. Because of the greater interpenetration of political and administrative systems, it is necessary to look at the political-administrative system as a whole. The three major elements of a political administrative system are:

- national goals,
- administrative structure, and
- technology and delivery systems.

(a) National Goals. Three interrelated political-administrative conditions are closely associated with both the original adoption of antinatalist policies and with their continued support: accurate information on the implications of rapid population growth; strong and confident leaders; and a strong commitment to development.

The importance of accurate information is illustrated by the experiences of China, India, Malaysia, and Taiwan, where census information and surveys were very important in bringing about the adoption of antinatalist policies. In Burma and some African countries, lack of such information in part contributes to pronatalism.

The political strength and confidence of national leadership also have important organizational and administrative dimensions. In Malaysia, Pakistan, Singapore, and Vietnam, party structures with local roots ensured that the government's message was conveyed to the people and mobilized public support for family planning.

The strength of a nation's commitment to development is perhaps the most important determinant of population planning goals. Commitment to development implies a concern with per capita GNP and public spending including expenditures in health and education. As it becomes clear that increases in population will tend to reduce per capita GNP and increase government spending requirements in public programs, the importance of reductions in population also becomes apparent.

(b) Administrative Structure. The way in which family planning programs are administered at the national level can play an important role in determining the success or failure of a fertility-reduction policy. In some countries (e.g., Korea, Taiwan, and Singapore), all aspects of family planning programs are administered by one agency; in others (e.g., Malaysia, Indonesia, and the Philippines), responsibility for programs is divided among different groups, with a coordinating agency to oversee the whole program.

Family planning programs most frequently are administered by health ministries and closely tied to programs for maternal and child health and postpartum care. This gives rise to what are perhaps the most persistent criticisms of such programs: that they lack political "clout" (because health ministries are generally among the weakest), and that they are too narrowly focused on contraceptive delivery to individual women. Two reforms
which have major implications for the location of programs are the focus on integration of services and the emphasis on services. It is also important that there be provisions for reaching rural areas, and it is the administrative system that affects whether a program reaches all reproductive couples. Cadres in China, the army in Indonesia, and private entrepreneurs in Thailand have all acted in community-based programs as functionaries of political-administrative systems.

(c) Technology and Delivery Systems. Specific types of both human and financial resources are needed for public programs. Mobilization and allocation of financial and human resources for family planning are generally governed by political-administrative conditions. The setting of clear goals for workers and the provision of the resources needed to achieve those goals are crucial to efficient performance.

Moreover, contraceptive technology and the type of delivery systems implied by these technologies are instruments for achieving policy goals. Often technologies are chosen more for their compatibility with bureaucratic requirements than for their compatibility with social and cultural attributes of the user. Client needs are taken into account far less often than are the preferences of political and bureaucratic leaders. For example, because the pill reduces administrative costs and can be distributed by paramedical personnel, it is a popular choice. However, where the medical profession is strongly organized and politically powerful, the need for medical supervision has been argued and widespread use has been blocked. Thus, the choice of technology is determined by which political or administrative group has more power rather than by consideration of what would be most appropriate for the users. While the mix of contraceptive methods and delivery systems can determine the success or failure of a program, too often such decisions are dependent on political-administrative conditions.

2. Overview for Latin America

A number of specific factors reflecting the linkages between political commitment, administrative capability and the effectiveness of family planning programs were identified from the experience in Latin America. The elements of political commitment include:

-- Public knowledge that high government officials favor strong contraceptive programs.

-- Inclusion of substantial local funds in family planning budgets.

-- A clear perception that the government orientation toward a family planning program is relatively permanent, that there will not be a change from one administration to the next.

-- A view of population growth as an obstacle to collective goals and a commitment to national economic development.

-- Three variables associated with democracy also appear to be associated with fertility declines: the total level of democracy, represented by freedom of speech, press, free elections, independent judiciary, and the degree of civilian supremacy; the level of decentralization and autonomy; and administrative capability.
The elements of administrative capability which hinder or help the success of programs include:

-- Decentralization of program efforts through multiple local agencies. This is considered necessary by some because it allows for the provision of services that are responsive to local needs and guards against weak commitment by a single department head or minister which could restrict the entire effort. Others argue centralization of services is better, because duplication of efforts can be avoided.

-- Technical and managerial capability to both set up programs and evaluate them are necessary.

-- The "feeling" that something can be done must be present.

-- Executive decrees initiating family planning programs are seen as important by some. Others feel that pluralistic consensus is more important.

-- A distinction between institution building and training. Administrative capability refers to the level of talent and basic infrastructure in a country. If this is low, a program must include institution building, which is a lengthy process. Where a country already has a basic infrastructure, training for specific skills and programs are all that is necessary. This takes less time and is more cost effective.

3. Other Related Elements

Workshop discussions brought out additional elements of political commitment and administrative capability:

-- To implement goals, stable and effective governments are necessary. The countries in Latin America which have experienced significant fertility declines without exception are characterized by these elements. The failures in Peru can be related to a lack of government effectiveness.

-- Existing service delivery systems upon which family planning programs can be built are important, especially in rural areas.

-- The ability of governments to deliver services at the local level (i.e., the decentralization of service networks) is an important element. The political form of government (e.g., democratic, authoritarian) may be less important than its capability to deliver services at the local level.

-- The self-confidence of the government is an important element of government commitment.

-- In general, political commitment involves more than just rhetorical support. It suggests that a nation's political elite is committed to a program of population control and, as such, provides the program with ample resources, appoints highly qualified officials to administer the programs, removes bureaucratic impediments to its effectiveness, and keeps the goals of the program prominent in the government's development agenda.
In sum, recent evidence indicates that fertility is responsive to public action. In this context, political commitment and administrative capability become important elements in promoting public action. In general, the less congenial the social setting to promoting fertility decline, the more important these elements become. The social setting, then, establishes very broad boundaries within which fertility can vary greatly, depending on the level of program effort and political will. The dynamic nature of political and administrative elements can be important inputs to decisions regarding the relative allocation of resources between general development projects and specific family planning programs in individual countries, as well as to decisions regarding the appropriate timing of particular styles of program intervention.

Various roles of political commitment and administrative capability in promoting public health were discussed by workshop participants and are briefly summarized here.

Political commitment and administrative capability can be viewed as elements in an interacting supply/demand framework. In this framework, three broadly defined factors are seen to determine family planning program effectiveness: political commitment, administrative capability, and socioeconomic and cultural acceptability. Demand, it can be argued, is initially a function of socioeconomic and cultural acceptability, as determined by certain levels of development (indicated by levels of primary education, distribution of income, access to social and economic opportunities, infant mortality and child mortality rates, female labor force participation rates, and the role of women) and a complex set of variables which determine people's perceptions of the value of children, their response to public policy, and formal and informal communication flows which establish peer pressure to have children. Supply, on the other hand, is a function of governmental political commitment and administrative capability, which involves the will and means of effectively delivering services. Political commitment, however, is important not only to family planning, but also to programs concerned with health, education, communication, the generation of employment for women, and equalizing the distribution of the social and economic benefits of growth. Such programs in turn will effectively influence the demand for family planning. The nature of a country's development process and the level of certain key indicators probably determine the extent to which a family planning program can succeed in lowering fertility. Beyond this, however, the degree of political commitment and the extent of administrative capacity go a long way toward determining whether or not a program will succeed.

Where the sociocultural environment is supportive of fertility decline, the role of the government can be limited to ensuring the availability of family planning services through public facilities and through policies and regulation which encourage private sector activities. Where the sociocultural environment is not supportive of fertility decline, the government must be more active. The degree of public activism has ranged along a spectrum from mild persuasion to outright coercion.
A related perspective proposes that, in most of the developed world, a demand for contraceptives already exists. Political commitment is not necessary in order to provide supplies to meet existing demand. It is important, however, in increasing this demand.

Political commitment and administrative capability play several other important roles: the legitimization of actions already occurring in both the public and private sector; ensuring program access to the use of the mass media as well as to government infrastructure; as a means of harnessing entrepreneurial talent and directing it toward the provision of family planning services, and of promoting the coordination of efforts in the private, commercial and public sectors; as a way of promoting institution building; and as a means of attracting and funneling foreign assistance resources to family planning programs.

Political will and administrative capability are thus very important facilitating conditions to program effectiveness, but they cannot overcome basic sociocultural obstacles unless direct government action on reproductive behavior becomes an important feature of the program. They are necessary but not sufficient conditions for program success in most countries of the Third World.

C. Predicted Trends in Developing Countries: A Typology

Berelson examines the present levels and trends in fertility of 29 developing countries with a view to predicting the likelihood of their achieving a crude birth rate of 20 per 1,000 per year (CBR 20) by the year 2000, and identifying program strategies for the next five to ten years that represent a sensible response to these predictions. Assessment of the likelihood that a country will reach a CBR 20 in the next 20 years is based on approximations of required threshold levels in two categories of fertility determinants:

--Basic Determinants: life expectancy, infant mortality, adult literacy, school enrollment, nonagricultural labor force participation, per capita GNP, and females 15-19 never married. Approximations of threshold values of these variables are as follows:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Threshold Value for CBR 35</th>
<th>Threshold Value for CBR 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult literacy</td>
<td>70%</td>
<td>93%</td>
</tr>
<tr>
<td>School enrollment, age 5-19</td>
<td>55%</td>
<td>69%</td>
</tr>
<tr>
<td>Life expectancy</td>
<td>60 years</td>
<td>69 years</td>
</tr>
<tr>
<td>Infant mortality rate</td>
<td>65</td>
<td>32</td>
</tr>
<tr>
<td>Nonagricultural labor force</td>
<td>55%</td>
<td>80%</td>
</tr>
<tr>
<td>Per capita GNP</td>
<td>$450</td>
<td>$1,080</td>
</tr>
<tr>
<td>Females 15-19 never married</td>
<td>80%</td>
<td>---</td>
</tr>
</tbody>
</table>

5Based on Berelson, op. cit.
--Proximate Determinants: biological and behavioral factors through which socioeconomic, cultural, and environmental variables affect fertility, including proportion of reproductive years spent in marriage, contraception, duration of lactation, and induced abortion rates. Approximate levels of these four factors in populations with CBRs of 45, 35, and 25 are as follows:

<table>
<thead>
<tr>
<th>Crude Birth Rate (15-45)</th>
<th>Proportion of reproductive years spent in marriage (%)</th>
<th>Proportion of married women of reproductive age currently using contraception (%)</th>
<th>Duration of lactation (months)</th>
<th>Total induced abortion rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>80</td>
<td>5</td>
<td>26</td>
<td>0</td>
</tr>
<tr>
<td>35</td>
<td>70</td>
<td>30</td>
<td>15</td>
<td>0.5</td>
</tr>
<tr>
<td>25</td>
<td>65</td>
<td>50</td>
<td>8</td>
<td>1.0</td>
</tr>
</tbody>
</table>

A country must achieve threshold levels in a combination of these determinants if it is to achieve a CBR of 20 by the year 2000. On the basis of present demographic rates and trends and the social and cultural settings, the countries are divided into four categories according to the likelihood of achieving this target:

1) Certain (2 percent of the LDC population): South Korea, Taiwan, Chile.

2) Probable (42 percent of the LDC population): China, Brazil, Mexico, the Philippines, Thailand, Turkey, Colombia, Sri Lanka, Venezuela, Malaysia.

3) Possible (42 percent of the LDC population): India, Indonesia, Egypt, Peru.

4) Unlikely (13 percent of the LDC population): Bangladesh, Pakistan, Nigeria, Iran, Zaire, Afghanistan, Sudan, Morocco, Algeria, Tanzania, Kenya, Nepal.

Berelson then suggests appropriate strategies for encouraging attainment of fertility reduction goals in each group of countries. His prescriptions, as well as some additional recommendations, can be grouped as follows: For the countries that are "certain," let well enough alone. In the "probable" category, strengthen family planning program efforts (i.e., the supply side) in some countries where program efforts are weak.

For the four countries in the "possible" category, the strategy suggests activities focusing on specific requirements, for example, increasing the range of contraceptive services available in India, making major efforts to establish effective service delivery systems in Egypt and Peru, and adding
sterilization to the strong Indonesian program. In order to break through the CBR 20 barrier, all four countries will require major advances in such development areas as income level and distribution, women's status (especially in Egypt), and community organization (especially in India and Peru).

Finally, the countries in the "unlikely" category most probably cannot achieve a CBR 20 by the year 2000. Assistance in family planning should be directed to those subsectors of the population which desire services. More generally, development strategies that emphasize equity and improved status for women should be encouraged. Improvements in development programs and community organization are especially needed in these countries, although their achievement is handicapped by both lower initial socioeconomic status and less interest in population policy.

In general, the policy objective should be to expedite reduction in fertility in order to hasten development rather than to encourage development in order to achieve reductions in fertility.
PART II

SUMMARY OF WORKSHOP DISCUSSION

The workshop review and discussion of the experience in selected developing countries illustrated the ways in which varying conditions associated with political commitment, administrative capability, socio-economic and cultural acceptability, and availability of services have influenced the nature and course of population programs. The discussion was initially organized according to the categorization of these countries as "unlikely", "possible", and "probable" candidates in Berelson's typology. The approach helped focus the attention of participants on constraints and opportunities for intervention at the national and sub-national levels. In turn, the discussion of specific cases, together with the background papers of the study, brought into focus several central issues relevant to AID policy and programs.

Both parts of the discussion--country experiences and policy-related issues--are summarized in this section.

A. Country Case Studies

Among the "unlikely" candidates, three Middle Eastern countries were briefly discussed. Afghanistan was seen as incorporating two rather distinct demographic models. To the North, a "U.S.S.R." model predominates, characterized by the resistance in the Soviet Islamic Republics to efforts to curb high fertility. To the East, a "China model" has evidenced success in fertility control efforts. The general expectation is that Afghanistan will follow the Soviet experience.

Awareness of the population issue has only recently been generated among the political leadership of the Sudan. With the support of the United Nations Fund for Population Activities (UNFPA), the first service program in 59 maternal/child care centers was launched in January, 1969. More concerted efforts are needed to sensitize political leadership as to the consequences of population increase. Experience suggests that since the macro-economic argument--that population policy should be seen as an integral part of overall development planning and expectations--has not had much impact, more forceful and persuasive arguments might concentrate on the pressures exerted by population growth on water supplies and ultimately on internal political stability--issues of immediate and vital concern to the leadership.

Morocco is an example of a country where a research effort supported by the AID Office of Population and a program of household distribution of services have resulted in prevalence rates on the order of 25 to 30 percent in the city of Marrakesh. It is necessary to highlight the success of the Marrakesh experience to demonstrate not only to Moroccans, but also to Tunisians and Egyptians, that receptivity to family planning need not have adverse political

See Appendix 2, Workshop Agenda, for the sequence of topics and principal discussants.
consequences particularly in a country such as Morocco where, as yet, no official population policy has been articulated. Morocco's experience suggests that a well-organized effort can indeed make progress, and that, instead of waiting for a definitive national policy to be formulated, it may be possible to provide services in tandem with development of a national policy.

Because most countries in Africa fall into the "unlikely" category, the discussants reviewed the continent as a whole. Analysis of demographic data indicates that fertility trends in almost all of the 52 African states are likely to remain somewhere between 40 and 50 annual births per 1,000 for the near future. Annual infant mortality in most of these countries will probably remain anywhere between 50-75 and 200 per 1,000 births. The prospects for fertility reduction through volition rather than disease are very poor. The most profound question in Africa is whether any purposeful program can simultaneously reduce fertility and infant mortality—in other words, what might be the extent of the longitudinal gap between bringing down one and the other—regardless of whether one is talking about change at the household level, among fertile women, or within the society. At present, there is a lack of data and analyses. Historically, infant mortality reduction has, in most instances, substantially preceded fertility reduction, usually by 15 to 20 years, and sometimes even longer. This occurs because infant mortality has dropped relatively quickly in response to very basic improvements in elementary health services.

A few African governments have recently endorsed population control as a national goal: Ghana, Kenya, Mauritius, and Botswana. There are perhaps another 20 governments that have endorsed a modest level of public sector support for family planning as well as private efforts. This group includes Nigeria, Sudan, Tanzania, Senegal, Liberia, and Sierra Leone. There is a great deal of fluctuation in their commitment, and it would be extremely difficult to measure its strength. At a minimum, they regard "family planning as legitimate". There are also some explicitly pronatalist countries, including Gabon and Cameroon, which have rejected fertility reduction in favor of the need to increase population. It was noted that some pronatalist countries are located in the Central African low fertility belt (25-30 births per 1,000) and may reflect the grip of almost pandemic diseases. The governments of these countries have been explicitly concerned about sterility problems. South Africa favors a differential fertility policy (pronatalist for white, antinatalist for blacks).

Finally, the majority of the 52 African states are basically indifferent when it comes to population policies. Many have issued documents or public statements on the subject, but (particularly in the Francophone states) the saliency of the issue in Africa is extremely low, and it is difficult to detect anything that could be called a meaningful population policy. Nowhere in Africa are government population policies, no matter what their nature, effective by most measurable definitions at the national level. The "population control" governments, except for Mauritius, have not done very well in reducing fertility. The number of contraceptive users in Ghana and Kenya
varies between 5 and 10 percent of the eligible acceptors. Half those users, at least, are relying on the private sector and commercial distribution of contraceptives. Nor are the policies of other governments showing any degree of effectiveness. The low overall legitimacy and effectiveness of most government policies have an effect on family planning.

There are very strong limitations on the effectiveness of any policies in these "unlikely" African countries. Therefore, the policy dimension should not be overemphasized in the hope that a government will make a statement that it thinks the country would be better off with a lower birth rate. Such a statement would not in itself constitute an accomplishment, as there is no evidence that very much has occurred in African countries by way of following up policy statements. The social and cultural setting is not congenial, and the administrative and political capabilities have been extremely weak. In general, political commitment to fertility reduction is similarly weak or nonexistent. The level of awareness among African officials and politicians of the urgency of the population problem is low, suggesting a need for AID officials to spend a great deal of time with politicians, planners and decision makers in that continent to increase their understanding of the crucial dynamics that exist between population and development.

An examination of the "unlikely" candidates in Asia shows that the effort to launch a large-scale family planning program in Pakistan in the mid-1960s was, a decade later, in serious disarray. The experience of Pakistan is a classic case of a "breakdown" in modernization. Although Ayub Khan was a strong leader, he had no national political base but, instead, relied on the bureaucracy to maintain cohesiveness in a divided society. He had a genuine commitment to family planning and established a formidable, if poorly functioning, family planning organization equipped with sophisticated methods of motivation, education, and evaluation, which was to penetrate villages throughout the country. The overthrow of Ayub Khan in 1969 signaled an end to this planning effort, and the negative reaction to Ayub spilled over to the family planning program, illustrating the point that these programs cannot be insulated from the political environment. These problems resulted in a lukewarm attitude toward family planning on the part of Zulfikar Ali Bhutto. The scope of the program was basically limited to the provision of contraceptive devices—an approach supported by AID's Office of Population. The problems that subsequently arose from this approach show that supply alone does not guarantee that family planning will be adopted and that it certainly is not an indicator of true political commitment—Pakistan adopted the AID approach primarily to expand a system of domestic patronage and to satisfy a major benefactor, the United States.

Among the "possible" candidates, data for Egypt show that, despite a decline in fertility levels between 1963 and 1972 (from 43 per 1,000 to 34 per 1,000), the crude birth rates between 1975 and 1978 have registered an increase to 38 per 1,000. Crude death rates stand at 13 per 1,000, and the annual growth rate is 2.5 percent. Contraceptive prevalence in urban sectors of Cairo and Alexandria are in the neighborhood of 40 percent, compared to a low of 10 percent in more traditional Upper Egypt and 18-20 percent in the Delta region.
Outside donors assisting population programs are plentiful, and these donors may be exceeding the absorptive capacity of the existing service delivery infrastructure in Egypt with their eagerness to help. The infrastructure consists of 3,500 Rural Health Units and hospitals which provide health services but in which the family planning component is quite uneven. On the other hand, AID's project in Menufiya Province has encouraged an increase in levels of contraceptive prevalence from 18 percent to 28 percent in less than a year through household distribution and community involvement. Replication of this type of effort is necessary, particularly since there is now greater opportunity to work more closely with local government. This opportunity has served as a catalyst for program execution and implementation.

Egypt's economic planning has not taken into account demographic forecasts of the consequences of population growth. The Five Year Plan does not establish population reduction as a priority, and top levels of government do not give much attention to family planning policy. Given Egypt's position with respect to other Arab countries, the endorsement of an antinatalist policy would be politically risky for the government, although it should perhaps consider committing itself to some demographic goal. More concerted efforts are needed in the area of sensitizing leadership to the impact of population growth upon the economy and the fact that something can be done about it. There is a need to stress issues such as water supply, provision of jobs, and meeting the educational and food supply needs of the population, and the consequences for these if population continues to increase at its present rate. Such issues are directly related to internal political stability and are more likely to influence the thinking of Egyptian officials.

In the mid 1960s, Indonesia was regarded as a country with little chance of achieving significant fertility declines. Both the socioeconomic setting and the lack of government commitment were seen as insurmountable barriers to fertility reduction. Yet today it is a country which, through political and organizational commitment, has succeeded in achieving substantial declines in the birth rate. This has in large part been the result of the shift in political leadership and organization from Sukarno to Suharto. During Sukarno's years, the administrative system was disorganized, and the central focus was on "identity development" (ideology) rather than on economic development. Since 1966, when Suharto came to power, a substantial decline in the birth rate and an increase in contraceptive acceptors have been achieved. A number of elements have contributed to this success:

--The return to government of technocrats with a strong commitment to national economic development.

--A clear and consistent antinatalist policy.

--Inflows of economic assistance from Western donors for all programs.

--Government willingness to permit external agencies to work with private groups.
--The creation of a National Family Planning Coordinating Board which has the aim of involving all government agencies in the promotion of declines in fertility. This board is characterized by strong presidential support, capable administrative leaders, increasing technical competence, flexibility, and receptivity to new and changing strategies.

--Penetration of administrative services from the center down to the village level, achieved through strong political support from the president, the provincial governors, the police, and the wives of village headmen.

--The receptivity of the government to decentralization efforts, which are based on the use of traditional organizational units and which strengthen local governments and institutions.

There is, however, some question as to how much of this success is institutionalized and how much is transitory. There has been far more coercion in the family planning program than has been acknowledged by external observers. Moreover, indications of other potential problems—such as the differences between the impact of the program in East Java and Bali and that in Central and West Java—have not been sufficiently analyzed. An additional cautionary note is the potential for the emergence of a strong sense of ethnic identity and the implications this may have for population policy.7

For several reasons, India is a country which should have been a leader in the developing world in reducing the birth rate. It was the first country to make family planning part of its national policy, and it understood better and earlier than most nations the relationship between population growth and economic development. It also has had a relatively efficient and experienced administrative system and an unusually large number of professionals who directly or indirectly could provide essential support to effective family planning programs. There are more doctors in India than in many countries, the elite—in intelligentsia and urban middle class—are strongly supportive of family planning, and there are no strong religious objections to family planning. Moreover, there is a tradition of accurate collection of statistical data.

Unfortunately, family planning efforts have not had the expected impact. Among the multiple causes are a lack of political support in the highest echelons of government, and an unwillingness to allocate the resources and the qualified public officials necessary to see the program through. Indira Gandhi was not fully committed to family planning before 1975. When the commitment was made, it was not based on the development-related elements discussed earlier, but took the form of a crash program based on compulsory sterilization and the use of the program as justification for retaining power. In the end, the issue of compulsory sterilization contributed to Gandhi's 1977 political setback, because the program was perceived as a campaign against the poor—the middle class against the lower class and the Hindus against the Muslims.

The following observations emerged from a comparison of the India and Pakistan experiences:

--Neither country had dynamic family planning programs when political commitment was weak; even when political commitment was strong, however, the programs were not successful.

--Although the two experiences suggest that the close linking of a family planning program to the political commitment of individual leaders—or the use of the program for short-term political purposes—may undermine the long-term viability of the program, evidence on this point is still weak and ambiguous.

--Although India possesses greater administrative capability, Pakistan has at times (particularly under Ayub) at least equalled India in family planning program effectiveness.

--Pakistan's inundation scheme, which was influenced by AID, was as much a failure as India's compulsory sterilization program, which was not.

Peru was identified as the most marginal case in the Berelson typology of "possible" candidates, in that the country lacks governmental commitment to fertility reduction, has almost no administrative capability to sustain a program, and suffers from a "psychology of underpopulation" associated with its territorial disputes with Chile over the northern part of that country. In the past, the Peruvian government has actively opposed population limitation. The pronatalist policy of Peru's current military leadership is seen to be an outgrowth of the government's instability over the past few years and of the growing opposition to it in all sectors of society. In these circumstances, the government avoids providing the opposition with any rallying point on sensitive social issues, and fears that an antinatalist policy statement would provide just that. Although the level of socioeconomic development is low, the thriving private market in contraceptives suggests that much more could be done than is being done at present, and despite a poor administrative capacity, the current regime has made some changes that may facilitate future efforts to reduce fertility. A major and persistent problem is the inadequacy of its health delivery systems—one of the poorest in Latin America.

The discussion of countries falling into the category of "probable" candidates began with an examination of the experience in Thailand. Although Thailand had a pronatalist policy until the late 1950s, by 1970 the cabinet had decided to adopt an official antinatalist policy. Recent declines in the birth rate are seen to be partially a result of the political and administrative system supporting this policy. Thailand has a centralized political system which is fairly capable of providing effective leadership for the implementation of national goals. Since 1960, external assistance has been significant and instrumental in encouraging the adoption of antinatalist goals. Although there has been no intense, persistent political backing for family planning programs—which might have provoked dissent from other organized groups and interests—there has been sufficient support to promote effective administrative action. Thailand is now experiencing a high rate of increase in family planning.
adoption and a very high rate of fertility decline. It appears that a major part of this success derives from the social, political and cultural conditions in the country, but a good measure can also be attributed to increased administrative capacity and to steady, rational, and noncoercive governmental support.

The important role of the status of women in Thailand in affecting fertility reduction was emphasized. The fertility pattern has been altered in the absence of several development-related variables, in large part because of the independent decision-making power enjoyed by women. Differences in the position of women in Southeast Asia and women in South and East Asia were mentioned. In the former, societies are characterized by a considerably lower degree of male child preference, mother-in-law domination, and what was described as male "heavy-handedness." Women make decisions related to their fertility and, therefore, determine the demand for family planning. It is the women who feel the economic pressures and who see and respond to the impairment of maternal and child health that results from high fertility.8

The current family planning program in the Philippines has proven to be something of a paradox. Despite the government's announcement of an antinatalist policy in the late 1960s, there has been no increase in the absolute number of acceptors of modern contraception. Several political and administrative factors help explain this failure.

--The country is characterized by organizational contradictions: On the one hand, the political and administrative system is both highly centralized and fragmented, handicapping official attempts to create and implement an antinatalist policy. On the other hand, there is a strong and active private sector which is taking a number of initiatives in family planning.

--Conflict between church and state over family planning has created a situation in which neither is willing to test its power on the issue.

--The government has resisted decentralization of the program. The creation of a central family planning coordinating body signaled the centralization of family planning efforts, and very few of its resources have "trickled down" to the field. At the same time, the political support for and leadership of this body is weak, while political interference in the national program is strong, arbitrary, and often destructive.

--There is little evidence of a strong government commitment to broad-based economic development.

--Martial law, which has curbed private economic and social development, has affected family planning as well.

--Many of the technocrats who helped bring antinatalist policies to the country in the late 1960s have now left the government.

The family planning program in the Philippines requires genuine decentralization and the support of private and local groups. Contraceptive use is seen to be due primarily to the private market.

Colombia and Costa Rica have experienced larger declines in fertility than other Latin American countries largely as a result of political and administrative elements associated with their relatively democratic form of government. The political regimes in these two countries, characterized by freedom of speech, press, free elections, an independent judiciary, and a degree of civilian supremacy, have increased their responsiveness to the demand for family planning. Local autonomy and decentralization of decision making probably facilitated the process by allowing more points of access for transmitting demand and by encouraging the design of services suited to local cultural conditions. Administrative capability has provided a private and public infrastructure, entrepreneurial and managerial talent, and training capabilities to implement policy. It has also facilitated the recognition that rapid population growth inhibits the development process.

Other political and administrative factors contributing to success include: the political commitment of national presidents; service organizations that have provided links between demand and service; and the cooperation between public programs, private clinic programs, and the commercial distribution networks. These have not attempted to undercut each other but, rather, have coordinated their efforts. The private sector has played an important role in the distribution of contraceptives in both countries. The experience of these countries suggests that working through multiple service organizations is preferable to enforced coordination; that the low profile of AID in channeling funds through accepted organizations and private groups makes more daring programs possible; and that conferences, fellowship programs, and research and training grants can yield very high dividends.

Moderate declines in fertility in Venezuela can probably be attributed to overall modernization and, perhaps, to private program efforts. But the failure to achieve even greater declines is partially a result of the generally low and fluctuating commitment to family planning by administrations and the weak links between public demand and program response.

Brazil was one of the last countries in Latin America in which the government has come to recognize the importance of population control. The current program is decentralized and has been responsive to demand at the local level; and efforts are slowly increasing. Political commitment to the goals of reducing the country's foreign debt and equalizing the distribution of income is seen as having an important positive impact in the program.

Mexico was also slow to adopt a population program. Positive political and administrative factors include President López Portillo's reiteration of the importance of reducing population growth, the program's utilization of the extensive health and social service infrastructure, and the availability
Since Mexico has not contraceptives in pharmacies and supermarkets. Since Mexico has committed itself to public action, there has been a rapid drop in fertility, the result in part of the availability of resource people trained by such international donors as the Ford Foundation, the strong commercial sector, and the large private programs which facilitated the turnaround once a government policy was developed. Mexico's current moves toward decentralization are welcome in view of the need for greater emphasis on program decentralization, improved access, and multiple service delivery points.

B. Policy-Related Issues

Several issues were raised regarding the relevance of the Berelson typology to AID policy and programs. There was a general consensus that the typology reaffirmed the need for AID-supported population strategies to be country-specific and responsive to the internal dynamics within each society. The practice adopted in AID's Bureau for Asia of developing population strategies for individual countries was seen as a useful approach to addressing these differences in country programs.

What were the implications of the typology for the allocation of AID resources? The issue was raised whether, from a policy perspective, AID program assistance should give higher priority to the "probable" countries—which are closer to the Berelson target and therefore more likely to attain the desired target within 20 years—than to the countries falling into the "unlikely" category. Should there be only minimal input into the latter countries, since assistance to them would be less cost-effective? It was stated that, although the Agency had no intention of ignoring the "unlikely" countries and although it can be assumed that AID will continue to be just as active in those countries as it is in countries in the "possible" category, the former do represent an obvious challenge. There is a need to find ways of coping with the more difficult sets of circumstances prevailing in these countries, and to recognize that even though countries may be classified in the same category the same approach cannot be used in all of them. Programs must be tailored to the specific needs and conditions in each country, and programming should be directed toward identification of, and response to, the internal dynamics of change within the "unlikely" set of countries. AID's ultimate goal should be to move countries out of this category into the "possible" and "probable" categories. It can be assumed that in every country some appropriate action can and should be taken, and that it is not necessary to await an indicator of "readiness"—such as a reduction in infant mortality—before making an attempt to reduce fertility.

The importance of understanding the internal dynamics of countries placed by Berelson in the "unlikely" category was brought up in another context. The issue was raised as to whether the problem in these countries lies in attitude (they do not want family planning programs) or in the lack of administrative ability (they cannot deliver services). The distinction was seen as having important implications for AID programs and policy: If the major problem is related to administrative ineffectiveness, then AID should focus on improvement of the administrative machinery. If the obstacle is sociocultural resistance to acceptance of family planning services, then another set of policies and programs is required. Bangladesh was cited as an example of a
country which, though it scored low according to Berelson's criteria, has demonstrated through the success of small private projects that it is quite receptive to the acceptance and utilization of family planning services.

At another level, Berelson's classification was seen as having implications for the structure of AID. The diversity of country circumstances may dictate different organizational and personnel requirements. For example, countries in the "probable" category will require a great deal of assistance in terms of resources, which implies the need for a strong central population office in AID that can influence Congress and mobilize resources. Countries in the "unlikely" category are in need of highly sensitive field staffs and strong and effective regional offices capable of adapting resources to specific sets of circumstances in each country.

In the case of African countries, a proposed approach was described in which AID focused its resources in specific sectors around programs that have a short-run impact on development objectives or problems, and a long-run impact on fertility. Specifically, the approach incorporated the following elements: The supply of contraceptive services would be increased in those African countries where governments are committed to population control, and family planning services on a national scale combined with rural health delivery systems, preventive medicine programs, and maternal child health care services, as has been proposed in Kenya. On an experimental basis, family planning components would be integrated into specific rural and regional development programs. High rural population densities in the face of increasingly scarce arable land (as in Rwanda, Burundi, Malawi, and parts of Kenya) may also justify experimental programs. Donors would be made aware of the importance of combining family planning with health care services, and would be discouraged from emphasizing, as they have in some areas in Sub-Saharan Africa, contraception delivery at the expense of other health care systems. As a matter of policy, the Bureau for Africa has made a concerted effort in the past few years to combine health, nutrition, and population-related services and to provide diverse types of training. For example, the Senegal project has integrated family planning into a maternal/child health care program; in Tanzania, where the family planning component is small, the emphasis is on maternal and child care health training; in Kenya, the AID project has supported a substantial amount of training of midwives and health aides. The projected plan for Rwanda is to integrate a family planning component into the existing maternal/child health care system and to upgrade health delivery services.

The approach also recommended establishment of a human resource training program to provide African nationals with training in demography, health care, family planning, and related services. Its purpose would be to increase significantly the number of Africans with skills in these areas and, thus, to increase awareness of the linkage between development processes and population issues. Such an effort would be accompanied by long-term investment in improving the quality and availability of demographic and related sources of information, so that policy makers and planners would have the data necessary for appraising the effect of population changes on their countries. Most of these countries have never had a complete census survey.
Finally, it was suggested that experimental projects for enhancing the status of women, generating additional forms of cash income in both agricultural and non-agricultural sectors, and assessing the effects of such economic changes upon fertility be established. Given slow economic growth in Africa, the status of women is probably the most important determinant of family planning effectiveness and fertility decline. The rate at which fertility will decline over the next two decades will depend on the number of women of reproductive age and on whether emotional, social, and economic opportunities are made available to them so that they are not limited to early marriage and childbearing.
PART III

CONCLUSIONS

The workshop did not draw up a formal list of policy recommendations for AID, but a consensus on certain points did emerge from the discussion. These are summarized below.

1. The country-specific approach to policy planning that has been adopted in the Bureau for Asia with respect to family planning programs should be followed for all countries, especially those in Africa and elsewhere that are in the "unlikely" category. Such an approach would establish realistic long-term goals and identify anomalies in short-term targets (for example, it was pointed out that serving middle-income clients in some areas may be a necessary first step even though it appears to run contrary to AID's practice of assessing programs in terms of specific criteria of benefit incidence to low-income groups).

2. It was emphasized that AID policy should also differentiate conditions within individual countries according to region of the country, subsector of population, and specific type of family planning program. AID must be more sensitive to the existence and emergence in regions or subgroups of situations which, although not representative of the society as a whole, do present features and characteristics particularly favorable to different program strategies. The notion that a typology should be seen as a continuum rather than as a static categorization offers the possibility that features characteristic of "possible" countries may be present in specific subsectors of "unlikely" countries.

3. There should be greater variety and flexibility in the services made available to countries in order to allow for easier adaptation to individual and family needs. The contrast between experiences in Indonesia and the Philippines was referred to. The success of the family planning program in the former was attributed to the amount of flexibility built into the family planning program by the Government and the AID mission, allowing field staff to respond to internal dynamics and adapt strategies in the context of on-going operations. In the Philippines, by contrast, the AID mission did not have this flexibility, and success levels were considerably lower.

4. AID should look for opportunities to work with local governments and institutions. The combination of a decentralized program, a strong local government effort, and a strong private sector effort is particularly effective. The two major successes in Latin America--Colombia and Costa Rica--have been characterized by good coordination between public and private sectors.

5. In Africa in particular, AID officials should invest more time in increasing the awareness among politicians, planners, and decision makers of the links between population and development. Reference was made to the fact that AID officials continue to develop projects in Africa which have
been thought out in Washington and which have had no input from African officials. Such practices perpetuate, among other things, the gap in perception and understanding between government officials and AID with respect to AID's sense of urgency and concern about population trends in that region.

6. AID should revise policy statements that emphasize the provision of family planning services to couples and contraceptive usage by married women, for such statements do not reflect the true situation. Specific reference was made to the large number of adult nonmarried women of reproductive age and to high rates of adolescent pregnancy. There is a need for a family planning program aimed at single women of all ages. In the case of adolescents, such an effort may entail the development of special programs in secondary schools--an approach different from the kind of strategies AID has followed.

The workshop was closed with the following summary statements:

1. The conceptual framework of the study, which formed the basis for the workshop discussions, was shown to be useful in providing a measure of how far some countries have to go to reach the desired target of a 20 per 1,000 crude birth rate and in guiding the initial analysis of possible population programs, as long as the specific needs of individual countries are also considered. The categorization, however, is simply a useful means of identifying in a general way where countries stand with respect to their demographic profiles. It should be made explicit that these typologies are not intended to suggest that countries in the bottom category should be ignored or that countries at the top should receive all the effort. Significant improvements are possible in the countries that have been categorized as "unlikely" and in any and all of the others. Policy should be directed at adjusting the population program to meet the dynamics of the individual situation and circumstances in each particular country, regardless of which stage that country is in.

2. It is unrealistic to expect radical change to occur in population trends over a short period of time. The twenty-year target set by Berelson is particularly useful because it emphasizes the importance of planning over the long term. By comparison, the five-year strategy plan utilized by the Agency has been limiting. It is much more fruitful to talk about and plan strategies for the next 20 years, so that the decisions that are made now are in terms of an objective to be achieved by the year 2000.

3. Insofar as population programs are concerned, the real action is in the field. Programs devised in Washington are clearly not sufficient. There is need for greater interaction and more effective sharing of knowledge, experience, country-specific insight and sensitivities between the Washington staff and the field staff.

4. The country-specific experiences illustrated--and the background papers confirmed--that any distinction that is made between family planning and development programs is an artificial one. No suggestion emerged from the workshop for a unilateral approach to the population issue. The workshop
reached a consensus that there is need to disaggregate the mix of fertility determinants and to mobilize a wide array of instruments in family planning techniques and other direct and indirect efforts related to fertility reduction in support of more creative program planning.

5. The roles of political commitment and administrative capability, highlighted in the country-specific discussions, also underline the importance of careful reviews and assessments of local circumstances in the early stages of designing program strategies. The discussions also pointed to the importance of knowing the sociocultural setting, local initiatives, and local communities in countries for which population strategies are devised.

6. The interrelationship of other developmental factors and the role of women was implicitly a central element of the discussions. Other development efforts--apart from population programs--should also stress the importance of this interrelationship.

7. The importance of evaluation was stressed, and the workshop was cited as an example of the possibilities for synthesizing evaluative information at relatively low cost.

8. The Bureau for Asia was encouraged to review its country-specific population strategy paper and to share it with other regional bureaus, and it was recommended that the other regional bureaus be called upon to formulate country-by-country population strategies.

9. Responsibilities related to the development and review of population activities are diversified and scattered, and there is a need to integrate these activities into other mechanisms within the Agency. Some attention should be given to the World Bank's external advisory system which periodically reviews the whole range of Bank population activities for the Bank's top management.
APPENDIX 1

Participants

POPULATION WORKSHOP, April 3, 1979

Anne Aarnes
Human Resources Division
Office of Policy Development and Program Review
Bureau for Program and Policy Coordination
A.I.D.
(Observer)

Clifford Belcher
Chief, Population Division
Office of Development Resources
Bureau for Africa
A.I.D.

Richard Benedick
Coordinator for Population Affairs
Department of State

Robert J. Berg
Associate Assistant Administrator
Office of Evaluation
Bureau for Program and Policy Coordination
A.I.D.

Richard Blue
Director, Development Studies Program
A.I.D.
(Observer)

Maura Brackett
Chief, Population Division
Office of Development Resources
Bureau for Latin America and the Caribbean
A.I.D.

Goler Butcher
Assistant Administrator for Africa
A.I.D.

Richard L. Clinton
Associate Dean
College of Liberal Arts
Oregon State University
Corvallis, Oregon
(Author of Workshop Paper)
Edward Coy
Deputy Assistant Administrator for Latin America and Caribbean
A.I.D.

Nicholas Danforth
Project Manager, Westinghouse Health Systems
Westinghouse Electric Corp.
Columbia, Maryland
(Contract Manager)

Jason L. Finkle
Director
Center for Population Planning
School of Public Health
University of Michigan
Ann Arbor, Michigan
(Author of Workshop Paper)

Patrick Fleuret
Human Resources Division
Office of Policy Development and Program Review
Bureau for Program and Policy Coordination
A.I.D.
(Observer)

Barbara Furst
Anthropologist
Washington, D.C.
(Author of Workshop Paper)

Duff Gillespie
Chief, Research Division
Office of Population
Bureau for Development Support
A.I.D.

R. Kenneth Godwin
Chairman
Department of Political Science
Oregon State University
Corvallis, Oregon
(Author of Workshop Paper)

Richard Greene
Development Studies Program
Training and Development Division
Office of Personnel Management
A.I.D.
Stephen Joseph
Deputy Assistant Administrator for Human Resources Development
Bureau for Development Support
A.I.D.

Lenni Kangas
Office of Technical Support
Bureau for Near East
A.I.D.

Brad Langmaid
Director, Office of Development Planning
Bureau for Near East
A.I.D.

Sander Levin
Assistant Administrator for Development Support
A.I.D.

Maureen Lewis
Human Resources Division
Office of Policy Development and Program Review
Bureau for Program and Policy Coordination
A.I.D.
(Observer)

David McClintock
Office of the Coordinator of Population Affairs
Bureau of Oceans and International Environmental and Scientific Affairs
Department of State

William McGreevey
Director, Population & Development Policy Program
Battelle Memorial Institute
Washington, D.C.
(Author of Workshop Paper)

Keys McManus
Deputy Director, Office of Technical Support
Bureau for Near East
A.I.D.

Gayl D. Ness
Department of Sociology
University of Michigan
Ann Arbor, Michigan
(Author of Workshop Paper)
Roxann Van Dusen
Human Resources Division
Office of Policy Development and Program Review
Bureau for Program and Policy Coordination
A.I.D.
(Observer)

Nadia Youssef
Research Associate
International Center for Research on Women
Washington, D.C.
(Rapporteur)
APPENDIX 2

AGENDA

FAMILY PLANNING PROGRAM EFFECTIVENESS STUDY

WORKSHOP

April 3, 1979

9:00 a.m. Welcome and introductory comments. Theme: What can we realistically expect to achieve by way of fertility decline in the developing world by the year 2000? What is AID's role in specific key countries? Mr. Shakow

9:15 a.m. State of social science research on determinants of fertility. Dr. McGreevey

9:30 a.m. Over-view and summary of the findings of the study. Setting the stage for country-specific discussions. Dr. Sinding

10:00 a.m. Coffee break

10:15 a.m. Discussion of appropriate strategies for AID in Berelson's "unlikely" countries. Initiating the discussion:

Near East (particularly Morocco): Mr. Kangas five minutes
Asia (Pakistan, Bangladesh): Dr. Finkle five minutes
Africa (Nigeria, Ghana, Kenya): Dr. Segal five minutes

12:15 p.m. Lunch (International Club)

1:30 p.m. Discussion of the "possible" countries. Initiating the discussion:

Latin America (Peru): Dr. Godwin five minutes
Near East (Egypt): Mr. Kangas five minutes
Asia (India, Indonesia): Dr. Ness or Dr. Finkle five minutes

2:30 p.m. Coffee break

2:45 p.m. Discussion of the "probable" countries. Initiating the discussion:

Latin America (Mexico, Colombia, Brazil): Dr. Godwin five minutes
Asia (Philippines, Thailand, Sri Lanka): Dr. Ness five minutes

4:45 p.m. Summary and Conclusions. Lessons learned and next steps. Mr. Shakow

5:15 p.m. Adjournment

5:30 p.m. Westinghouse Health Systems Reception at International Club to 6:30 p.m.
APPENDIX 3

FAMILY PLANNING PROGRAM EFFECTIVENESS STUDY
Submitted by:

Westinghouse Health Systems
Box 866
Columbia, Maryland 21044

To:

Program and Policy Coordination Bureau
U.S. Agency for International Development
Department of State
Washington, D.C. 20523

FAMILY PLANNING PROGRAM EFFECTIVENESS STUDY

USAID/afr-C-1145, Work Order 11

September 29, 1978
# FAMILY PLANNING PROGRAM EFFECTIVENESS STUDY

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BACKGROUND TO THE STUDY

The continuing debate about the effectiveness of U.S. assistance to family planning programs in developing countries has focused primarily on the issue of "supply" vs "demand". Critics who consider AID population assistance ineffective argue that modern family planning services are neither necessary nor sufficient to lower fertility. They believe that because birth rates are affected by social, cultural, and economic factors, then those factors must be changed for birth rates to change. Until basic socio-economic changes occur, the argument goes, there will be little demand for contraceptives.

On the other hand, supporters of expanded family planning programs argue that in many parts of the Third World the supply of family planning information and services is inadequate, and that when men and women are better educated about family planning and have full access to family planning services, then many more of them will use those services effectively.

Few proponents on either side disagree that both the supply of and the demand for family planning services, which have grown rapidly in recent years, will have to grow even more rapidly in the future to avoid a tripling of the world's population in the 21st century. Thus the most useful questions to ask are not whether AID family planning assistance should be expanded, but when, where, to whom, and how. To help them find answers to those questions, population program planners need to define what one of them calls "ripeness" criteria: preconditions or predisposing factors which will help to indicate whether the countries and institutions receiving population assistance are likely to utilize it effectively.

The four papers in this study were prepared in an effort to help AID define and understand some of the most important predisposing factors affecting family planning program effectiveness:
• **Political commitment** of the government, officials, and significant political institutions outside of government in favor of expanded family planning services

• **Administrative ability** of the government and other institutions to organize, manage and implement the delivery of those services

• **Cultural factors** affecting the attitudes and behaviors of men and women regarding the use of modern contraceptives.

Each paper was written by experts who are familiar with the literature and who have had recent field experiences. They were asked to survey major research studies and to focus on particular countries as case studies. The two major papers focus on political and administrative factors in Asia and Latin America, and are supplemented by a brief essay on Ghana. The fourth paper is a summary of cultural factors affecting family planning utilization.

**SOME GENERAL CONCLUSIONS**

The most detailed papers in the study, by Jason Finkle, Gayle Ness, and Lindsay Robinson, look primarily at Asia but contain broad observations relevant to other areas as well. They examine the impact of "political-administrative" conditions on family planning program performance, both by carefully framing the concepts involved and then by identifying the actual political and administrative determinants of effectiveness in particular Asian programs. The papers draw as heavily on the authors' personal experiences in Asia as on the literature (nearly all of which is by non-Asians), and focus on lessons learned from India, Pakistan, Thailand, Indonesia, and the Philippines.

The papers illustrate how the effectiveness of Asian family planning programs is largely a function of a complex, changing relationship between many political and administrative factors, and indicate that this relationship is a result of deeply imbedded internal pressures which are not easily affected by external forces. The papers also imply that population experts must be sensitive to those changing political and administrative variables in planning programs.

The paper on Latin America by Richard Clinton and Kenneth Godwin focuses on political and administrative factors in Colombia and Costa Rica and briefly touches on programs in Venezuela, Mexico, Equador, and Peru for comparative purposes. It explores a very general model for fertility de-
cline which relates various broad political and administrative variables (such as levels of modernization, democracy, contraceptive demand, and political commitment) and attempts to explain the differences in family planning effectiveness among different countries by examining those variables.

The final political and administrative paper, Aaron Segal's comment on Ghana's population policy, emphasizes that country's positive role in setting both an example for other African countries and goals for itself — despite administrative obstacles to success and despite the fact that Ghana's population policy has failed to meet these goals. He explores the question as to whether it is more useful for a developing country to set high targets early in the development of its population policy than to implement "modest measures lacking larger objectives."

The overview of cultural factors affecting fertility by Barbara Furst is an attempt to pull together the seemingly endless array of fertility related studies by anthropologists, sociologists, and other social scientists in many developed and developing countries. These studies, concentrating on the many traditional cultural barriers to fertility control, make up what often appears to be a conflicting and confusing body of literature containing few general observations which can be applied to more than a limited number of families or societies. Nonetheless, it is important to be reminded of the key role played by culture, particularly culture related to the changing role of women and the changing value of children, in family planning programs. Even this brief survey of these traditional barriers, and of how they are being eroded by modernization, helps to indicate which social, cultural, and economic conditions are associated with family planning acceptance.

Although the four papers differ widely in form and content, some general assumptions of the authors seem to be shared between the lines which may appear obvious but which nonetheless bear repeating:

- Political, administrative, and cultural variables affecting population policies and family planning programs are multifaceted, constantly changing, and widely different from one group or one country to the next.
- Although both political commitment and administrative ability in support of family planning programs are necessary for pro-
gram effectiveness, they are insufficient if social, cultural, and economic pressures are not conducive to a smaller family norm.

- If their programs are to be effective, family planning program planners must be aware and keep abreast of current political and administrative issues, as well as changing socio-economic and cultural pressures, which may affect their programs.

These papers are an initial exploration of the types of political, administrative, and socio-economic and cultural indicators which need to be explored in further depth on a case-by-case basis before national or local family planning projects are implemented.

CONTRIBUTORS TO THE STUDY

This study was coordinated by Westinghouse Health Systems under Indefinite Quantity Contract No. AID/afr-C-1145, Work Order No. 11, for the Studies Division of the Office of Evaluation of the Bureau for Program and Policy Coordination of AID. It was designed with technical direction from the AID Project Manager, Steven W. Sinding, Ph.D., former Population Advisor to the Studies Division who is currently Director of the Population Division of the Asia Bureau of AID. The study was coordinated at Westinghouse Health Systems by the Project Director, Sharon Stanton Russell, and the Project Manager, Nicholas Danforth.

The Asia case studies were written by three consultants from the University of Michigan at Ann Arbor: Professor Jason L. Finkle, Ph.D., Director of the Center for Population Planning of the School of Public Health; Professor Gayl D. Ness, Ph.D., Department of Sociology; and Lindsay M. Robinson, M.P.H.

The Latin America case studies were written by the two consultants from Oregon State University in Corvallis: Richard L. Clinton, Ph.D., Associate Dean of the College of Liberal Arts; and R. Kenneth Godwin, Ph.D., Chairman and Associate Professor of the Department of Political Science. The Africa case study is by Aaron Segal, Ph.D., Program Manager in the Division of International Programs of the National Science Foundation in Washington, D.C. Barbara Furst, writer of the culture and fertility analysis, is an anthropologist based in Washington, D.C.
In connection with this study, the consultants, Dr. Finkle and Dr. Godwin, interviewed a number of experts in the population field in Washington, D.C. and New York City; their names and institutions (for identification purposes only) are included in the Appendix.
The information, ideas, and opinions included in this study are entirely the authors' own, and should in no way be construed as necessarily reflecting opinions held by any other individuals or institutions including Westinghouse Health Systems, the Agency for International Development, or the organizations where the authors are employed.
SECTION 1

ASIA CASE STUDIES:

POLITICAL-ADMINISTRATIVE CONDITIONS AND
FAMILY PLANNING PROGRAM EFFECTIVENESS

By: Jason L. Finkle, Gayl D. Ness, and Lindsay M. Robinson
Political-Administrative Conditions and Family Planning Program Effectiveness

**Introduction**

On the political and administrative determinants of family planning program effectiveness, there is much comment, lack of conceptual clarity and very little systematic research. Strong political commitment has been identified as a major determinant of program successes in Ayub's Pakistan, China, and Indonesia among other places. The lack of political commitment has also been linked to program weaknesses in India and Bhutto's Pakistan.

On the other hand, some confusion arises when it is observed that an excess of political commitment in Indira and Sanjay Gandhi's India and Ayub's Pakistan was also responsible for disastrous program failures there. In two of Asia's most successful family planning programs, Taiwan and South Korea, political commitment has received far less attention as the cause of high program performance. Further, even where political commitment is seen as a cause of program effectiveness, the observations are usually general and impressionistic. There is little systematic examination of what political commitment is, how it is manifested in organization and behavior, and exactly how it comes to have an impact of program performance.

Much the same can be said for the impact of administration on family planning program effectiveness. A 1965 ECAFE working group noted that the importance of administrative matters and
called for more attention to them. A decade later, David Korten is still exhorting the world to meet the family planning management challenge of the 1980's. The intervening years have seen far more exhortation than systematic attention to management matters. It is easy to recognize that failure to pay field personnel on time, failure to recruit top quality personnel and to provide sufficient incentive for work, failure to provide proper contraceptive supplies and equipment, failure to set reasonable targets and to obtain valid reports on field operations must in some way reduce program effectiveness. Still, the source of these failures, and the specific way they do affect performance are not systematically examined. Finally, in all observation of management failures, it is never clear where politics ends and management begins.

Obviously, some conceptual clarification is needed in both areas. This paper will attempt to provide some of that needed conceptual clarification. But it has another, more important, and related aim as well. It will also attempt to identify some of the major political and administrative determinants of family planning program performance. As we have said, there are very few systematic attempts to examine the impact of political and administrative conditions on program effectiveness. There are, however, a few studies that can provide important insights. Even more, there is much indirect evidence in the literature of family planning programs that can provide useful insights if it is drawn together properly. There is also a large amount of information in the form of personal experience, the current lore of family
planning derived from many years of field observation. All of this information has much to tell us if we ask the right questions. In this paper our aim of conceptual clarification will in effect be an attempt to develop the right questions, and to pose those questions to the literature and the lore of family planning programs. We believe this exercise will help us to identify some of the more important political and administrative determinants of program effectiveness.

Our attempt will be largely limited to Asia. In this region, we find a more advanced stage of national public activity in family planning than in other of the world developing regions. The Asian region came earlier to the adoption of official antinatalist policies than did Africa or Latin America. In some ways Asian nations helped to legitimize official antinatalist policies. Further, there is considerable variance in Asia in both political and administrative conditions, and in family planning program effectiveness. Finally, and as a result of this, there is a rich stock of knowledge, both literature and lore, on which we can draw for our analysis.

We shall draw on three sources of information for our analysis. First, we shall use the available specific studies of political and administrative impacts on family planning programs. Second, we shall examine the wide ranging literature on family planning programs, which provides much of the indirect evidence of the determinants of program effectiveness. Finally, we shall draw on the lore that is contained in personal experiences of a wide range of observers of the Asian family planning scene. These include the rich experience of the peripatetic Sam Keeny, perhaps the single
most experienced and articulate of all family planning observers, and the legions of field workers, program administrators, and international organization workers the authors have known and interviewed over the past decade. Our analysis will also draw on a smaller but more pointed series of interviews done specifically for this exercise.

**Political-Administrative Systems: A Framework of Questions**

Our first task is to deal with the analytical separation of political and administrative conditions, a separation that is embedded in western social sciences. The separation reflects in part the institutional differentiation of western industrial societies, and is reinforced by the organization of the social sciences. Political parties are forms of organization distinct from civil bureaucracies, and from the plethora of private organizations characteristic of western societies. The academic disciplines that have developed specialized competence to examine these different forms of organization are distinct power structures. They develop unique theoretical and methodological approaches to the world, and have considerable interest in maintaining their distinctiveness.

Given the institutional differentiation of western societies, the large role played by private organizations, and the distinctiveness of academic disciplines, the separation of political and administrative concerns is understandable, and at least partly justifiable.

For the developing world, however, this separation is far less justifiable. The lower level of institutional differentiation in
the non-industrial nations implies a greater interpenetration of 
political and administrative conditions. Second, the greater power 
and centrality of public organizations in the developing world im­
plies that the politics of administration (or task accomplishment) 
is often only the mirror image of the administration of politics 
(or legitimacy).3 Finally, the great thrust for national economic 
and social development that is so pervasive in the developing 
world undermines the utility of separating political from administra­
tive concerns. It is no longer sufficient for governments simply 
to be; legitimacy depends in large part on doing; and the doing 
typically involves organizing public activities to increase 
national human productivity and welfare. For all of these reasons, 
the approach to public programs in the developing world requires 
a perspective that links rather than separates political and ad­
ministrative conditions. The perspective required is one that 
focuses upon political-administrative systems rather than upon 
political and administrative conditions.

A brief reference to illustrative examples from the current 
literature will be useful here. In a recent and insightful article 
on the management of family planning programs, Ted Smith4 argued 
that failures in personnel recruitment and reward constituted some 
of the most serious liabilities in family planning programs. He 
advocated stipulations in external assistance that would ensure 
appointment of high quality personnel, as well as reward structures 
that might be "entirely out of line with those provided by other 
government agencies." Is this a management issue or a political 
issue? In another comparative analysis of Malaysia and the
Philippines, Ness and Ando argued that Philippine leaders typically used personalistic vote-buying strategies for mobilizing political support, while Malaysian leaders typically used programmed rural development strategies. The one worked through the mobilization of political workers around election time, the other worked through the routine administration of technically specialized agencies, whose outputs were dramatically increased by routine programmatic techniques. Were these observations of the political or of the administrative conditions?

In both cases, political and administrative conditions are so intertwined that considering one without the other would certainly be inappropriate. Public programs, population programs included, are always interdependent with a nation's political system. What may appear as the result of efficient administration is usually in the final analysis a kind of administration that is made possible by the political system. And a political system that appears effective in mobilizing support and gaining legitimacy is usually in the final analysis a system that uses an efficient administrative process.

In this paper, we shall not attempt to separate political and administrative conditions. Rather we shall deal with what we call the political-administrative system. It is this system that is at the root of any public policy and determines its direction and effectiveness.

With this political-administrative systems perspective we can deal with public policy more holistically. We can use a standard definition of public policy, or of population policy, as something
that involves a statement of a set of goals, and the organization and instruments mobilized to achieve these goals. To be sure, even the separation of goals, organization, and instruments involves some arbitrariness, as it cuts up the multifaceted flow of human behavior by which collective ends are achieved. Nonetheless, some form of conceptual arrangement is required, and we find that this tripartite arrangement helps to arrange in a useful manner a series of observations on the determinants of family planning effectiveness.

In what follows we shall ask what are the conditions that determine a nation's population goals. More specifically, we shall ask what leads to the official adoption and continued support of antinatalist policies. Second, we shall ask what are the observations to be made about the organizational mechanisms by which goals are implemented. Third, we shall ask what can be learned from informed observation about the instruments of action that are organized to achieve collective goals in family planning. In all three questions the analysis does two things simultaneously. It begins to disaggregate the gross concept of political commitment to identify some of its major components, and it begins to show how these components involve intertwined and interdependent issues of legitimacy and task accomplishment.

Goals, Organization, and Instruments

Goals. Since India and China established the first official national antinatalist policies in 1952 and 1953, the world has witnessed a radical change in national population goals. For most of recorded history, governments have viewed population as a resource to be expanded. People implied revenues, labor and military might,
and the wise ruler would increase rather than decrease their number. Such orientations were deeply institutionalized; they were infused with a form of almost primitive religious value that reflected an orientation close to the center of the human species' very struggle for survival. This makes the shift to antinatalism all the more remarkable, and also helps to explain the deep, popular, and often religious resistance to official antinatalist policies. If pronatalism is so deeply embedded in the human collective experience, how do we account for the rapid and radical change?

Three interrelated political-administrative conditions are closely associated both with the original adoption of antinatalist policies and with their continued support. When political leaders possessed accurate information on the implications of rapid population growth, when the political leaders obtaining this information were strong and confident, and when their development commitments identified population growth as an obstacle to collective goals, strong and effective antinatalist policies were adopted and supported.

1. Population information. The relationship between population information and antinatalist goals is clear and fairly consistent. China adopted its first antinatalist policy following upon and as a result of its 1953 census. Although India's original policy was not immediately and directly the result of census returns, the major policy change that infused a sense of urgency about population control did result from the 1961 census returns. The examination of the 1957 census returns, together with national sample surveys on employment, led the Malaysian planners to promote an official antinatalist policy. Taiwan's political leaders were
typical of others in resisting antinatalist policies in the early 1960's. They incorrectly thought that the people wanted more children and that sex and family planning would be taboo subjects and thus political liabilities. The Taichung survey demonstrated both a popular willingness to discuss family planning and a popular desire for assistance, and this information was instrumental in changing the stance of the political leaders.8

On the negative side, it can be argued that Burma's lack of an effective census since 1940 in large part contributes to that country's pronatalism and its continued rejection of even private family planning services.

The impact of population information has also been demonstrated in a comparative analysis of UNFPA expenditures in Asia, Africa and Latin America.9 With its more advanced stage of population policy development, Asia absorbed the majority of UNFPA funds for its direct family planning services from the earliest activities of the international organization. With its resistance to antinatalist policies, Latin America used UNFPA funds primarily for basic census and other population data until into the early 1970's. This apparently led to policy changes, however, which were reflected in rapid shifts to expenditures for family planning services. For a variety of reasons, Africa still lags behind in the adoption of antinatalist policies, and here the majority of UNFPA expenditures are concentrated in basic census and population data gathering.

2. Political strength. There are some deviant cases, however, that call for more complex explanations. The Philippines has a long history of effective census taking and national data gathering.
As early as 1958, public documents noted the high costs of population growth and suggested that a national policy should be aimed at reducing the rate of population growth. It was another eleven years, however, before an official antinatalist policy was adopted. In this case, it is instructive that the antinatalist decision was taken only after President Marcos had won an unprecedented second term as president.

Political leaders are typically concerned with legitimacy, and adopt public policies with an eye toward mobilizing support and minimizing dissent. When political leaders feel strong and confident, they see less dissent and fear dissent less. Strong and confident political leadership is often closely associated with the adoption of an antinatalist policy. Again the list of illustrations is impressive.

Successful revolutionary regimes initially have a justifiable sense of strength. Thus the Chinese felt strong enough in the mid 1950's to adopt the highly revolutionary and ambitious "great leap" policy, and strong enough just before that to adopt an antinatalist policy. The Malaysian government's smashing electoral victory in 1964 certainly facilitated the adoption of the antinatalist policy. It is unlikely that such a policy could have been adopted after the electoral setbacks and communal riots of 1969, and indeed that experience did lead to a withdrawal of active support for the family planning program that had been adopted in the moment of political strength. Ayub Khan's assumption of power in Pakistan must be interpreted as a strengthening of the political center, with clear and direct implications for the antinatalist
policy. The same can be said for the Suharto regime in Indonesia, which had sufficiently consolidated power by 1968 to pursue a wide variety of progressive public policies, including family planning.

Political strength has important organizational or administrative dimensions. It implies a strong party structure, with roots in local branch organizations that can get government's message to the people and can just as significantly remain sensitive to the issues that concern the people. It also implies sufficient command over the public administrative structure to enable government to do the things that will mobilize popular support. Thus the Singapore government has mobilized considerable political support, especially for an urban setting, through the creation of what can only be called a super-efficient public administration. Malaysia's effective rural development program from 1959 to 1964 certainly increased popular trust in government. The North Vietnamese administrative capacities in the early 1960's were as pronounced as were the South's incapacities, and in both cases the level of administrative capacity reflected and affected levels of political strength.

3. Development Commitment. Perhaps the most central component of political will that affects population goals is a commitment to national economic development. This is also the component in which the political-administrative system is most clearly manifest. Here the political and administrative conditions are most clearly, directly, and inextricably intertwined. In a systematic comparison of population policies in Malaysia and the Philippines the major outlines of this argument were exposed. Malaysia was found to have a strong commitment, the Philippines a weak commitment to
national economic development. In Malaysia, national economic plans were developed, showing increasing technical sophistication and comprehensiveness. The plans all had direct and rational impacts on national economic policy, reflected in annual budgets and expenditures. The plans were the project of an Economic Planning Unit, which showed steady increases in technical competence in national planning. They were also supported by other specialized agencies of government, including the statistics department that collected basic socio-economic data, and the executive agencies that both planned for and carried out the components of the plans. The technical work of the EPU was linked to the cabinet through a national committee, that was in fact a mini-cabinet. These are the administrative elements of what we call the commitment to development. There were symbolic elements as well. From its first electoral activities in 1955, the ruling party has consistently used national development activities as mechanisms to mobilize political support. Roads, schools, health centers, land development, public utilities, irrigation and drainage projects were the inducements government held out to the electorate to gain its support.

On all of these counts, the Philippines stands almost at the opposite pole. The country has had a large number of national economic plans, but few have had any marked impact on economic policy, and many have even gone unsigned by the president. The planning unit has shown more consistency in its political impotence and isolation from the cabinet than in its influence and centrality. Political support is typically mobilized through vote-buying.
activities organized by local leaders with their personal political followings. National economic development has seldom been a major mechanism used for mobilizing political support.

The differences in the two political-administrative systems had direct and immediate implications for the formulation of national population goals. In Malaysia, the development commitment led quickly and directly to the adoption of antinatalist goals, and to the continued support of those goals, though to be sure with different levels of strength that reflected the waxing and waning of central political power. In the Philippines, this lack of commitment to development goals has been associated with a late adoption of antinatalist goals, with the greater weight of external influence in adopting those goals, and with the consistently weak support those goals have received.

Development goals reflect political and administrative conditions that are in distinct contrast with custodial or security goals. The latter have been the dominant goals of governments throughout history; the former have emerged only in the past century or less. In the first place, with development goals the political elite is committed to change, and especially to change in a direction that is considered progressive. Second, this leads governments to assume powerful initiative roles in the society as a whole, which in turn implies the necessity of building up the administrative capacities of the state. Further, the "progressive" content of the goals leads governments to build specific administrative capacities to monitor social and economic conditions. The development of national income accounting, and its technical utility
in national planning, have led to its adoption as the major accounting or perceptive mechanism governments use in achieving their goals. This entire process of adopting developmental goals and building administrative capacities appropriate to those goals has had a profound effect on population policies.

There are a number of ways through which development goals lead directly to the adoption of antinatalist population goals. In the first place, development has come to be measured by gross national product per capita. This measurement in itself defines population growth as antithetical to development goals. Although this simple mechanical definition may be logically or empirically deficient, it has great attraction to policy-makers. Very little imagination is required to see that if population growth were less rapid, the same rate of output growth would result in more rapid growth in output per capita. There is an equally simple accounting process in other government activities by which development goals are seen to imply the need for antinatalist policies. Development implies greater public investment or cost for expanding education and health facilities. It is very easy for finance ministers, education and health ministers to see in population projections massive, and often intolerable, increases in public spending. Even with a stationary population it would be necessary to expand education and health facilities to achieve national goals of increased productivity and welfare. When rapid population growth is added to this calculation, the increases are compounded. Further, it requires only a simple and intuitively appealing calculation to show that if population were growing more slowly, if antinatalist.
goals were achieved, there would be direct benefits in reduced rates of growth in public spending requirements.

As in the case of population information and political strength, the list of cases illustrating the relation between development commitment and antinatalist goals is impressive. Ayub Khan's early years of rule in Pakistan were marked by increased commitment to economic development, in both symbolic and administrative components. India's antinatalist policy was an integral part of its pioneering organizational and symbolic commitment to national economic development. Bhutto's greater commitment to political mobilization, especially of the rural population, led to a weakening of the development administration structure, which was reflected in his lesser support to family planning. The shift from Sukarno to Suharto in Indonesia marked a dramatic change from symbolic goals of national identity to the goals of economic development. Suharto brought back the technocrats who had been exiled or downgraded by Sukarno, and this signalled a commitment to development that led directly to the adoption of antinatalist goals. The development commitment has been sustained in Indonesia, though not without some difficulty, and the most recent election results and cabinet reshuffling may well portend a return to earlier types of commitment. If this does occur, we might expect negative implications for the family planning program.

On the negative side, Thailand and Burma provide instructive illustrations. Burma's continued commitment to symbolic goals of identity -- the Burmese road to socialism -- denigrates the materialism of economic development goals, and must be judged to
play a sustaining role in the government's pronatalist and anti-family planning goals. Thailand's political elite has for more than a century been more strongly committed to national security, and especially to ruling elite security, than to national economic development. Military leaders continued to show attraction for traditional pronatalist orientations -- people equal power, labor and revenues -- and throughout the 1960's this provided a powerful obstacle to the adoption of antinatalist goals.

In this analysis we have argued that the political commitment, which many observers have claimed is necessary for effective family planning programming, is not a simple homogeneous, nor simply a political condition. It contains at least three components, each of which has intertwined political and administrative dimensions. Political commitment implies a commitment to national economic development, with both symbolic and organizational manifestations. Political commitment also implies some strength in central political leadership, which also involves issues of legitimacy and task accomplishment. Finally, political commitment implies information, or intelligence of the aggregate condition of the population, and this too implies organizational capacities to perceive and other capacities by which that perception is interpreted and given meaning.

Organization. Goals are only public statements of intent or desired end states unless they are given an organizational vehicle by which they can be achieved. Asian antinatalist goals, as well as those in the rest of the modern world, have most typically been operationalized through the creation of national family
planning programs. In the literature and the lore of family planning programs, three general themes or issues have emerged in the discussion of organizational mechanisms and processes. One concerns structure, and especially speaks of the difference between single agency types, and coordinative interagency boards. A second concerns location, and especially raises questions about the relation of family planning to health agencies and to clinic-based activity. The third issue concerns the degree of penetration of the total population achieved by any organizational structure.

The three issues are brought together in part through the widely stated need for some form of integrated family planning activity.

1. Structure. A recent UN study of family planning administration in Asia noted two major organizational patterns. In one case, major responsibility is given to a single operating agency, often the health ministry. This agency then establishes distinctive family planning clinics and carries out a wide range of activities related to service delivery -- including training of workers, actual service delivery, research and information work. South Korea, Taiwan and, to a certain extent, Singapore represent this type of structure. In the other case, a national level board is established with representatives from a number of operating agencies that are considered relevant for population policy. The board is responsible for coordination and sometimes operation. Malaysia, Indonesia and the Philippines represent this type of structure. There is much variation in Asia between the major types, and many programs have shown considerable structural change over time. The only thing we learn from this observation is that,
by itself, structure does not appear to have any direct and consistent impact on program effectiveness. It has been recognized for some time that the structure and content of a program are probably less important than the clear and consistent implementation of whatever program exists.

2. Location. The most consistent observation of organizational conditions is the location of family planning within or close to the national health agency. This gives rise to what is perhaps the most persistent criticism of family planning programs -- their political impotence and their excessively narrow focus on contraceptive delivery to individual women (or families) at risk. It is widely observed that health ministries are the weakest in most governments. They have the smallest budgets; their ministers are among the least influential in any cabinet; and their emphasis on clinical services makes it unlikely that they will ever reach a large part of the needy population. A related, and we believe increasingly powerful, criticism is that the health services are dominated by norms and orientations of western medicine, and are therefore inappropriate to needs and beyond the resources of developing nations.

These are all valid criticisms. They are all levelled against family planning as well as against medicine generally, and they have led to some attempts at organizational reform. Yet there appear to be important political-administrative reasons for the health location and clinic activity, as well as an important paradox, that should be recognized. The paradox is that medical doctors and the medical profession are both very strong and very
weak. Medicine is everywhere a high status and wealthy profession and its members usually have considerable influence. At the same time, health ministries are usually the least powerful and influential of all government units. What we observe in this paradox is the difference between the power to initiate and the power to obstruct. The medical profession, as any organized group, gains considerable power to obstruct public policy actions. This does not, however, give it the power to initiate public actions. Organized medical groups have often opposed public programs to increase health services. Revolutionary regimes seem to achieve considerable advances in health care in part through destroying the political power of the organized medical profession. Finkle has shown in a comparison of India and Pakistan in the 1960's that the differences in the political power of the medical profession helped explain some of the obstruction of family planning programs in India and the advance of those programs in Pakistan.

The most obvious reason for health orientation in family planning concerns legitimacy and the minimization of dissent. Especially in the early stages of most programs, it was important that the medical profession lent a considerable amount of legitimacy to family planning. The use of the medical profession symbolized the health and welfare aspects of national policy, which might otherwise appear misanthropic. Perhaps more important is the fact that the medical profession is the only group with a recognized right to intervene in individual fertility behavior. This was more important where deeply held religious values offered resistance to family planning programs, as in Roman Catholic countries.
and in more traditional rural religious settings. Finally, there appeared to be fairly widespread recognition of the potential medical risks of the new contraceptive technology, and the medical profession provided at least some public protection against these risks.

The utility of the clinic orientation is almost equally obvious. For most programs this implied a post-partum and an MCH approach. Both certainly reduced the costs of acceptor recruitment, the first by confronting women when they were most interested in receiving fertility control assistance, the second by being located where large numbers of mothers would congregate, and where the advantages of family planning for both mother and child could most readily be explained.

These were apparently important advantages for the early formation of the new family planning programs, and they are in many cases probably important in maintaining legitimacy and contact against the ever present potential for the rise of dissent. At the same time, the limitations of this locational aspect have been widely recognized, and many moves to reform are under way. Two in particular have major implications for political-administrative systems. These concern the proposal for integration, and the proposal for community based family planning programs. The first will be treated here, the second is more effectively treated along with a consideration of the penetration of the program to rural areas.

Even before Taylor and Berelson first proposed a pilot program integrating family planning with MCH a decade ago, the integration
movement had strong support in Asia. Most recently the Population Council has supported major field research programs designed to determine what such programs would require. A spirited defense of this integration proposal is presented by Bruce Johnston who draws upon an Indian research program, which he interprets as providing clear evidence that integrated programs are more effective than non-integrated programs.¹⁹

In contrast, the ESCAP Population Division has proposed that the issue of integration be subject to more systematic investigation.²⁰ It notes the distinction between integration as structure and as process. An integrated structure means that one unit has control over another, and that this also implies access to the resources of the other. Thus the proposal for integration connotes a political struggle between two organized groups over access to resources. Integration as process, on the other hand, suggests a form of interactive linkage between specialized activities, which can in fact be achieved by a number of different structural arrangements. ESCAP proposes systematic research that aims to determine whether and what kinds of interactive linkages affect program performance, and what kinds of structural arrangements appear to produce the most effective linkage processes. This proposal also argues that systematic research is more useful than the pilot projects, which usually show high contamination with external resources that are not accounted for and that cannot be readily duplicated when projects move from pilot to routine stages. Pilot projects tend to demonstrate the feasibility of what they are designed to test, and they also typically fail when they are extended beyond the initial experimental boundaries.
3. Penetration. The Chinese family planning program, with its village level planned birth committees, has produced more excited enthusiasm among observers than any other single program in Asia. One element of this program that appears to elicit the most favorable comment is its administrative penetration throughout Chinese society, extending to virtually all reproductive couples. It is also noted with favor that a number of elements are interlocked in the program: the emphasis upon late age of marriage (the combined age of the couples should reach at least 50 years), spacing of births up to five years apart, and stopping at two children regardless of sex. Finally, the use of planned birth committees provides the degree of community and peer pressure in support of these norms that epitomizes the administrative penetration many political leaders seem anxious to achieve. More recently the Indonesian family planning program, especially in East Java and Bali, has achieved considerable recognition, and in part appears to emulate some of the elements of penetration that mark the Chinese program.

Two important comments must be made at this point. One concerns the uniqueness of the Chinese political system that lies behind whatever reality there is in its successful program. The penetration achieved by the Chinese political-administrative system (and this is clearly recognized as a political-administrative system) did not happen overnight. It is the product of a long history of struggle in which the Chinese developed, through what might be called a process of natural selection, a high capability in organizing the peasantry. It is fair to suggest that no other society in Asia, with the possible exception of the Vietnamese, had
the historical experience that produced China's mobilizing and penetrating capacity. It is also fair to suggest that no other society in Asia will be readily capable of emulating the Chinese political-administrative structures and processes in the near future. The penetration that Indonesia has achieved appears to depend in no small measure on the use of its army, which plays important administrative roles from province down to village level organization. Seemingly, penetration can be achieved in a variety of ways, and some of the alternative modes should be systematically examined.

In Thailand, community based family planning programming is being experimented with as an alternative mechanism for providing administrative penetration in a more market-oriented society. This program uses village level personnel to act as peer leaders and promoters of the new low fertility norms. In contrast to China's cadres, functionaries of a revolutionary political-administrative system, this program uses local capitalist entrepreneurs, probably more suited to the type of political system that Thailand exhibits. The Thai success is not quite as dramatic and unquestioned as that of China, although this may be more a function of the amount of information available than of the real results. Nonetheless, the community-based, market-oriented program does offer an alternative mode of penetration that warrants examination and that may be more suited to the political-administrative systems of much of the developing world.

Malaysia also achieved considerable administrative penetration in its rural development program, although it has not been
able to replicate this in its family planning program. Still, the political-administrative principles may be important to identify. The Malaysian success appears to have been based on a combination of political centralization and administrative decentralization that is unusual for a developing nation. As early as the mid 1950's and 1960's, observers have noted the tendency for weak and ineffective governments to centralize administrative activities in an attempt to increase performance. They have also almost universally noted that such administrative centralization is counter-productive. It deprives local elements of precisely that experience they need to develop responsible initiative and control. Centralization greatly increases the time and energy needed to turn local interests, ideas and needs into effective action. It produces administrators who are fearful of taking action, and programs that are ill-suited to the local conditions in which they must be carried out.

It is doubtful that the long revolutionary struggle of China will be duplicated in many other Asian countries, and equally doubtful that others will develop the political-administrative mobilizing and penetrating capacities that China has apparently created. Thus it is useful for local political leaders and for external donors in family planning to consider alternative forms for producing comparable levels of penetration. Administrative decentralization has a great deal to offer, and it would be useful to engage in more systematic investigations of the conditions that produce effective decentralization and to attempt to promote this type of decentralization in efforts to assist family planning programs.
Instruments and Resources. To achieve policy goals, organizations must be provided with the tools necessary for action. As in any public program, specific types of both human and financial resources are needed. Each involves important political-administrative issues. In family planning, there is also another distinctive type of instrument -- the new contraceptive technology and the delivery system it implies which has highly important but often neglected political-administrative implications.

1. Technology. Perhaps the most general observation to be made about the new contraceptive technology is that almost no country uses the full range available. A recent analysis of organization and technology in family planning, done for the United Nations Division of Public Administration and Finance, classified countries as one, two, three, or four method countries, on the basis of the proportionate distribution of acceptors of the four major methods (IUD, pill, sterilization, and other). Of the 36 countries surveyed with 1970 data none could be classed four method, and 17 could be classed three method countries. Fifteen countries were marked by the use of only two methods, and four were essentially dominated by one method.

A number of studies has suggested that multi-method programs are more effective than single method programs. From the point of view of the individual user, this is certainly a plausible conclusion. With a wide range of methods, it is more likely that one will be acceptable to most individuals.

There have been, to our knowledge, no systematic studies of the conditions that determine the mix of methods and delivery
strategies used by national programs. Nonetheless, we suggest that client needs are far less important than the preferences or perceptions of political and bureaucratic leaders in determining what technology a program will use. In effect, contraceptive technology is more often selected on the basis of its compatibility with bureaucratic requirements than on the basis of its compatibility with the social and cultural attributes of the user. This in turn suggests that technological choices will be constrained in important ways by the political and organizational conditions that weigh heavily on program leaders. A few examples will serve to show the complexities of this situation and to illustrate the political-administrative impacts on program technology.

A Malaysian family planning program official once explained his country's almost exclusive reliance on the pill in terms of women's preferences. The IUD, he observed, is objectionable to Malay women, since the more orthodox of these Muslim women accept the proscription against having a foreign object in the body during individual prayer. This would be a plausible explanation but for the fact that over half of the acceptors were Chinese and Indians. In Taiwan, Chinese women have shown considerable willingness to use the IUD, and the widespread use of vasectomies among Hindus in India is well recognized. In this explanation, the Malaysian official was apparently far more concerned with the potential resistance of Muslim religious leaders than with client preferences.

The oral pill has emerged as one of the most efficient and effective contraceptive methods. The pill has been emphasized in
many national programs, and has overtaken or displaced the IUD in almost all. A number of political-administrative factors might explain the emphasis on the pill, although these must be considered impressionistic since no systematic study of technology choices has yet been made. The US AID program has exercised political, technical and financial influence to induce program leaders to promote the pill. It has helped to dispel fears of the pill's adverse side-effects and to reduce greatly the cost of the pill. In some cases, it has used considerable pressure to induce countries to accept the pill, and, as in Pakistan, to use it in massive inundation campaigns. Whatever the merits of this program, it is clear that political-administrative elites, and not the masses of acceptors, are deciding on the technology to be used.

The pill has the advantage of reducing administrative costs of contraceptive delivery, but political considerations also often intrude into this calculation. Malaysia and Thailand found the use of the pill effective, because it could be dispensed by para-medical personnel, thereby overcoming the obstacle of doctor scarcity. On the other hand, where the medical profession is strongly organized and politically powerful, as in India, it has been able to block the widespread use of the pill with arguments about potential adverse side effects and the need for medical supervision.

Finally, the use of a specific delivery system, the private market distribution of contraceptives, illustrates another area in which political-administrative conditions impinge upon technology choice in public programs. Preethe in Sri Lanka, Nirodh in India
and the Jamu dealers in Indonesia are striking Asian examples of the capacity of the private market to distribute pills and condoms. The price market has been demonstrated to be a highly effective distribution network for most consumer goods including the distribution of contraceptive technology in the industrial world. Thus the suggestion for its use in contraceptive distribution in the developing world is reasonable. Ironically, the deep ideological distrust of the price market system that prevails in most developing countries impedes the rational use of this distribution system in public programs. Peter King examined the deep seated differences between private marketing executive and government bureaucrats in the specific setting of the Indian Nirodh program. He showed that these differences often involve deep distrust, and work styles so different as to obstruct effective cooperation between the two. Where contraceptives are distributed through the price market system, this is often done in spite of rather than with the assistance of the national family planning program.

The specific mix of contraceptive methods and delivery systems -- the technology of family planning -- are important determinants of program effectiveness. These program elements are also shaped by political-administrative conditions. Many observers have commented upon the intrusion of such conditions, and program officials are aware of them. Unfortunately this issue has not received the systematic analysis it deserves.

2. Financial Resources. There is little question that the mobilization and allocation of financial resources to any public program are governed by political-administrative conditions.
We can reduce the scope and complexity of public finance issues by reviewing how political-administrative factors intrude upon family planning effectiveness through the issue of financial resources.

Sam Keeny has pointed out that late payment of salaries is a major problem in many family planning programs. Salaries and travel payments have often been months in arrears in Indonesia and the Philippines. An ESCAP study\(^{25}\) of family planning administration provided some insights on this situation. Clinic personnel were surveyed and asked how often they experienced shortages or delays in travel payments, salaries, supplies and equipment. Clinic efficiency was also assessed with a simple output-input ratio, that is, acceptors per staff day. In South Korea and Malaysia there was a clear and expected negative relationship between reported shortages and delays and clinic efficiency: the more efficient clinics reported few shortages and delays. In Indonesia and the Philippines, in contrast, the relationship was positive: the more efficient clinics reported more shortages and delays.

Experienced field observers suggested the explanation for this paradoxical finding. In Malaysia and South Korea, family planning was part of a generally efficient and effective public administrative system. On the whole things work pretty well, including the general logistical operations. In isolated instances, when the logistical system does break down, or shows more than average weakness, it has a negative impact on program efficiency. In Indonesia and the Philippines, on the other hand, the overall
public-administration system is very weak and so perceived. Field workers adjust by withdrawing their efficiency. They hold multiple jobs, take none of them very seriously, and sometimes appear at work only to receive their pay. Thus in clinics with very low efficiency, workers did not report shortages and delays because they scarcely viewed them as exceptional. In clinics where the staff did attend regularly and worked hard, that is, where they apparently did want to perform well, shortages and delays were a source of frustration, and therefore were reported.

It is, of course, easier to expose than to explain the differences in effectiveness of overall public administration systems seen in these cases. It is also easier to explain than to prescribe remedies for the weaknesses of specific systems. For example, numerous observers have noted the deleterious impact of political forces on program finances in the Philippines. The ruling elite appears to treat public funds as personal resources, which can be allocated at will for pet projects. The centralization of political power with the advent of martial law in 1972 has not served to regularize public finances; it has only served to concentrate the source of irrationality. This may help to explain the long-standing weakness of the Philippines family planning program, but it does not help to provide prescriptions for remedy.

Despite the acknowledged weakness of its public administrative system, Indonesia has been relatively successful in family planning, especially in East Java and Bali. Part of the explanation for this anomaly may lie in these areas' distinctive cultural and socio-economic conditions. The more commonly offered explanation, however, is that top level political commitment is
sufficient to overcome administrative weaknesses. There is
evidence of strong political commitment from the president
through the provincial governors, and there is also evidence
that political and military personnel have also been used to
produce a new administration system that penetrates down to the
village level. Two questions must be raised, however. If
presidential political commitment has been so important, why
have the family planning successes been largely limited to Bali
and East Java? And how long will the success last?

3. Human Resources. Effective public programming requires
a sensitive balance between political pressures for efficient
task performance and organizational protection for individual
job security. Deficiencies in the first produce failures to
mobilize worker motivation and efficiency. Deficiencies in the
second often imply arbitrary political intrusions that undermine
worker willingness to accept responsibility.

Effective political leadership produces clear goals for
program workers, helps to provide them with the resources needed
to achieve goals, and promotes efficient task performance with
rational rewards and punishments. No country, developed or
developing, meets these criteria fully. In Asia, however, it is
possible to identify such countries as Singapore, Malaysia,
South Korea, Taiwan, and to a lesser extent Thailand as cases
that approach this ideal. Over the past decade Indonesia has
also shown the steady political support that is necessary for the
gradual creation of efficient programatic action. Still the
legacies of arbitrary political intrusion and lack of steady
pressure for task accomplishment remain strong and debilitating, especially in personnel policies. Pakistan, Bangladesh and the Philippines must be considered more than mildly deficient in this area. Although competent and committed workers can be found in many programs in these countries, the overall political-administrative system does not lend much support to the mobilization of the human talents that exist.

Political intrusions into personnel policy in family planning have had major impacts on program performance throughout Asia. President Bhutto in Pakistan is said to have staffed the family planning organization with his political followers, and thus further decreased its effectiveness. The use of political-coercive personnel policies in India produced disastrous effects on both the ruling party and the family planning program. One's position and sympathies will determine which area is considered the more disastrous, but there can be little doubt that the family planning program suffered a shock from which it will recover only with difficulty. The Philippines has vascillated considerably between massive and restrained use of lay field workers, with little appreciable impact on family planning program effectiveness. Indonesia's recent strong, but apparently sensitively tempered, political support to family planning seems to have had a positive impact on program performance.
Notes


16. Personal interview.


23. For example, Edward Shils made this argument in "The Intellectuals in the Political Development of the New States," World Politics, 12 (April) 1960, pp. 329-368.


CASE STUDIES

INDIA
PAKISTAN
THAILAND
INDONESIA
THE PHILLIPINES

By Jason L. Finkle, Gayl D. Ness, and Lindsay M. Robinson
The following pages constitute an attempt to assess the effect of political commitment and administrative capability on family planning program effectiveness in India and Pakistan. Inasmuch as the general history of both programs is familiar to students and observers of population control efforts in the region, this brief analysis will not review the evolution of the two programs but will be limited to a discussion of the two variables cited above, with some attention to the role of foreign assistance and government commitment to economic development.

India and Pakistan were at the very forefront of nations to make fertility control an integral component of national policy and, by the mid-1960s, each country had launched large-scale family planning programs. Encouraged by the availability of the IUD as a "cheap, effective and safe" contraceptive, they created family planning organizations designed to motivate clients, provide essential contraceptive information and services, and evaluate the effectiveness of the programs. For much of the world this massive effort in South Asia was a crucible of the feasibility of organized government efforts to influence fertility behavior. If India and Pakistan could succeed they would serve as a model for all other developing nations experiencing undesirably high rates of population growth.

Roughly a decade later, the two programs were in a serious state of disarray from which neither has yet recovered. While there were organizational defects in each program, the reasons for failure are not the conventional ones of program management, inadequate fiscal resources and government apathy. Instead, the basic difficulty encountered by both programs originates in each country's political system, and was ultimately reflected in their family planning programs.
In many respects, Pakistan is a classical illustration of a "breakdown in modernization." Until 1969, Pakistan appeared to be moving rapidly along the route to development. Under the strong leadership of President Ayub Kahn, Pakistan promoted the goal of economic growth with a sense of purpose and dynamism that made Pakistan a favorite among the international donor community. Ayub, however, did not build a national political base but relied on the bureaucracy as his major pillar of support. He looked to the bureaucracy to maintain the cohesiveness of a factionated society and to faithfully implement his policies.

President Ayub's policies included a genuine commitment to population control which was regarded as necessary to economic development. Seeking to reduce Pakistan's rate of population growth, the government built a family planning organization that was intended to penetrate the thousands of villages throughout Pakistan, utilize sophisticated techniques of motivation and education, and yield information about the program's progress that could be utilized by family planning administrators at all levels. Although the program under Ayub was probably far less successful than the government claimed, the organization brought together under his leadership provided a reasonably solid basis for continued improvement in the future.

The overthrow of Ayub in 1969 signified the end of Pakistan's vigorous family planning push and, more importantly, raised a number of fundamental questions about Pakistan's orientation toward development. First of all, the collapse of the Ayub regime indicated that a genuine commitment to economic development, even when relatively successful, was not sufficient; the particular route to development was equally if not more important. That
is, Ayub was concerned with increasing GNP but was not simultaneously con-
cerned with such questions as the distribution of income, urban-rural in-
come differentials, and the broader questions of political, social, and
economic equity. His failure to be sufficiently sensitive to these consider-
ations led to his political collapse, despite the impressive economic gains
made by the nation under his leadership.

Subsequently, the negative reaction to Ayub spilled over to taint the
family planning program and made later efforts at fertility control more
difficult. If nothing else, the early Pakistan experience should have demon-
strated to the world that there was no way of insulating a family planning
program from its political environment. The strength of Pakistan’s family
planning program derived from Ayub’s commitment to population control, and
the ensuing public hostility to family planning derived from popular antago-
nism to Ayub and his policies. Since Ayub, political commitment to family
planning has never been as strong in Pakistan; the role of the bureaucracy
in the governance of the nation has been consistently less evident.

Prime Minister Bhutto differed from Ayub in many significant respects.
His commitment to economic development was weaker; he relied far less on the
bureaucracy; he seemed to have cared less about family planning; and he
attempted to build a mass political base on the peasantry and rural popula-
tion rather than on the bureaucracy and the urban middle class. Despite
his lukewarm attitude toward family planning (based on his recognition that
national integration was of much higher priority), Prime Minister Bhutto
nevertheless launched an unprecedented family planning scheme in Pakistan
mainly, it is felt, because it provided him with domestic patronage and
satisfied his major foreign benefactor, the United States.

The Expanded Population Planning Scheme under Prime Minister Bhutto consisted mainly of two major components: 1) The continuous motivation system employed many thousands of two-person teams, each comprised of a male and female, which were expected to visit every eligible couple in Pakistan three to four times a year in order to motivate them to accept family planning and to supply them with contraceptives. Almost all assessments of this system support the view that it failed to achieve its goals. 2) The contraceptive inundation scheme which was intended to provide conventional contraceptives to 35-40 thousand shopkeepers as well as to hospitals, clinics, and private physicians, and to inundate the entire nation with contraceptives so that they would be available easily and cheaply to every citizen of the country.

The idea of contraceptive inundation seems to have originated in the Office of Population in Washington and reflects the view of that unit of AID which holds that a large unmet demand for family planning services exists in the developing world and that the major need is to make contraceptives available to these willing users. While this view is not without some merit, it is generally felt by students of population -- both academics as well as administrators -- that it seriously distorts the sociology of fertility by underestimating the importance of demand by concentrating almost exclusively on supply. In short, experience, systematic empirical studies, and the Pakistan experience suggest that the availability of contraceptives is not a guarantee that family planning will be adopted. Equal, and in some cases greater, attention must be given to the question of motivation, education, and even to socio-economic conditions that may contribute to the eventual adoption of family planning. Thus, despite the enormous supply of contra-
ceptives made available to Pakistan beginning in 1973 and the financial support given by AID to the program, there is little basis to conclude that the time, effort and money were well spent. While one can argue that there was no serious damage caused by the contraceptive inundation scheme, often overlooked is the fact that the most serious damage is that it has had the effect of institutionalizing failure in Pakistan's family planning program. Thus, with a history of chronic frustration and disappointment, the institutionalization of failure may be the heaviest price Pakistan has paid for its national experiment with contraceptive inundation.
Until June 1975 when a state of emergency was declared throughout India, the family planning program in the country had been uneven, sporadic, and far less successful than expected. Although social and cultural conditions in India are not favorable to small family norms, there were many reasons to believe that India would be a leader among developing nations in reducing its birthrate. Not only was it the first country to make family planning a part of its national policy, but it understood better and earlier than most nations the relationship between population growth and economic development. Moreover, India had a relatively efficient and experienced administrative system as well as an unusually large number of professional personnel who either directly or indirectly were essential to an effective family planning program. India has a long tradition of producing excellent statisticians and demographers and has a better and more accurate Census than almost any other developing country. Moreover, India also had a more favorable ratio of doctors to population than Pakistan or many other developing countries. The elite, intelligentsia and urban middle classes were strongly supportive of promoting family planning for the nation. There were no strong religious objections among Hindus to family planning practices and there was great international interest in India's desire to reduce its greater population growth.

Despite these assets, the Indian family planning program just "plodded" along. Some states did relatively well -- even compared with performance levels of Taiwan and Korea -- while other states performed remarkably poorly. Overall, however, the impact of the family planning program on the nation's rate of population growth was disappointing.

Despite these assets, the Indian family planning program was a disappoint-
ment as the nation's population growth remained alarmingly high. There are multiple causes for this poor record of performance; however, almost all observers seem to feel that the program suffered because it lacked political support in the highest echelons of government. It was felt that with a political commitment to family planning, the program would somehow acquire a more distinct sense of purpose and a general dynamism that would increase its probability of succeeding. "Political commitment," as the term is used here implies a great deal more than rhetorical support for family planning: it suggests that when a nation's political elites are committed to a program of population control, they are likely to give that program ample resources, appoint highly qualified officials to administer the program, remove bureaucratic impediments to its effectiveness, and keep the goals of the program prominent in the government's development agenda.

At no time since family planning was included in the five-year plan in 1951 has India demonstrated this kind of commitment to family planning. Ironically, Prime Minister Indira Gandhi, who launched a massive compulsory sterilization program during the Emergency in 1975, had been lukewarm toward population control until that time. From 1966 when she became Prime Minister, her words and the actions of her government — as well as the quality of officials appointed to head the family planning program — indicate that population is far from the top of India's priorities. The program was located in the Health Ministry, a weak ministry as in most countries. Within the ministry the family planning program was generally understaffed and its leaders were not given sufficient authority to succeed.

It was only several months after the declaration of the Emergency in 1975
that Indira Gandhi committed her government to population control. This was not, however, the type of political commitment discussed earlier in this analysis but was, more or less, an "hysterical" commitment demanding a crash program to achieve extraordinarily ambitious targets. Little effort was made to strengthen India's administrative capacity to carry out family planning and, paradoxically, the compulsory sterilization program even failed to fully utilize the existing capacity.

Why did Indira Gandhi shift almost overnight from a somewhat indifferent attitude toward family planning to a strong commitment to population control? The Emergency was Indira Gandhi's tactic to put an end to a series of circumstances that threatened the continuation of her tenure as Prime Minister. To justify the proclamation of Emergency within India as well as to the external world, she announced a twenty point program that would supposedly energize the national economy, rid the country of corruption and bureaucratic lethargy, and resolve some of the more egregious income disparities and inequities in Indian society. Within a few months, family planning became one of the top objectives of the Emergency. Through the leadership and drive of Sanjay Gandhi, the younger son of the Prime Minister, chief minister of numerous states—particularly those in the Hindi-speaking belt of the north—initiated a massive sterilization program of unprecedented proportions.

Civil servants, school teachers, police officials, soldiers, businessmen, and others in the private sector were given sterilization quotas to meet. Compulsion was substituted for voluntarism as positive incentives and threatening disincentives were introduced to compel men, and to a lesser
extent women, to submit to sterilization. Within a matter of months the number of sterilizations reported far surpassed even the government's ambitious targets. When Indira Gandhi called for an election in order to legitimize the harsh, authoritarian measures of the Emergency, she was repudiated by the electorate. Significantly, the election indicated that popular dissatisfaction with the government headed by Indira Gandhi was most pervasive in those states where compulsory sterilization had been most vigorously implemented. Now, roughly two years after Indira Gandhi, the brutal excesses of the family planning program under the Emergency still discredit the program, and family planning workers only hesitantly carry out their responsibilities.

A FINAL NOTE

On the basis of the Indian and Pakistan experience discussed above, the following observations may be advanced:

1) Neither India nor Pakistan had dynamic family planning programs when political commitment was weak; however, when political commitment was strong each country's program suffered.

2) It seems erroneous, however, to conclude that political commitment per se is likely to lead to family planning disaster. Despite the two cases considered here, the evidence on this point is weak and ambiguous.

3) By most criteria, India has greater administrative capability than Pakistan; yet Pakistan has at times, particularly under President Ayub, at least equalled India in the effectiveness of its family planning program.

4) Family planning programs can make monumental miscalculations with or without the advice and assistance of AID. Pakistan's contraceptive inundation scheme was heavily influenced by AID. It has been judged a failure. India's compulsory sterilization program was undertaken at a time when AID was not rendering aid or assistance to India. It too failed.
THAILAND

Thailand's past century and a half of modernizing activities has been dominated by an orientation to national and elite security. Until about 1960 this implied strong pronatalist orientations. These began to erode with a World Bank report in 1958 that pointed to the high future costs of rapid population growth. Over the decade of the 1960's, increasing development efforts - building national planning and statistical capacities, and experimenting with family planning activities - finally led to a cabinet decision early in 1970 to adopt an official antinatalist policy. Throughout the entire period, Thailand has had a relatively strong and centralized political system, which has proved capable of providing fairly effective leadership for national goals. Since about 1960, external assistance in support of development programming has been significant and very useful in leading to the adoption of antinatalist goals.

The responsibility for achieving antinatalist policy goals has been lodged primarily in the Ministry of Public Health, with variously effective national level committees working to extend population policy beyond health. There has been a steady growth of health facilities, increasingly reaching more and more of the remote rural population, and this health delivery system has proved relatively effective in bringing contraceptive supplies to many people. The system continues to receive political support, but it is neither as strong as that found in Indonesia, nor as fickle as that found in the Philippines. The absence of intense and persistent political backing may be far more advantageous than disadvantageous to the program in that it provides sufficient support to promote effective administrative action, but does not evoke dissent from other organized groups and interests.
There does not appear to have been any major political dissent mobilized by the family planning program. On the contrary, some important influential persons have seen population programming as a possible avenue to greater political power. This has provided a good opportunity for external donors to help in developing innovative strategies in family planning programming. Thailand's Community Based Family Planning program, for example, has provided an important additional form of organized activity in support of family planning.

There has been an impressive growth of administrative capacities in many forms of development over the past two decades. Family planning has benefitted from the system's general service delivery capacity and in its capacity to monitor changes in fertility behavior. The increased statistical capacity, developed both through the government and through university-based population institutes, has been able to show that Thailand is now experiencing one of the fastest rates of increase in family planning adoption coupled with a very high rate of decline in fertility. It appears that a major part of this success derives from political-cultural conditions - such as the important economic role of women and the lack of major religious or ethnic dissent - but a good measure of the success is also attributable to the increase in administrative capacity and the steady, rational, and non-coercive political support that lies behind this administrative development.
INDONESIA

The shift from Sukarno to Suharto in Indonesian leadership marked a major change in development and population orientations. Sukarno's concern was with national unity and national identity. His neglect and later antipathy for economic development are well known. The national trauma that brought Suharto to power signalled a radical change of government goals as well as a radical change of personnel. With Suharto the technocrats returned and government adopted a strong commitment to national economic development. A clear and consistent antinatalist policy followed logically from this change. The overall political change found ready acceptance and approval in the western donor world, and implied a massive inflow of economic assistance for all programs, including family planning.

The organizational apparatus for family planning involved the creation of a National Family Planning Coordinating Board (BKKBN), which would attempt to turn all government agencies toward fertility reduction as one of their regular operational objectives. The Board is located directly under the president and from its inception has enjoyed strong and consistent presidential support. The Coordinating Board strategy proved highly successful in Indonesia. It combined steady presidential support with an organizational apparatus that could direct resources to existing agencies and could encourage the establishment of new organizational activities. The Board has enjoyed fairly good administrative leadership along with increasing technical competence and, for whatever reason, has avoided destructive internecine conflicts.
The immediate result of the new program was a rapid increase in contraceptive acceptors, the numbers of which rose far more rapidly than the government had anticipated. Both the IUD and the pill were extensively used, and condoms and more recently sterilizations have been added to the list of actively used methods.

The flexibility and the resources provided by the Board have helped to encourage new strategies for contraceptive delivery. Indonesia has gained deserved recognition for the efforts to involve the private market through the use of the traditional medicinal hawkers, the Jamu dealers, who are now extensively used to distribute condoms.

Administrative problems remain. The logistical system and reporting system are still plagued with problems of short supply, delays in payments and the like, but these appear to be diminishing as something approaching steady progress in administrative processes is achieved. Still, common problems appear. It has proved much easier to build sophisticated central computerized data handling systems than the field capacity needed for accurate and reliable reporting.

One of the most dramatic, and externally recognized, successes of the Indonesian program lies in its penetration of administrative services from the center down to the village level. This appears to have been achieved in part through strong political support from the president and the provincial governors and in part through a willingness to attempt something like an organizational revolution down to the village. The result is not unlike that found in China, where village planned birth committees are used to gain local participation and peer pressure in support of fertility-limiting behavior. It is also important to note, however, that the military
and police are integrally involved in this administrative penetration, sitting on local committees, and with the village headman's wife often organizing the village planned birth committee. The most extensive and successful use of local village organization appears to have taken place in Bali, where the traditional local organizational unit, the Banjar, is used directly to influence fertility behavior.

From this perspective, Indonesia presents a good illustration of how persistent political support to a coordinating agency can provide steady increases in administrative capacity and a dramatic new administrative penetration to the rural areas, which were often by-passed by old colonial type bureaucracies.

There are, however, important cautionary notes that should be entered into this happy picture. There is great enthusiasm for the Indonesian success today, especially from external donors hungry for good news in family planning. There is still, however, some question about how much of that success has been institutionalized, or how much it is transitory and precarious. The cautionary notes derive from the following observations:

-The government currently employs a heavy hand against such dissidents as students opposed to public as well as private corruption.

-The family planning program itself contains far more coercion than is acknowledged by external observers. This might present some similarity to the growth of the communist party under Sukarno and Subandrio, where local coercive tactics precipitated a widespread violent reaction after the abortive coup of 1965.

-The elections and cabinet shuffling of May 1978 bear uncomfortable resemblances to the past Sukarno strategies of divide and rule. If Suharto is indeed attempting to increase his power by encouraging factional rivalries and disputes within the cabinet, the result will surely be a weakening of central political leadership. If this goes as far as it did under Sukarno, internal observers predict civil war with bloodshed that will make 1965 look like a friendly soccer match.
There appears to be some popular disillusionment with "development" that is difficult to interpret. It contains an element of student unrest over flagrant corruption, as well as elements of what used to be called the revolution of rising expectations.

Finally, the external enthusiasm over the current Indonesian success fails to confront the great difference between East Java-Bali, and Central and West Java. Until this major difference is dealt with, and until the above cautionary observations are shown to be unfounded, we prefer to consider Indonesia's success highly precarious.

If indeed Indonesia is returning to the coercive search for symbolism that marked the Sukarno years, there is little that any outside power can do to avert a major catastrophe. External donors can probably do little more than continue to support the internal Indonesian struggles to build increasing technical competence into their administrative apparatus.
THE PHILIPPINES

The Philippines shows an interesting organizational paradox. At least since Independence, the country has had a very weak political-administrative system. This lead to great difficulties in making the original antinatalist policy decision, and even greater difficulty in implementing that decision. On the other hand, the country has a very strong private sector, showing considerable initiative in economic matters and in a wide range of other voluntary organizations, one of which is in family planning.

The country has a long history of collecting socio-economic data. Censuses have been taken for most of this century, central government statistical capacity has steadily developed, and a strong base of university researchers has grown up with considerable technical expertise in collecting and analysing data on social and economic change. At least since the 1950's, there has been a good deal of local information on the high costs of rapid population growth. This has not, however, led directly to an antinatalist policy decision.

The political system is weak and fragmented. Political leaders use their own personal followings to mobilize support rather than any form of effective and lasting political party. In both organization and action, there is little evidence of a strong government commitment to economic development.

Under President Marcos, external pressure steadily mounted for an antinatalist policy. President Marcos was one of the original signers of the world leaders' declaration on population problems in 1967. The issuance of Humanae Vitae in 1968, however, halted government movement toward an antinatalist policy decision. The U.S. AID provided funds for local public
and private family planning activities since 1967, indicating an increase of 
external pressure and inducement for an antinatalist policy.

The policy decision was not taken until President Marcos gained considerab
considerable strength by winning the first presidential reelection in independent 
history. With the active assistance of U.S. AID, a young group of "techno-
crats" managed to co-opt the Church hierarchy by creating a Responsible 
Parenthood Council in 1969. This Council showed that the rhythm method 
could be effective and thereby gained the acquiescence, if not the full 
support, of the Church hierarchy. Throughout this contest between the Church 
and the political elite, both sides have been reluctant to test their power. 
The Church was split by its own internal crisis of authority triggered by 
_Humanae Vitae;_ and the political elite preferred to keep the potentially 
divisive issue of population policy out of election activity.

Once the antinatalist policy decision was made, the government moved to 
organize program effort through the creation of a central coordinating body, 
the Population Commission. The Commission was to receive all external funds 
for population work and channel government resources to the most effective 
activities. Alongside the Commission, government created a Population Center 
Foundation, which was to promote research and consideration of broad popula-
tion policy issues.

The creation of these two bodies was essentially a signal to centralize 
resources for population work. The result has been the development of big 
buildings in Manila, with large, underutilized staff, and with little trickle 
down of resources to the field where they can be used. A massive and 
sophisticated central data processing facility has been developed, but with 
field control that renders highly suspect the data fed into the central
system. For some years, even the Population Commission "adjusted" acceptor figures downward by 20 percent across the board.

Political support for the Population Commission is weak, but political interference is strong, arbitrary and destructive. Funds are allocated to the Commission then arbitrarily reallocated by the top elites to other pet projects. The first executive director had some technical competence, little administrative ability and less political influence. The current executive director appears to have less of all three.

The program has recently gone through a move toward decentralization, placing greater authority and responsibility on provincial and municipal officers. Given the excessive and debilitating centralization of the entire Philippines administrative system, this move can be said to be much needed. At the same time, given the failure of past attempts at decentralization in other public programs, it is doubtful that the current attempt will have any significant positive results.

One of the few hopeful signs in this program is the steady rise in reported contraceptive user rates. The validity of the data must be at least partly questioned. Nonetheless, there does seem to be some important increase in the effective demand for contraceptive service and supply. This might be met in part through the impressive private market system and in part, though one guesses in far less part, by the extension of service through public programs.
A SELECT LITERATURE REVIEW

By Lindsay M. Robinson

Before undertaking this review, a wide array of population experts at the University of Michigan were consulted for advice about literature on the relationship between political will and commitment, and administrative capability, as these affect the development and implementation of population policies and programs. On the basis of these opinions, and subsequent analysis of the literature, the following conclusions can be drawn.

1. Although many statements explicitly and implicitly refer to the importance of political will and commitment, they tend to be conjectural rather than conclusive, being based on opinions and personal experiences rather than on empirical investigations.

2. Elites are recognized as the policy-makers in most developing countries, and much has been written about their beliefs, attitudes, values and opinions on population control and policies. However, the only study which attempted to examine the impact of these characteristics on policy outcomes (Bachrach and Bergman) focused exclusively on the United States. Moreover, some important aspects have received no attention (e.g., military leaders); and only two studies
(Waterbury and Clinton) attempted to determine elite attitudes toward, and their perceptions of the impact of, Western "imperialism" and U.S. advocacy of population control. Interestingly, these studies did not support the frequent allegations (e.g., Stycos, Demerath) about the "detrimental impact" of foreign, particularly U.S., involvement. One study suggests that the discrepancy might be partly explained by the time of the survey: whatever the negative influence of foreign involvement, it may diminish rapidly once a family planning program has been established.

3. Despite frequent laments about the lack of administrative (or "management") capability in most developing countries, there appears to have been little systematic attempt to examine organizational issues in family planning. Some administrative personnel have been given management training courses on the assumption that these will be helpful in improving family planning programs, but no actual assessments have been made. Where research results might offer guidance, the findings have not been implemented. Moreover, the policies/requirements of external donors tend to exacerbate rather than ameliorate inherent administrative weaknesses. One widely noted and undoubtedly important opinion warrants serious consideration, however: without political and program leadership commitment and support, administrative skills may be largely irrelevant.
Precis of some relatively recent and representative writings are enclosed. These are not intended to be exhaustive but to provide, in an easily assimilable format, a sample of significant opinions about the subject under discussion; and to identify areas in which knowledge is either deficient or non-existent and where more research is needed. The writings of Drs. Finkle and Ness are deliberately omitted since these are reflected in the paper to which this review is attached.

In a short comment, Cool points out that model management techniques which are "rational" and "logical" in the developed world may not be readily transferable to developing countries with different values and institutions. He believes that good management can contribute to family planning program effectiveness, but only if the society values successful performance in this area. In many countries, however, priorities and rewards have not been sufficient to attract top personnel.

"This seems to indicate, inter alia, that to achieve fundamental improvements in family planning program management internal political priorities and status rewards for management people may have to be altered." (p. 38)

Since elites are usually responsible for formulating and implementing population policies, knowledge of the "values, beliefs, attitudes and opinions" of elites, and the extent to which these are reflected in behavior, should be helpful in explaining why countries respond as they do to rapid population growth. This paper reviews and analyses the existing literature and research, in an attempt to synthesize the findings, despite the great variation in methodologies, timing, countries, and even contents.

The significance of elite attitudes differs by country, and is affected by political system characteristics; by the "relative roles of bureaucratic, legislative, military, or private sector elites;" (p. 12) by the salience and sensitivity of the population issue; and according to the stage population policy development and planning have reached. It is suggested that relevant elites may well depend on the stage of policy-making: for example, the bureaucratic elite might become more important at the implementation stage, whereas previously legislators and public opinion-makers might have been key. Elite influence should not be assumed or inferred, however, but specifically examined by surveys if possible, and at least by independent observation. As the author points out, "[n]one of the studies here treated gave adequate attention to this question." (p. 16) Indeed, Bachrach and Bergman were the
The major foci of most studies were "knowledge and perception of the population problem" by elites, and "their attitudes toward population policy." (p. 22) This was the extent of many studies, although others attempted some explanation in addition to reporting the data. Few studies tried to relate elite attitudes to actual behavior in policy formulation, or to examine factors (e.g., external donor pressure) which might lead to inconsistency between attitudes and actions. Environmental variables were discussed, if at all, only in the context of general background and not in relation to elite attitudes or behavior.

As the reviewer stressed, comparison of the findings was complicated by the lack of uniformity in countries considered and questions examined. Nevertheless, some generalizations were possible. High population growth rates were "almost universally" perceived by elites, although large percentages in Mexico, Paraguay and Honduras did not view their growth rates as "high" (defined as 2 percent or higher per annum). There was least consensus, however, on the economic impact of rapid growth:

"[I]n all of the countries except Pakistan where this question or a variant of it was included in the study, a considerable proportion of the elites..."
perceived population growth as a positive factor in economic development, although only in Mexico [prior to reversal of government pronatalist policy] was this viewpoint in the majority." (p. 26)

This item obviously, "did not provide a very good basis for predicting" population policy outcomes.

Population growth was not generally viewed as desirable for increasing national power, and domestic concerns seemed to be more prominent among minorities who favored growth. Elite perceptions of population growth may be affected, perhaps, by an immediate external threat:

"Thus, Badrudduza found in Pakistan in 1965 that 80 percent of the respondents interviewed before the war with India rated the population problem as serious or very serious, yet only 65 percent did so after the war. Furthermore, the difference was even more pronounced in West Pakistan, which was more affected by the war: 78 percent before the war and only 61 percent after the war rated the population problem as serious." (p. 29, referring to Md. Badrudduza, Attitudes of Pakistani Elites Toward Population Problems and Population Policy, unpublished Ph.D. dissertation, Cornell University, 1967.)

Low priority is accorded population growth and policy when compared with other areas; although important studies on Kenya, Peru and Pakistan\(^2\) failed to raise this issue. On the other hand, national family planning programs usually had high support, except for Honduras, Caracas and Buenos Aires. (At the time of the surveys, government support for family planning was weak in Honduras; no program existed in Venezuela; and Argentina was strongly pronatalist.) More significant, perhaps, were findings
that elites "do not make an automatic linkage between family planning and population control," (p. 35) although "family planning ranks as the most prominent approach" advocated by elites. (p. 39) Unfortunately, the open-ended questions used to obtain information on possible (or preferred) government strategies to control population growth produced inevitable uncertainties and ambiguities, for example, what is meant by "education."

In the studies reviewed, there was generally no systematic attempt to determine the influence of social background or socialization on elite attitudes. (p. 40) Age was shown to affect attitudes in Pakistan and Honduras, and less dramatically in Turkey, with younger persons more in favor of population control.

"These findings suggest . . . [that] within a generation, developing countries may exhibit a far greater degree of willingness and capacity to act decisively to limit population growth than is generally expected." (p. 43)

Education was not usually examined but, in any event, among elites the variation is likely to be insignificant. One study (Mundigo) suggests that examination of the "content" and "location" of education might be fruitful:

"[T]hose [Hondurans] who received their higher education in Honduras or countries other than the United States were substantially more likely to oppose birth control programs than those educated in the United States." (p. 44)

Where studies differentiated elites by occupation, analysis is difficult because the categorization varied; but no strong patterns are obvious where comparison is possible. Interestingly,
no studies examined one very important elite group, namely, military leaders.

In terms of ideology, there was a slight trend in the expected direction, with "left" oriented elites likely to view population policy more as a means of socio-economic restructuring than of limiting population growth; but findings on the relationship between ideology and elite attitudes toward population were generally inconclusive.

"These studies bear out the observation that attitudes regarding population and family planning are not linked to any single ideological position or orientation either within countries or cross-nationally." (p. 50)

The studies confirm the recognized fact that elites have lower fertility than the population at large; nevertheless, despite generally favorable attitudes toward increasing the availability of family planning services, the elites own fertility behavior would lead to a "fairly high" population growth rate. (p. 57)

"These findings regarding actual fertility behavior also lead to the conclusion that in many countries, elite views on family planning matters are probably not held with much intensity and, moreover, that for a large number of them, family planning is not a very relevant personal concern." (p. 58)

This suggests that elites might not be inclined to "push strongly for policy measures to spread fertility control." (p. 58)

Notwithstanding the frequent allegations about the detrimental impact of Western "imperialism" and U.S. advocacy of population control, only one study (Waterbury) addressed this particular issue, and its finding does not support the common

contention:

"While Egyptians have every reason to suspect Western motives, none of the respondents felt that constituted grounds for rejecting family planning. Moreover, most respondents, including one Marxist, claimed never to have heard before this portrayal of Western interest in family planning." (p. 62, quoting from John Waterbury, "Egyptian Elite Perceptions of the Population Problem," Fieldstaff Reports - Northeast Africa Series, Vol. XVIII, No. 3 (June 1973), p. 12)

In aggregating responses concerned with perceived obstacles to family planning in Peru, Clinton found that only 26 percent of respondents mentioned U.S. involvement, whereas 57 percent mentioned the Catholic Church and 33 percent mentioned non-recognition of population as a problem. After establishment of a family planning program, "only two out of 81 respondents saw 'reaction to the U.S.' as an obstacle to its success." (p. 63)

"Clinton's and Waterbury's data did not imply that elites' attitudes would not be affected if they were to perceive overt U.S. intervention in their domestic population policy-making; the findings did suggest, however, that U.S. (or World Bank) identification with population control is not necessarily as damaging to the population movement as many writers have tried to present it based on the statements of a limited number of Third World intellectuals and politicians." (p. 63)

Better information is needed on the effect of external forces in influencing elite attitudes and behavior with regard to population.

The reviewer ends by noting that the same conclusions could have been reached by "many close observers and participants in international population activities ... without the aid of surveys." (p. 66) Hence studies to date provide little assistance in determining the links between elite attitudes and behavior on the one hand, and their relationship with population policy processes and outcomes on the other.


Demerath's central theme is that only a "societal" approach (that is, fundamental change in primary institutions) is likely to be effective in reducing fertility. Reproductive practices are the result of complex and interrelated socio-economic and cultural factors which have been largely ignored by family planners, in the misguided belief that fertility could be controlled through adequate technology, improved communications and education, and the provision of contraceptives.

After tracing the evolution of population as a field of interest, Demerath examines critically the growth of the (predominantly) U.S. "family planning establishment," and the influence of its institutions and professionals on the development and implementation of population policies and programs in the Third World. In particular, he emphasizes the detrimental impact created by the "carrot and stick" approach characteristic of U.S. foreign policy, and the negative effects of tying family planning funds to unrelated (U.S.) objectives and/or restricting in large part their use to expenditures for U.S. goods and technical assistance.

By way of illustrating the conventional family planning versus the societal approach, Demerath contrasts the experiences of India and China. Although India has spent more foreign and domestic funds on family planning than any other country,
fertility has remained virtually unchanged.* Even by conventional evaluative measures (sterilizations, IUD's inserted, etc.) the results have been minimal compared to the goal. From the beginning, medical personnel and ideas have dominated the program, and family planning was linked to the weak (state) health care systems. A series of increasingly explicit and comprehensive central plans have been developed, but initially the states were unsure of the central government's commitment and continued funding, and were reluctant to proceed; then, when they did, staff instructions, training and supervision were all grossly inadequate at the district level and below. Moreover, the unfavorable conditions of family planning workers (as compared to regular civil servants) led to recruitment difficulties. Subsequent reorganization improved somewhat the status of family planning in the government bureaucracy, but major administrative hurdles remain.

In Demerath's view, India is hindered by constraints inherent in a decentralized federal democracy, reinforced by ethnic and linguistic heterogeneity. The colonial "law and order" mentality still pervades the bureaucracy, and strict adherence to civil service seniority rules encumbered the family planning program with mediocre personnel. Perhaps more amenable to improvement through training is the bureaucratic "penchant for symbols, plans and paper, meetings and assemblies, talk and print," (p. 82) and the frequent assumption that agreement on

*NB: It is important to note that this study was published in 1976, and may not reflect more recent changes.
Demerath, 1976, page 3

a course of action constitutes resolution of a problem. In addition, "numbers games" are often used as substitutes to avoid more threatening assessments. Lingering caste-like practices also impede cooperative endeavors. Demerath notes that Indian and Western observers alike agree that in India,

"organizational behavior is generally characterized by deference to age and seniority, to rank and authority, and, more subtly, to caste and to color (Harrison, 1960; Misra, 1962; Naipaul, 1964; Srinavas, 1962). Delegation is difficult to practice and responsibility hard to take. It is easier to distrust than to trust. The power to make decisions, even the smallest decisions, is usually held zealously at the top by means of tight review, and by endless noting up and down the parallel hierarchies of administrative generalists and of experts. Organizational goals are set at the top and too-seldom translated or broken down for the involvement or understanding of subordinates." (p. 82)

In Demerath's view, neither an increase in competent managerial personnel nor political commitment would be sufficient to effect major improvements in India's civil administration: this will require transformation of primary social institutions, as will a reduction in fertility.

In China, by contrast, fertility has fallen remarkably, largely, Demerath contends, as an indirect consequence of broad socio-economic and institutional changes, but also in response to a "planned birth" program. He notes that episodic campaigns prior to 1964 "seem to have had no effect on birth rates even in the urban centers," (p. 159); that the Cultural Revolution (1966-67) was a temporary disruption; but that since 1971,
Demerath, 1976, p. 4

"birth planning has had the highest priority nationwide." (p. 159)

Irrespective of whether the quantitative contribution of overall socio-economic development is larger than that of family planning per se, and Demerath acknowledges the lack of hard supporting data, government commitment is the key. The impetus for institutional changes favoring lower fertility (age at marriage, rising status of women, reduced economic importance of the extended family, widespread literacy, small family norm, etc.) emanates directly from the top political leadership; and at every level of society, there appears to be not only the will to adopt political policies and priorities, but also the administrative capacity to implement them. The planned birth program has benefited from both characteristics, as is evident from government support for development of contraceptive technology and policies to encourage its application; and an outreach program that apparently can make contact with each individual woman of reproductive years. While no central targets are set, provincial units are believed to identify specific goals; and peer pressure is used as a form of coercion. Family planning is still conducted through the health care system (itself highly politicized), but "the Chinese use the polity to exert antinatal pressures, believing that fertility reduction is too important to be left to health planners or to family planners." (p. 181)

More generally, in Demerath's view, the family planning approach will be unable to achieve zero or low and stable population growth in poor countries. Even where fertility has
fallen (e.g., Taiwan, Singapore, Hong Kong, Costa Rica), the relationship between family planning programs and fertility rates is unclear: in Taiwan, for example, the rate was falling before introduction of the program. Fertility begins to fall once a majority of the population begin to have access to the benefits of socio-economic development, Demerath believes, and this is the crucial variable. Political commitment, in turn, is the key to changing socio-economic institutions. In support of his contention, the experiences of Cuba, Tunisia and Singapore are cited. If fertility control is to be accomplished, the political leadership must assume responsibility, work with experts to develop a "societal" fertility strategy, and ensure a competent central administrative structure to carry out specific fertility programs and to coordinate broad socio-economic programs as these affect fertility.

Demerath also draws attention to the "political impotence" (p. 101) of most family planners in the Third World, and their tendency to think in biomedical rather than political terms, such as legal and economic changes to promote antinatal practices. This tendency has been exacerbated by foreign advocacy of family planning as "apolitical and voluntaristic," a view compatible with the conservatism of most local politicians. Beyond eloquent statements about objectives and human welfare, however, goals have often been arbitrary and unrelated to resources. As a result, realistic evaluation of either programs or personal performances has been impossible, a desirable situation from the perspective of mediocre bureaucrats, but one which does not promote competent administration.
This article examines differences in marital fertility based on data from the National Longitudinal Study of Social, Economic and Demographic Changes (1969 and 1972 surveys) and the 1975 Survey of Fertility in Thailand. Comparative analysis indicates that marital fertility has fallen by 18 percent overall, with the rural decline (20%) exceeding the urban decline (10%), thus contracting the gap between the two areas. Data on the number of women pregnant when the surveys were taken and the interval between births are consistent with the drop in overall fertility. The authors note:

"Thailand's reduction of 18 percent in marital fertility is extremely rapid . . . like that experienced by Hong Kong, Singapore and Taiwan. But it is more significant because of the substantially rural nature of the decline and the much larger size of Thailand's population." (p. 37)

Knowledge of birth control methods increased substantially in the period: married women 15-44 years who could name a specific contraceptive method increased from 48% to 86% in rural areas, and from 74% to 92% in urban areas. Those who have ever used contraception increased from 14% to 49% in rural areas, and from 38% to 66% in urban areas; and those currently using contraception increased from 11% to 40% in rural areas, and from 41% to 49% in urban areas. (p. 39, age-standardized figures quoted.) (Some of the urban/rural difference may be explained by a one-year time-lag between the first rural and urban surveys.) These increases in the use of contraception...
"are among the most rapid on record," and "development of a modern communications and transportation network" which reaches the remotest villages is undoubtedly a major factor. (p. 39)

The National Family Planning Program, launched in 1970, coincides approximately with the increase in contraceptive use and the drop in fertility. Although no definite causal relationship can be established, in rural areas,

"[o]nly very minimal practice of contraception appears to have predated the onset of the national program," (p. 40)

and the inverse relationships between pill cycles distributed in rural areas, and marital fertility and the percentage of women currently pregnant, supports the belief that the national program is having "a substantial impact." (pp. 44-45)

The pill is clearly the preferred method in both urban and rural areas, but the full range of methods is available in both areas.

While most indices of socio-economic development are improving, Thailand remains predominantly rural and less developed than other societies which have experienced similar fertility declines. The higher status of women and very high participation by women in the labor force may be important factors.

As "conclusions," the authors present the following hypotheses:

1. The spread of family limitation practices can precede and influence declines in preferred family size.
2. The modernization of tastes and attitudes influencing fertility-related behavior may in some cases be linked only weakly to socioeconomic development.

3. Cultural factors, including the status of women, may be important in facilitating or inhibiting the fertility decline, to a large extent independently of the level of socioeconomic development.

4. Deliberate intervention through organized family planning programs can have a substantial impact on facilitating the fertility transition in a receptive setting.
Despite the Indonesian Government's apparently serious commitment to family planning, administrative weaknesses characterize this area as they do other economic development efforts.

"The failure to deal directly with the problem of administrative capacity may be the most serious shortcoming in most development assistance schemes. Feasibility studies routinely omit evaluations of the personnel likely to be assigned to project execution. Project agreements rarely undertake to stipulate provisions for adequate administrative support. And indigenous economic planners tend to write plans that implicitly assume nonexistent levels of administrative infrastructure; e.g. capital facilities, trained personnel, routinized procedures, etc." (p. 26)

The paper argues that management presents different and more complex challenges in family planning than in other development activities because it must be decentralized, requires a strong field organization, and must coordinate the activities of numerous other agencies — a task of far greater magnitude than that faced in other areas. Moreover, the initial impetus for family planning is likely to come from external donors or elite groups, with a program being established in advance of effective demand by an "indigenous clientele."

As a result, information systems and operating procedures must be designed to compensate for the lack of external client...

Korten points out that population/family planning has succeeded in establishing the legitimacy of such activities from both an individual and a societal perspective, but in few countries has the fertility rate dropped. Growing international and domestic awareness of population issues is likely to increase verbal and/or paper commitment to population control (e.g., statements in development plans), but this may not be translated into resource allocations for population programs.

Since the 1974 World Population Conference, the family planning, health, and development approaches to population control have converged, encouraging the integration of population and broader socio-economic activities. International financial assistance for population programs is becoming less readily available and emphasis on integration favors joint funding of population and other development projects. In the next decade, therefore, population programs will increase in diversity and organizational complexity, requiring ever greater management expertise.

Korten outlines a common, though not invariable, sequence of family planning program stages, beginning with a single-purpose, usually private, organization. The second stage integrates family planning with other health care services. He stresses the importance of effective management
of integrated programs:

"The greater the degree of integration, the more success or failure of the family planning program depends on the strength and commitment of the broader health system." (p. 181)

The third stage involves government commitment and a separate population agency is usually established. This agency then plans and coordinates all population-related activities, but actual implementation is through a variety of ministries, agencies and the private sector.

"The success of the population agency depends on the existence of the traditions and budgeting mechanisms required to give clout to a central planning agency, the degree of top-level governmental support they receive, and the viability of their structure and placement within the governmental bureaucracy." (p. 182)

Korten points out that an interministerial body and an independent population agency, which the World Bank (and Korten) prefer, are not the same. A population agency has the necessary commitment, and can assemble skills lacking in other government agencies. In addition, the agency can be a channel for international assistance and a demonstration of "serious commitment to population issues, in the face of pressure from foreign donors," (p. 182) without disturbing the domestic status quo.

Stage four represents the extension to rural areas, and coordination, of multiple development activities under the auspices of the senior local official (e.g., the governor, district chief, etc.) with operational control over sectoral activities and broad civil (political) power. Variations of this system exist in Indonesia, Taiwan and Korea. Korten notes
that,

"if the civil structure is sufficiently strong and there is sufficient commitment to population objectives at the central governmental level to ensure that they receive the necessary priority attention," (p. 182)

this arrangement can be very effective in meeting population targets, as appears to be occurring in Indonesia.

If, as is possible, the population agency is only a transitional phase prior to complete integration of population and other development activities, far greater managerial and administrative skills will be needed with total integration, where personnel have no special competence or commitment to population matters. Medical skills will become less important and "marketing"-type skills more important for program leadership. In addition to planning capability, skills in developing and maintaining political support and effective organizational coordination will become increasingly important.

Korten concludes with some comments and suggestions about the changes in the contraceptive delivery system, client outreach activities, and the information and research base necessary to support an extended, integrated population control effort.

The theme of this paper is that the gap between planning and implementation of population programs is vast in most developing countries, which have "neither the requisite organizational capacity nor the political commitment necessary for the particular family planning strategies they have adopted." (p. 569) To have any chance of success, the design of such programs must be compatible with cultural and socio-economic realities in the environment of implementation, and must be feasible within the organizational structure which either exists or can be developed.

While the literature contains numerous "client-centered" critiques of family planning programs, the authors concur with Ronald Freeman's assessment that,

"the more successful programs probably are distinguished less by their content than by the systematic and persistent and thorough implementation of whatever the program is."

(p. 571, quoted from "Family Planning Programs Today: Major Themes of the Geneva Conferences," Studies in Family Planning, October 1965)

The family planning literature approaches organizational issues in a normative, nonempirical and unsystematic fashion, without an adequate theoretical framework. This has encouraged location of most family planning programs in "relatively conventional bureaucracies," without consideration of their appropriateness or alternatives to this choice.
The authors suggest that the lack of a private infrastructure and the socialist orientation of many Third World leaders has led to extensive government involvement in development activities, "in part inspired by ideological conviction rather than by an empirical assessment of the capability of the bureaucracy to assume such responsibilities successfully." (p. 573) In this regard, family planning was no exception, and the influence of narrowly focused foreign experts, with their preference for avoiding politically sensitive issues, did nothing to ameliorate the inherent weaknesses.

The "management school" has had limited success with training administrators after program implementation, but, as the authors, among others, point out:

"In the absence of organizational leadership and commitment, management skills may be largely irrelevant to the work of operating agencies." (p. 575)

John Cool is quoted as stressing that management techniques are relevant only if the society attached sufficient importance to competent performance in the designated area: family planning appears not yet to be considered "sufficiently important," and suffers from impediments long familiar to students of organizational behavior:

"[The] survival goals of individuals within the [family planning] organization, and of the organization itself, have been recognized as being in competition with formally stated goals and policies." (p. 576)

The authors advocate use of an "open systems" model to examine empirically the wide range of cultural and environmental influences which impinge on organizational performance.
Family planning is unusually sensitive because it attempts to change, by organizational effort, intimate personal behavior of "crucial social and emotional significance" to both individuals and society. The proposed analytical approach would distinguish between the "organizational dimension" and the "client-oriented dimension" of family planning programs, and then examine, in each case, differences between the plan or strategy and its implementation as observed in practice. To be effective, there must be "some congruence between the organizing dimension and the client-oriented dimension."

"In the past, questions relating to strategies for dealing with clients have received the major share of attention in the discussion of family planning. To the extent that there is a literature on organizing strategies, it has largely failed to incorporate either an adequate recognition of the organizational implications of the client dimension or an understanding of the existing organizational capabilities within the system." (pp. 581-82)

The Indian situation illustrates the intricacy of organizational relationships which impinge, internally and externally, on family planning programs. Although the health care system is primarily responsible and can be considered the "focal organization," this system is itself a highly complicated bureaucracy; and other government departments (e.g., revenue and planning) have some family planning responsibilities. Knowledge of the "bureaucratic culture" is imperative in order to understand the functioning of family planning programs. In India, for example, the bureaucratic "law and order" orientation may be incompatible with, or at least have a negative impact on, the organization's capacity to induce voluntary social change. Similarly, "struc-
tural factors" (such as the amount of centralization, the arrange-
ment of lines of authority) and "process variables" (human
relationships and behavior) may encourage organizational conflict
and low staff productivity. Program designs make implicit or
explicit assumptions about bureaucratic capabilities; and parti-
cularly about staff training, efficiency, motivation, work pat-
terns, supervision, etc. Frequently, family planning programs
fail to accomplish their stated goals because these were based
on unrealistic assumptions and "a range of expectations . . .
which are contrary to existing patterns of bureaucratic be-
havior." (p. 585)

Other environmental features may be instrumental or
contribute to family planning effectiveness. The status of the
"focal organization" may affect its role as coordinator of
family planning program components in all sectors. In India,
for example, the low status of the Ministry of Health "may
seriously impair" its effectiveness as overall coordinator.
Private, professional, and political groups can also assist or
hinder organizational performance.

"For example, the degree and type of support that
political and local leaders give to family plan-
ning programs may be one of the most crucial de-
terminants of the program's success." (p. 587)

Especially in areas of ethnic and/or religious heterogeneity,
support for family planning might be a political liability
and latently or openly opposed by politicians. At the same,
politicians at all levels have vested interests in the "extern-
alities" which emanate from family planning programs, e.g.,
employment creation generally and patronage jobs particularly;
and the location of facilities. The broader environment may also exert constraints: for example, widespread poverty and deprivation may lead to excessive staff preoccupation with job security and also increase the likelihood of corruption. In addition, in such areas recruitment of highly qualified personnel may be well nigh impossible.

The authors conclude that successful implementation of family planning programs depends on a consideration of, and adjustment for, inherent and potential organizational weaknesses and limitations. Although better information would be helpful (and should be developed),

"[t]he main barrier is not so much a lack of information as a lack of willingness to take organizational capacity into account." (p. 594)

Large-scale replication of successful pilot projects has often failed to produce the desired (and expected) results precisely because general programs do not have access to the same resources as pilot projects, and "they are no test of the organizational capacity that exists within the program at large." (p. 594)

The Indian vasectomy camps are a case on point: "The highly concentrated organizational energies required could simply not be sustained on a regular basis." (p. 594)
stimulus and, at the same time, the importance of "clientele-creating" approaches should be stressed.

Smith points out that the "newness" of family planning programs means they lack institutionalized administrative functions; this can increase the chance of successful innovation, however, since there will be less built-in resistance to change. Staff recruitment is probably the single most important factor in institutionalizing effective management: "Entrepreneurs create new organizations and programs; traditional bureaucrats do not." (p. 29)

Smith believes that personnel incentives adequate to attract top quality staff, even when these incentives "may in fact be entirely out of line with those provided by other government agencies," (p. 28) are imperative. He suggests that the importance of personnel has been "under-emphasized," and that there may be a need to "raid" other sectors. International bodies might also insist, as an aid condition, on personnel policies designed to attract and maintain highly qualified staff. Despite possible protests of interference in domestic affairs, Smith claims that the personnel issue is sufficiently important to justify such a condition.

"[I]f key personnel make as big a difference as I think they do, then the failure to insist on this component all but ensures a program of mediocre quality." (p. 29)
Until recently, "output" was not part of the Indonesian bureaucratic thinking, and although the concept is gaining currency, there is still a wide gap between recognition of the need for better management and the commitment of resources necessary to achieve this end. Bureaucratic norms are "status quo" rather than "change" oriented, with control and subservience to superiors being highly valued. Smith notes the "strongest" management component of the Indonesian family planning program emanates from these norms, and ironically is also a major weakness: "scrupulous budgetary control [is applied] almost to the point where very little is permitted to happen." (p. 30) In addition, the role of foreign donors as "superiors" increases local hesitation to spend funds if any question might subsequently arise.

Indonesia has personnel experienced in "control" management, but few with expertise in "production" management. The Ford Foundation is (in 1972) providing assistance to overcome this deficiency; but, as Smith points out, such training must be in context to have any usefulness:

"Principles of American public administration were mistakenly thrust upon a cadre of Indonesian officials who . . . could find no effective use for them." (p. 32)

In a footnote, Smith reminds readers of unsuccessful attempts by Brazil and the Philippines to institute the principles of the U.S. civil service system.
In most Latin American countries, public recognition of "explosive" population growth and techniques to regulate conception coincided (in the early sixties) with formulation in the U.S. of population control strategies and family planning aid policies. At first, Latin reactions ranged from "suspicious" to "hostile," reflecting more their interpretation of U.S. economic and political motives than domestic religious (Catholic) opposition. The "empty lands and untapped resources" argument was propounded, partly to counter fears that family planning assistance might be substituted for economic development aid, a not illogical possibility in light of contemporary statements by U.S. government officials and the previous reduction in aid for health care programs; but also as a means of resisting cultural "imperialism." It was also noted that the U.S. did not practice what it preached.

While rightist Latin nationals espoused "dollars instead of pills" (p. 69), those of the leftist persuasion saw population control as supporting the political status quo and thereby delaying its revolutionary structural reform. Opposition to population control was also a consequence of Marxist ideology's profound influence on Latin American intellectual life: Malthusian predictions were unwarranted because the population "problem" would disappear with socio-economic development; and
needs in this area were so overwhelming that other foci were simply diversionary.

Nevertheless, an increasing number of intellectuals have begun to recognize population control as at least temporarily desirable, pending broader social change; and certainly that access to contraception is a "basic human right" to facilitate "freedom of choice" in individual family planning, and to improve human welfare. The medical profession has sometimes aided and sometimes opposed contraception. The role of the Church was even more ambiguous. As Stycos explained:

"Basic agreement with the Church on population problems and family planning has always been a mild embarrassment to the Left. A move by the Church to a pro-birth control policy would help to consolidate leftist opposition to birth control, since such a policy would make consistent the socialist views of the reactionary character of the Church and the reactionary character of population control." (p. 77)

Socialist opposition also decreased when population control was espoused in terms of "rational decision-making" and an "increase in the free will" of individual families. The example of socialist Eastern Europe might have been instrumental socialist in changing/Latin ideas. Nationalist leaders both in Latin America and internationally have tended to prefer, at least publicly, this "human welfare" view.

After extensive discussion of the nature and detrimental impact of U.S. government association with population control in Latin America, Stycos concludes that "discreet and limited"
Stycos, 1967, page three

U.S. aid, especially from private sources; could be useful; and that "with luck," the ideological controversy will have subsided within ten years (i.e., by 1977) and "programmatic facilitation" will be the task facing Latin America (and, implicitly, the U.S.).
This paper assumes that management science has a role to play in improving family planning programs (although the last paragraph concedes that "a systematic assessment of the [management science] contribution to date is needed") (p. 25), and examines some recent initiatives in this area.

In addition to problems faced by public sector activities generally, population programs face special difficulties emanating from their newness and uniqueness: lack of institutionalized administrative functions, staff assigned from other agencies, changing technology and resource needs and availability, and rapid expansion which means that personnel who were qualified at one level of operation find themselves faced with tasks of infinitely greater magnitude and complexity, and frequently well beyond their administrative capacity. The preponderance of physicians as family planning program managers has also resulted in the lack of a management perspective; and governments have not appointed their best administrators, accentuating the low status of these programs and hindering recruitment of competent managerial personnel.

Until the seventies, indigenous management institutes were little interested in family planning; and foreign experts and donors emphasized research and technical assistance rather than program management to improve performance. The research
findings have not necessarily been applied, however, and
"'translation of knowledge to action is one of the most criti-
cal management issues facing family planning programs.'" (p. 10,
quoting H. Blaise, "Management Issues in Family Planning Program Operations: Knowledge and Action," prepared for
ECAFE Regional Seminar, 1974)

Recently, there has been increased interest and action
to improve management capacity in population programs, and
seminars, courses and international meetings have been sponsored
by management institutes in several Third World and donor coun-
tries. Donors' policies and reporting requirement need to be
examined critically, especially at management meetings, to avoid
the need for multiple accounting and data information systems which
satisfy donors but complicate local management; and encoura-
gement should be given to local management of the key elements
such as "program planning, policy, control and system design."
(p. 14)

While the "management community" has something to offer,
however, it cannot be a panacea, and

"there are severe constraints imposed on the management expert's ability to introduce change when this runs counter to government-
wide policies or procedures." (p. 23)
SECTION 2

LATIN AMERICA CASE STUDIES:

LINKAGES BETWEEN POLITICAL COMMITMENT,
ADMINISTRATIVE CAPABILITY, AND THE
EFFECTIVENESS OF FAMILY PLANNING PROGRAMS

By: Richard L. Clinton and R. Kenneth Godwin
ABBREVIATIONS FOR LATIN AMERICAN ORGANIZATIONS

ASCOfAME -- Columbian Association of Medical School Faculty
AVPF    -- Venezuelan Family Planning Association
CELADe  -- Centro Latinoamericano de Demografia
CONApo  -- Costa Rica's board co-ordinating family planning activities among government programs and other sectors
COPEI   -- Christian Democratic Party (Venezuela)
PROFAMILIA -- Family planning services developed in conjunction with ASCOfAME (Colombia) (private family planning network)
In [1964] 38 percent of women in union [in Bogotá] reported ever having used a contraceptive method; by 1969, the proportion had risen to 65 percent. There was little evidence that the change in level of contraceptive practice could be attributed to increased modernism. (Baldwin & Ford, 1976: 78.)

... it is inappropriate to use Colombia's experience to support the assertion that "family planning programs, when vigorously implemented, reduce fertility levels even in advance of general socio-economic development." ... by all evidence, the increased demand for contraception was generated by the process of modernization in Columbia. (Potter, Ordóñez, & Measham, 1976: 525.)

Introduction: In this paper we attempt to summarize the existing and often contradictory literature on the recent dramatic fertility declines registered in Columbia and Costa Rica. In doing so, we have focused in particular on the linkages between political commitment, administrative capability, and family planning program effectiveness. This literature review was supplemented by a review of AID files concerning population programs and by interviews with personnel in AID, the World Bank, UNFPA, IPPF, and the Population Council. The synthesis of these sets of information represents the views of the two authors, not those of Westinghouse Health Systems or of any of the organizations or individuals kind enough to permit interviews.

Our analysis concentrates largely on Columbia. Its family planning programs are perceived by almost all observers as quite successful. For this reason AID directed Westinghouse to examine whether any lessons from the Colombian experience might be applicable to other programs. To generalize from the single case is always risky, however, and for this reason we included several other countries in our review for purposes of comparison.

Published literature: Major papers and manuscripts concerning Colombia's population policy and fertility reduction include the following: Ott, 1975,
1977; Potter, Ordóñez, and Measham, 1976; Bailey, Measham, and Umaña, 1976; Bravo, 1974, 1975; Simmons and Cardona, 1973; and the prepared statements of Tamayo, Bair, and Rizo before the U.S. House of Representatives Select Committee on Population, April 25, 1978. More general literature on Latin America can be found in Studies in Family Planning and Country Profiles published by the Population Council, numerous excellent publications by CELADE, the American Universities' Field Staff Reports, and edited volumes by Chaplin (1971), McCoy (1974), and Stycos (1971). In addition, the testimonies of Sanhueza and Ravenholt before the House Select Committee provide good updates of the published materials. Hilton (1975) prepared a reasonably complete annotated bibliography of case studies and comparative case studies of population policies.

**Political Commitment**

**What is Political Commitment?** In order to determine whether political "commitment" or "will" is vital to the success of family planning programs, we must develop some basic definition of the meaning(s) of "commitment." To the vast majority of our interviewees, "political commitment" seemed to include three basic components: (1) public knowledge (at least among the political elites) that the highest governmental officials favor a strong contraceptive program; (2) substantial amounts of local funds included in the family planning budget (these may or may not be associated with other programs); and (3) clear perception of the government's basic orientation toward its program as relatively permanent.

In terms of these three characteristics, it is clear that Colombia's government is "strongly committed" to a population program. All the respondents with whom we spoke considered Colombia's commitment either the highest or next-to-the-highest in Latin America (after Costa Rica's, or, for some, Mexico's). Certainly Colombia's most recent development plan (Stamper, 1977) and its budget expenditures (AID internal estimates) indicate strong encouragement of population reduction for both
health and demographic purposes.

Does Political Commitment Make a Difference? Without exception our interviewees saw Colombia's commitment as an important factor in the success of its family planning program. There was, however, substantial disagreement concerning the general question of whether or not the commitment had to be for "demographic purposes" or whether "health and development" goals were sufficient.

Why is Political Commitment Important? Our respondents offered a wide variety of reasons for the importance of political commitment, but most of these comments can be reduced to the following factors:

(1) Governmental commitment legitimizes actions already occurring in both the public and private sectors. For example, in Mexico contraceptives were long available in both the public and private sectors, but the program personnel had to proceed with extreme caution for fear of creating a stir that might endanger the entire effort. This reduced substantially the ability to obtain new acceptors and provide services on a large scale.

(2) Governmental commitment makes it possible to use the media more openly, to use personal contacts in neighborhoods, and to tap latent demand and create new demand. In countries like Argentina or Uruguay government commitment is less necessary; the commercial sector and private clinics can supply most of the necessary services. In places such as Bolivia and Haiti, on the other hand, almost all demand must be created, and socio-economic development efforts must accompany the contraceptive programs. In Brazil, Mexico, Colombia, Panama, and Costa Rica, the emergence of a strong commitment on the part of the government can make a great difference in the short run.
(3) Political commitment helps to ward off opposing political forces such as Opus Dei and Marxist critics.

(4) Political commitment makes it "profitable" in career terms for middle level personnel and bureaucrats to stay with the program and thereby enhances administrative capability. The careers of persons involved with family planning are not jeopardized by their affiliation with such programs when the government's commitment is a firm one.

(5) Governmental commitment means that population activities can use the existing administrative infrastructure for health and education to deliver family planning services. This is particularly important both in cost terms and because even if government emphasis on population subsequently wanes, the infrastructure, once in place, is likely to continue its family planning services.

(6) Governmental commitment enhances the prospect for loans from the World Bank, AID, and other sources, indeed, it is often the sine qua non of such loans. In addition—and perhaps more importantly—if the commitment is strong at a very high level, then the lending agency can be more confident that the loan funds are being used for the purposes intended. For example, the World Bank may find that its loan for population services in a given country is not being used for population services, but the Ministry of Health blames the problem on the Ministry of Finance and vice versa. This bureaucratic run-around can only be broken through in most instances if a significant political figure decides to take action.

(7) Governmental commitment to the concept of fertility regulation and/or population growth rate reduction reduces the "stickiness" and recalcitrance.
of lower level bureaucrats in their handling of population-related matters.

Administrative Capability

In both the literature on population policy and our interviews with population activists, references to political commitment and its importance were more focused than were those concerning administrative capability. Although most writers and interviewees saw administrative capability as important to the success of family planning programs, there was little consensus as to what administrative capability means, how it affected programs, or how it could be developed.

There does not seem to be a great deal of literature concerning administrative capability, but Drs. Finkle and Ness in their report will be dealing with this issue more extensively. We cannot neglect the issue completely, however, in that better administration and implementation were seen as two of the more important products of political commitment (see points 4, 5, 6, and 7 above).

One of the most interesting aspects of our literature review and interviews was the striking contrast between the strength of the belief that political commitment leads to enhanced administrative capability and, thereby, to improved program success, and the absence of empirical evidence of this expected linkage. In fact, rather than finding "What is to be done," we more often ran into a long series of illustrations of Murphy's Law.* One respondent in AID perhaps put the matter most succinctly in his statement, "successful administration depends first and last on not institutionalizing incompetence."

Factors frequently cited in our review of the literature and our interviews as hindering or helping successful administration include the following:

(1a) Decentralization of program efforts and having multiple local agencies

*Murphy's Law: If anything can go wrong, it will. Or in a more homely idiom, "Jellybread always falls jellyside down."
involved in population activities is important so that if one Minister or Departmental Head does not have a strong commitment to family planning activities, the other agencies can compensate and provide the necessary services. In addition, in each country certain agencies are more capable of working successfully in urban areas, while others are better suited to perform in rural regions. Similarly, some are better able to service particular clienteles than are others. Finally, several respondents and some written materials (e.g., Ott, 1977) expressed the opinion that competition among the various agencies as well as among government programs, private sector programs, and commercial distribution helps to keep each other active and innovative and to prevent any single group from assuming a monopolistic position.

(1b) A smaller, but still significant, number of individuals perceived successful administration as being dependent on centralization of services and avoidance of duplication. Certainly the point made by one World Bank Officer illustrates a major dilemma that donor agencies face: "When the World Bank, PAHO, UNFPA, AID, IDRC, and the Ford Foundation are all trying to work with a family planning program in a country, the local administrators spend more time traveling and in meetings with all the different donors that in administering their own programs." This duplication and seeming disorganization is prevalent not only among external donors but also among the locals. For example, when the Venezuelan Government decided to devote some of its efforts to family planning and took over the clinics of the Venezuelan Family Planning Association, bitter political struggles ensued between the Director of the IPFF affiliate and the Venezuelan Minister of Health. Officials from both AID and IPPF indicated that among the highest officers of the two competing parties more time was spent over "turf guarding"
than in program operations.

2) Technical capability is essential first in setting up programs and then in evaluating them. If a program must be built from the very beginning (rather than simply added to other service deliveries) the task is doubly difficult. Nothing ever works the way it was envisioned on the drawing boards, hence managerial talent is vital in overcoming unforeseen problems. After the program is established, this same talent is needed to make necessary adjustments to changing circumstances.

If a program is being added to existing delivery networks, other issues must be faced. Quite often funds allocated to family planning will be siphoned off to other better established or more powerfully entrenched areas. (This problem is one of the reasons political commitment at a high level is crucial.) Yet, the use of existing services in the Ministries of Health and MCH programs has become the type of administrative arrangement most frequently advocated by PAHO, UNFPA, and some portions of AID.

3) The "feeling" that something can be done must be present. In our interviews with field personnel the importance of the locals' believing they could accomplish something was mentioned every time. This feeling and its opposite tend to become self-fulfilling prophecies. For example, in Ecuador, Peru, Bolivia, and Jamaica--where a socio-economic and political environment congenial to the development of administrative and technical competence had either never existed (Bolivia, Ecuador, and Peru) or was in a temporary state of disarray (Jamaica)--the implementation of action programs stagnated. Respondents traced this not only to a general malaise concerning fertility limitation programs.
but also to the lack of rationality in the reward structure in these environments which crushed feelings of efficaciousness among those associated with them.

(4) Executive decree and pluralistic consensus as the appropriate initiating procedure for family planning programs each had its proponents among our respondents. Several respondents felt that under a military regime or a civilian regime working under a state of emergency, the administrative organization and implementation of family planning programs could be handled more quickly and efficiently. (For a discussion of this approach see Warwick, 1976.) Other respondents strongly felt that in the long run this approach was more prone to reversals and that the consensus necessary for a solid political commitment would not be as likely to emerge when executive decrees or special powers based on a state of emergency were utilized.

(5) Finally, it is necessary to distinguish between institution building and mere training to set up and/or implement specific programs. Administrative capability, in a broad sense, refers to the level of the talent and basic infrastructure already existing in a country, which is one of the factors that characterizes the general level of a nation's political development. If this level is low, then a certain amount of institution building must precede the programs if they are to run effectively. This is, of course, a lengthy process. Training for specific skills and programs, while no less important, takes less time and gives the appearance of being cost effective.

In both the literature and the interviews we found that perhaps the basic source of disagreement among those associated with population programs in developing countries is the type of program action to which they are referring when they discuss administrative capability.
For instance, one respondent cited Costa Rica as an example where little administrative effort was necessary. In his elaboration of this point, however, it was clear that he was referring only to training programs that would build on existing structures. In another case a respondent indicated that in Haiti the UNFPA could handle all the development of administrative talent. Again, when the response was probed it was clear that the reference was to only one small activity, not to the entire population program. Similar cases occurred when individuals referred to massive, long-term programmatic inputs. A respondent mentioned Mexico in this regard and suggested that capabilities such as those at El Colegio de México must be sponsored. When asked to elaborate, the respondent did not feel that this was the task of population aid programs alone or even that the majority of funds should come from population funds.

In what follows we will review the cases of Colombia and Costa Rica and, to a lesser extent, a group of control countries to examine how well their experiences support the above propositions concerning the linkages between political will, administrative capability, and program success.
POPULATION PROGRAMS AND FERTILITY DECLINE
IN COLOMBIA AND COSTA RICA

In the literature we have been able to review, no authors have singled out a government's political commitment or administrative capacity for their specific contribution to family planning program effectiveness. As regards Colombia and Costa Rica, however, a number of common themes are apparent in the way their programs have developed, and some inferences can perhaps be drawn concerning the role of these two variables.

By far the most important condition in each country in terms of explaining the rapid growth of their family planning programs was that fertility was already declining when the programs were introduced. In other words, significant numbers of couples were already desirous of having smaller families and were already taking measures to that end. KAP surveys in Bogotá in 1964 and 1969 indicated, moreover, that approval of contraception was widespread (82% and 97%, respectively), as was knowledge of at least one contraceptive technique (68% and 76%). Women in union reporting ever having used a contraceptive method rose from 36% to 65% in that five-year period. (Simmons and Cardona, 1974: 43-44.) Also of importance was a growing tendency among younger women to discuss these matters with their husbands (43% and 62%). (Ibid.: 43 and 45.) The first KAP survey in Costa Rica in 1964 revealed "a general acceptance of the idea of family limitation, a widespread knowledge of contraceptive methods (96%), and a current use of contraceptives by 50% of the women interviewed." (Gómez and Bermúdez, 1974: 10.)

While little can be said with assurance about why these changes were occurring more markedly in some countries than in others, the explanation probably lies in the complex process of socio-cultural disruption known as modernization. Events force behavior changes and this, in turn, causes the cognitive disruption
known as individual (as opposed to societal level) modernity.

We are postulating that modernization proceeds very gradually, indeed, insidiously, at first. We believe this is a reasonable assumption because even isolated traditional peoples today are increasingly exposed to modernity and thrust into behavioral changes through interaction with foreign tourists and technicians who penetrate to the most inaccessible areas and who fairly inundate more accessible ones; through radio, motion pictures, and in some cases television; through political campaigners, officials, or military personnel passing through or stationed in remote villages; through relatives and acquaintances who have migrated or worked in urban areas and returned to visit; and through their own travels to nearby markets or perhaps to larger towns or cities. Of all these influences the most important appear to be occupational changes. (Inkeles, 1969.) The move to a money economy and the semi-forced migration to cities occur before many of the educational and material accoutrements of modernity are acquired. Therefore, some of the most fundamental behavioral and attitudinal characteristics of modernity may be adopted in advance of thorough-going modernization. New surroundings, modes of working, and exposure to a variety of unfamiliar stimuli lead individuals to question things formerly accepted without question and to see themselves in roles or activities previously unthinkable. Of such is made the shift from a fatalistic to an instrumental outlook on life, without which the idea of trying to plan one's family could never be entertained.

Of incalculable importance in this regard is the faith that has developed among supposedly premodern rural peoples in modern medicine. After all, it is the decline in mortality brought about by modern medical and public health programs that has produced the population explosion. It is, therefore, understandable that the successes of these measures have had a powerful impact on
the thinking of even the minimally educated. It would be difficult to overestimate the contribution of this general attitude to the rapid and widespread acceptance of the pill upon its introduction in the mid-1960s.

In short, the receptivity of the people of Colombia and Costa Rica to the idea and practice of family limitation may perhaps be better explained by the erosion of traditionalism rather than by any spectacular or uniform increase in modernization. This disruption of traditionalism was undoubtedly accelerated in Colombia by the traumas of La Violencia between 1948 and 1964, which also account for a significant part of the rural-urban migration of that period. (Potter, et al, 1976: 523.) Costa Rica, on the other hand, has a relatively high degree of urbanization, education, and non-agricultural employment compared with many other countries of Latin America. Colombia, too, has an unusually high level of urbanization, thus exposing a large proportion of its population to the virus of modernity. This exposure is heightened in Costa Rica by the country's small size and in Colombia by the exceptional number and geographic spread of major cities.

With the exception of La Violencia, none of the above characteristics, however, is unique to Colombia or Costa Rica. The disruptions associated with what industrialized societies call "modernization" are occurring throughout Latin America. The demographic and social indicators of these changes do not show that Colombia should have a significantly sharper decline in birth rate than Brazil, Mexico, Panama, or Venezuela. Whether we use death rate, infant mortality rate, physicians per capita, literacy, caloric intake, per cent in non-agricultural employment, or GNP, the extremely rapid declines between 1965 and 1975 in the crude birth rates in Colombia (25%) and Costa Rica (29%) cannot be ascribed solely to modernization or socio-economic development. Assuming, therefore, that these declines are not simply the product of reporting errors (or manifestations of the General Uncertainty Principle), the experience of Colombia
and Costa Rica may well offer us guidance as to how fertility decline can be accelerated by population programs.

Following the procedures of Mauldin, Berelson, and Sykes (1976), we examined several socio-economic indices that typically show the strongest zero-order correlation with declining fertility. As Mauldin et al. indicate, the general association of these factors with fertility, despite some contrary cases, is widely accepted as genuine cause or as causal surrogate. Moreover, these are the kinds of socio-economic factors that are put forth as policy instruments in the field—prominently, for example, in the World Population Plan of Action—in connection with the development-and-family planning or development-versus-family-planning debate. They are typically used as surrogate measures for the "demand" for family planning services. We have chosen Brazil, Mexico, Ecuador, Peru, and Venezuela as appropriate countries for comparison with Colombia and Costa Rica. Table 1 indicates the values for the socio-economic indicators of demand (circa 1970), the CBR's for 1965 and 1975, and the per cent decline in the CBR in each country over this period.

As can be seen, although Costa Rica is clearly further along in the development process than the other countries, Venezuela is higher than Colombia on five of the seven indicators, and Mexico is higher on four. When the means of the socio-economic variables for the five control countries are compared with those of Colombia and Costa Rica, the similarities in the general levels of modernization are quite striking.

Political and Administrative Linkages

As we have indicated, there are always difficulties in knowing how far one can extrapolate from one or two cases to a larger population. In this paper, however, we will attempt to move as close as possible to the limits of such
<table>
<thead>
<tr>
<th>Country</th>
<th>Z Adults Literate</th>
<th>Z 5-19 Enrolled in School</th>
<th>Life Expectancy</th>
<th>Infant Mortality Rate</th>
<th>Z Males in Non-agricultural Labor Force</th>
<th>GNP Per Capita</th>
<th>% Urban 65</th>
<th>CBR 75</th>
<th>% Decline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colombia</td>
<td>81</td>
<td>63</td>
<td>60</td>
<td>76</td>
<td>44</td>
<td>432</td>
<td>48</td>
<td>44</td>
<td>33</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>88</td>
<td>75</td>
<td>67</td>
<td>70</td>
<td>45</td>
<td>713</td>
<td>23*</td>
<td>41</td>
<td>29</td>
</tr>
<tr>
<td>Brazil</td>
<td>66</td>
<td>58</td>
<td>61</td>
<td>109</td>
<td>41</td>
<td>680</td>
<td>30</td>
<td>42</td>
<td>38</td>
</tr>
<tr>
<td>Ecuador</td>
<td>70</td>
<td>65</td>
<td>58</td>
<td>91</td>
<td>38</td>
<td>415</td>
<td>21</td>
<td>45</td>
<td>45</td>
</tr>
<tr>
<td>Mexico</td>
<td>74</td>
<td>69</td>
<td>62</td>
<td>68</td>
<td>42</td>
<td>996</td>
<td>37</td>
<td>44</td>
<td>40</td>
</tr>
<tr>
<td>Peru</td>
<td>72</td>
<td>75</td>
<td>55</td>
<td>135</td>
<td>41</td>
<td>659</td>
<td>25</td>
<td>43</td>
<td>42</td>
</tr>
<tr>
<td>Venezuela</td>
<td>77</td>
<td>75</td>
<td>64</td>
<td>49</td>
<td>57</td>
<td>1,837</td>
<td>41</td>
<td>42</td>
<td>37</td>
</tr>
<tr>
<td>Mean for 5 control countries</td>
<td>71.8</td>
<td>68.4</td>
<td>60.0</td>
<td>90.4 (79.2)</td>
<td>43.8</td>
<td>917.4 (687.5)</td>
<td>30.8</td>
<td>43.2</td>
<td>40.4</td>
</tr>
</tbody>
</table>


*Urban here is measured as the percentage of the population in cities of 100,000 or larger, which can be misleading for a small country like Costa Rica. For a discussion of why Costa Rica is more urban than it would appear from the census figures, see Gómez and Bermúdez, 1974: 3-4.
extrapolations. Cognizant of the policy maker's need to make decisions in the absence of complete information, we will not be as cautious as we would be if we were writing for a purely academic audience but will attempt to provide as many reasonable propositions as possible.

Table 1 indicates that looking only to social development does not resolve the ambiguities surrounding the question of fertility decline in Colombia and Costa Rica. Even though Costa Rica is the most "developed" of the seven countries, on balance, Colombia would fall near the middle of the five "control countries" and even Costa Rica is not tremendously different. Perhaps, then, the key lies in the political system of the countries or in the interaction between the political system and development.

Recently 84 specialists in Latin American politics were asked to rank the 20 non-English speaking countries of Latin America on 15 variables associated with democracy (Johnson, 1976). Four of these variables were socio-economic (e.g., educational level and standard of living), the other 13 political (e.g., degree of civilian supremacy). We have chosen three of these variables for use here: Total Level of Democracy (includes freedom of speech and press, free elections, independent judiciary, and degree of civilian supremacy), Level of Decentralization and Local Autonomy, and Administrative Capability. Table 2 shows the scores for each of these three variables and a summary index of the three.

When the political system variables are included in the analysis, a cogent explanation for Costa Rica's and Colombia's fertility decline suggests itself. The socio-economic indices are, in effect, measures of "demand" for contraceptive services. If this demand is to be met, however, the public sector and/or the private sector must make contraceptive services readily available. It can be reasonably argued that the more democratic character of the Costa Rican and
<table>
<thead>
<tr>
<th>Maximum Possible Score</th>
<th>Democracy (400)</th>
<th>Administrative Capability (400)</th>
<th>Decentralization (400)</th>
<th>Summary Index For All 3</th>
<th>% Fertility Decline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colombia</td>
<td>343</td>
<td>278</td>
<td>269</td>
<td>297</td>
<td>25</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>390</td>
<td>324</td>
<td>305</td>
<td>340</td>
<td>29</td>
</tr>
<tr>
<td>Brazil</td>
<td>151</td>
<td>297</td>
<td>234</td>
<td>227</td>
<td>10</td>
</tr>
<tr>
<td>Ecuador</td>
<td>182</td>
<td>200</td>
<td>190</td>
<td>191</td>
<td>0</td>
</tr>
<tr>
<td>Mexico</td>
<td>305</td>
<td>285</td>
<td>245</td>
<td>278</td>
<td>9</td>
</tr>
<tr>
<td>Peru</td>
<td>164</td>
<td>264</td>
<td>204</td>
<td>211</td>
<td>2</td>
</tr>
<tr>
<td>Venezuela</td>
<td>371</td>
<td>308</td>
<td>281</td>
<td>320</td>
<td>11</td>
</tr>
<tr>
<td>Mean for 5 control countries</td>
<td>235</td>
<td>271</td>
<td>231</td>
<td>245</td>
<td>6%</td>
</tr>
</tbody>
</table>

Source: Johnson, 1976.
Colombian political regimes increased the probability that they would respond to this demand.* Local autonomy and decentralization of decision making probably facilitate this process (Ness and Stephens) in that greater local autonomy and decentralization provide more points of access for transmitting the demand and allow the provision of services to be appropriately designed for local subcultures. For instance, a service network designed for Bogotá or Caracas is not likely to be appropriate for rural areas. Decentralization also may be expected to reduce the likelihood of "incompetence becoming institutionalized," or at least to prevent this from happening at a level that could damage all program activities.

Administrative capability enters the process by providing the infrastructure (public or private), the entrepreneurial and managerial talent, and the training capabilities to implement policy. Very importantly as well, administrative capability may also enter the process by facilitating the recognition that rapid population growth inhibits the development process. Without this recognition, the commitment of the government to fertility reduction policies is not likely to be great.

A Model For Fertility Decline

From the above discussion we can generate a reasonable model for "family planning success." The model has six components: (1) level of "modernization"; (2) level of democracy; (3) level of demand for contraceptives; (4) public program commitment; (5) administrative capability; and (6) strength of private and commercial delivery networks. Figure 1, adapted from Godwin (1975b), diagrams this model.

*As will be discussed below, this "demand" must be organized by political groups in the society--i.e., some organization or lobby must transmit the mass demand to the decision makers. For a model based on this linkage, see Godwin, 1975b.
Figure 1: A Model of Fertility Decline
Costa Rica and Colombia:

Utilizing the model in Figure 1 to examine the seven countries discussed in this paper, we can see where the linkages between modernization, political commitment, administrative capability, and fertility decline have (and have not) occurred. Of the seven, Costa Rica is probably both the most modernized and the most democratic. It would be surprising, therefore, if Costa Rica did not experience the largest fertility decline of the seven countries. Socio-economic development has led to increased knowledge about and demand for contraception. The government and the private sector have responded to this demand. Berelson and Mauldin (1976) rank Costa Rica's public program commitment as the highest in Latin America. The pluralistic and decentralized governmental structure allowed multiple access and multiple means of contraceptive provision through both the private and public sectors with the result being an extremely rapid fertility decline.

Undoubtedly the commitment of the presidents of Costa Rica facilitated the development of administrative capability, financial support, and program stability in both the public sector programs of the Ministry of Health and the Caja Costarricense de Seguro Social and in the private sector clinics of the IPPF affiliate (Epstein, 1974: 227). One of the truly unique characteristics of the Costa Rican programs has been the loose, non-competitive, public-private cooperation through CONAPO (Gómez and Bermúdez, 1974 and Epstein, 1974: 219). The public sector did not attempt to destroy the private and commercial distribution networks but worked with them and, in some cases, through them.

In many respects Colombia is a more interesting case than Costa Rica. The level of socio-economic modernization and the level of democracy are not as great as in Costa Rica. In fact, as Tables 1 and 2 indicate, Colombia falls below Venezuela on five of the seven socio-economic variables and on all three of the political variables. Yet, the fertility decline in Colombia is more than
twice that of Venezuela's. What explains this striking discrepancy?

We would suggest that three factors stand out in Colombia as having had the greatest impact on the fertility decline: (1) the presidents of Colombia provided the three aspects of political commitment (see p. 2 above); (2) the crucial linkage between mass demand and service response was accomplished through ASCOFAME and PROFAMILIA (... with a little help from their friends); and (3) the public programs, the private clinic programs, and the commercial distribution networks did not attempt to destroy each other but instead competed in terms of innovative delivery programs. Decentralization, competition among the three sectors, and innovations initiated by the less politically vulnerable private sector helped keep everyone alert and allowed local organizations to design programs to meet local needs.

Ex-President Alberto Lleras Camargo and President Carlos Lleras Restrepo of Colombia were particularly forthright and forceful in their early statements and messages to Congress, and Lleras Restrepo was, in addition, the only Latin American head of state to sign the 1966 Declaration on Population presented to U.N. Secretary General U Thant (Bravo, 1974:271; Ordóñez, 1971:54). Nor did these positive statements go unreinforced. A special administrative unit responsible for population-related matters was created in Colombia in 1968, as had been done in 1966 in Costa Rica (Ott, 1977:5; Bravo, 1974:271).*

While considerable furor in the press and in Congress accompanied the initial official involvements in population-related programs in Colombia, the net effect of these controversies seems to have been to further legitimate and advertise family planning (Bravo, 1974:273; Epstein, 1974:225). The research

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*This unit was a part of the National Planning Department and in 1970 was made the National Population Council by President Misael Pastrana Borrero. (Bravo, 1974:278.) Bravo emphasizes the significance of the Planning Department's having been involved in population matters from the outset.
and training previously made possible by foreign assistance proved especially valuable in turning these controversies to the advantage of the family planning program.

Both in Colombia and in Costa Rica the commitment by the president to family planning seems to have been carried through from one administration to the next with remarkable continuity. The probable importance of this consistent support at the highest level is perhaps best seen in the counterexamples of Egypt, Kenya, and Pakistan, where presidential supportiveness of family planning waxed and waned (Warwick, 1976:4,6,44).

While presidential support for family planning programs can be more symbolic than substantive, it would seem to be a major asset nonetheless, especially in the legalistic-formalistic bureaucratic milieu of Latin America. Public knowledge of the president's favorable disposition acts as a lubricant to lessen friction and reduce delays throughout the bureaucracy in the handling of population-related matters. If, on the other hand, the president were known to be unenthusiastic about or uninterested in family planning, this would afford a convenient excuse for inaction or sabotage at every bureaucratic level. In cases where the president is known or thought to be opposed to fertility reduction and population limitation, as was Peru's General Velasco Alvarado, the effect on public health functionaries and even private family planning organizations can be paralyzing (AID/Lima Airgram to AID/W, Feb. 10, 1976).

It hardly need be pointed out that Latin Americans do not, in general, hold their governments in very high regard. On the contrary, even quite uneducated Latin Americans tend to be realistically cynical about the degree of waste, inefficiency, and corruption that characterize their governments. Only a few harbor any illusion that the government is working for their best interests and improved welfare. The effect on public opinion, therefore, of a government's endorsement
of a particular policy or program is open to question. Since Third-World governments, in general, and Latin American governments, in particular, tend to be highly centralized and to concentrate power in the hands of the president, however, it is obviously advantageous for a policy or program to enjoy the support of the president.

Regarding the role of administrative capacity on the effectiveness of family planning programs in Colombia and Costa Rica, it should be recalled that a very large proportion of the contraceptives distributed in these countries are delivered commercially. Particularly in Colombia, the government's rather notorious administrative ineptness has had a relatively minimal impact on the family planning programs, since they are in large part carried out under private auspices. In fact, the commercial sector is reported to account for more than half of all contraceptives distributed in Colombia (Little, 1972:1; Pérez and Gómez, 1975:269). In Costa Rica as of mid-1973, the delivery of family planning information and devices was handled through 98 centers of the Ministry of Public Health, 12 clinics of the Caja Costarricense de Seguro Social, and two IPPF affiliate clinics (Gómez and Bermúdez, 1974:P). Given the minimal number of hours of attention to the public of the Ministry centers, plus their multiple medical responsibilities, however, it is probable that more contraceptives were delivered through the Social Security and ADC clinics. In addition, as in Colombia and to a considerable extent the rest of Latin America, the commercial sector services a significant proportion of the population (Ibid.:10). As late as 1969, the private sector of Costa Rica furnished 58% of the orals distributed in the country (Marckwardt, 1974:7), and in Colombia, because of the difficulties and expense of importing condoms, nearly all of these devices are distributed privately (Little, 1972:7 and 8).
If there are vital lessons to be learned by AID from Colombia's decline in fertility, they would include the following:

1) Facilitating multiple services organizations such as ASCOFAME, PROFAMILIA, the Ministry of Health, and the various commercial programs seems preferable to forcing (or perhaps even attempting to facilitate) coordination.

2) AID's low profile in channeling its funds through UNFPA, PAHO, FPIA, and IPPF made the programs more politically feasible and, in combination with the private nature of some of the program participants, made possible such truly daring initiatives as voluntary sterilization for both males and females and innovative efforts such as the Ministry of Health-PROFAMILIA rural health programs.

3) The groundwork laid through conferences, fellowship programs, research, and training grants can pay very high dividends further down the line.

Venezuela:

In contrast to Colombia's decline, that of Venezuela has been quite moderate. If the model outlined in Figure 1 is appropriate, most of the decline in Venezuela can be traced to increasing modernization (linkage a) rather than to public programs (linkage bcd) or perhaps even private program efforts (linkage ab). In spite of their many similarities, Venezuela differs from Colombia in almost every respect in regard to population programs. Its political commitment has not been high and has varied from one administration to another. The linkage between mass demand and public program response has been particularly weak when COPEI has been in power. Certainly an astute public administrator in Venezuela would think twice before allowing his or
or her career to become too closely associated with the MCH and family planning programs.

In Venezuela, despite the initial aggressiveness of the AVPF (Wiarda, 1970), no organization has been able to perform the role that ASCOFAME played in Colombia in linking mass demand to government policy. In fact, the Venezuelan Family Planning Program was eventually taken over by the Ministry of Health, creating a struggle over the distribution of clinics. Rather than develop its own distribution network, the Venezuelan Government decided to avoid "unnecessary duplication" by establishing governmental administration of the IPPF affiliate. Such an approach seems to be counterproductive for at least six reasons:

1) The Venezuelan Government has sufficient resources to build its own distribution facilities in areas not covered by private clinics. This would be a better way to avoid duplication of services.

2) Since the government's move to take over the private clinics, most of the efforts of the respective chief administrators have been directed at discrediting each other rather than at expanding the programs.

3) If COPEI regains power, the distribution network will be under its control, and COPEI is not likely to be favorably disposed to increasing the budget of the population program.

4) The public sector can now divert external assistance away from family planning.

5) The advantage of having a nongovernmental group to demonstrate that new, bolder approaches are politically feasible and socially acceptable has been lost. If an innovation is "too daring" the political backlash can damage the entire program rather than only a single sector.

6) The ability of a conservative faction of the medical establishment or other groups...
opposing fertility reduction to reduce contraceptive availability by increasing government regulation and red tape is enhanced by a "unified" program.

If external donors are to facilitate the improvement of the situation in Venezuela, it would seem reasonable to encourage the development of the private sector there. Unfortunately it seems that such ideas are not popular in most public bureaucracies, where competition is seen as appropriate only to the private, profit-making sector.

Mexico, Ecuador, and Peru:

We will not attempt to deal in depth with these three countries. Their inclusion in this report, like that of Venezuela, was to aid us in understanding the special characteristics of the Colombian program. Nevertheless, because we have studied them in some detail--particularly Mexico (Godwin, 1977) and Peru (Clinton, 1971, 1974, 1977)--we will suggest certain political/administrative factors that may have some policy utility to AID program effectiveness.

In Mexico, the most significant aspect of AID's role was its total absence. Given the stance of President Echeverría in his electoral campaign and the lack of an AID program in Mexico, the subsequent population activities there may appear to have few implications for AID. We would suggest, however, that Mexico's late entry into population programs provides a compelling example of what happens (or doesn't happen) in the absence of effective linkages between mass demand and public response. Mexico has a powerful and highly coordinated one-party political system. This absence of pluralism and Mexico's delayed response to population pressures give support to our earlier stress on the importance of decentralization, multiple access to the polity, and multiple service delivery points.

Among the more positive indicators for population policy in Mexico have been the reiteration by President López Portillo of the importance of reducing population growth; the utilization of the existing and extensive health and
social service infrastructure, and the dramatic change in ease of access by allowing not only pharmacies but also supermarkets to sell contraceptives. Mexico also appears to be developing a community-based distribution network similar to that in Colombia.

Perhaps the best way AID can facilitate the further progress of the Mexican program is through multi-lateral funding as in Colombia, through continued assistance to the Ford Foundation to provide training and institution-building support, and through encouraging the Mexican government to continue its multiple service approach and its strengthening of the commercial sector.

Ecuador offers one of the most significant demographic challenges in Latin America. Its growth rate is probably the highest in the region (3.4%), and its socio-economic indicators do not suggest an imminent increase in demand for family planning services. Nevertheless, we would suggest that the multiple strategy approach (public, private, and commercial) should also be encouraged in Ecuador. In this way, where demand is high it will not go unnoticed by the population community. This approach also increases the possibility of finding culturally appropriate methods of supplying contraceptives and of avoiding the medical, clinic-based approach that tends to dominate in Latin America if alternative delivery approaches are not emphasized by external donors.

Peru, of course, provides an example of what happens when a government actively opposes fertility reduction or population limitation. Official pronouncements by President Juan Velasco Alvarado and other high functionaries of the post-1968 military regime against family planning programs in general and against foreign involvement in population-related programs in Peru in particular were followed by the forced cessation of incipient family planning efforts by the Ministry of Health and revocation of the charter of the small IPPF affiliate. Even population-relevant research has been limited by this
negative atmosphere, although some progress has been made on this front in the Instituto Nacional de Planificación through AID's assistance and at the Catholic University with the help of the Ford Foundation.

While the level of socio-economic development in Peru is still too low to produce massive demand for family planning, the high incidence of abortion, a thriving private market for contraceptives, and the number of acceptors of the short-lived experiments in family planning indicate that much more could be done than currently is being done. Largely because of the highly centralized and authoritarian military government's ideological and strategic objections to population limitation programs, however, and because of the widespread demoralization and confusion within the governmental bureaucracy, it is doubtful that meaningful progress toward reducing fertility will be made in Peru for some time. Under these circumstances, perhaps the best that can be done by outsiders is to encourage recognition of the interrelationships between demographic variables and development problems and to continue to support research and the training of promising young people in relevant areas of study.

Conclusions:

Our search for lessons from the relatively successful cases of Costa Rica and Colombia was sparked by the hope that we might be able to identify some set of circumstances that constitute a "take-off point" in a country's demographic history when family planning programs could most effectively be introduced or expanded. We did not find evidence for the existence of such a take-off point or threshold. Instead we were most impressed by the catalytic role played by groups such as ASCOFAME and PROFAMILIA in facilitating the responsiveness of the political system to mass demand for contraceptives. In this process, we found the commitment by the president, continuity of that commitment from one administration to the next, and shared responsibility for service delivery among
public and private programs and the commercial sector to be of the utmost importance. Consequently, we would argue for the superiority of multiple or pluralistic approaches over more coordinated or centralized ones. Coordination is too prone to turn into control and the more extensive the control the greater the prospective damage from "the institutionalization of incompetence." In addition to the high potential returns on investments in training, research, and "awareness-generating" efforts, we feel that there is much to be said for simply the early establishment of family planning programs--the longer they are in existence, the more effective they can be, the better they will be known, and the more legitimate they will become. As Mauldin and Berelson have demonstrated, "duration consistently matters." (1978:114). Finally, we would urge significantly greater support for more innovative, non-traditional, non-clinic-based approaches to contraceptive delivery. "Modernization" is proceeding painfully slowly in many ways, but in almost every country there is significant unmet demand for knowledge and techniques of fertility limitation. Meeting that demand would require a very small proportion of total development assistance funding and could be expected to make a significant independent contribution both to human welfare and to overall development efforts.
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SECTION 3

AFRICA CASE STUDY:

GHANA'S POPULATION POLICY:
LESSONS FOR AFRICA

By: Aaron Segal
Introduction

The Ghana government in 1969 issued a comprehensive statement of population policy, the first of its kind in Africa, and a thoughtful and intelligent document which merited the widespread attention that it received in Africa and around the world. Since 1969 Ghana has experienced two military coups, chronic political instability, and economic stagnation punctuated by bouts of wild inflation and deep recession. No systematic effort has been made to implement the population policy statement in a country where government policy and practice have grown far apart. There has been no evident fall in fertility or significant increase in the modest numbers of users of official contraceptive services.

The facts are irrefutable: during the first 10 years Ghana’s population policy has not been implemented and has not met its targets. The interpretation of these facts is another matter. Several interpretations of what has and has not happened are available. Each leads to different lessons for other African states in pursuit of population policies.

Explaining Policy and Practice

Ghana has a sophisticated well-educated and articulate elite which draws on extensive international connections. It is on members of this elite and external donors that responsibility for the population policy and its implementation rests. One view holds that this top down elitist approach to population policy often fails when the fertility practices of the elite are significantly different from those of the majority as is the case in Ghana. The elites lack the political support to implement policies for which there is little public backing. Indeed the elites may even lose interest in the policies once a policy statement has been produced, unless there is sustained large-scale external support. Ghanaian elites convinced themselves that a population problem existed and that a policy was needed. It is not clear that they convinced anyone else including the military officers who took power from the civilians and made raising rabbits the national priority.

Related to this explanation is the view that Ghana is not ready for population control. KAP studies as late as 1973 indicate a preference for seven or more children, consistent with actual practice. Although certain
Ghanaian ethnic groups traditionally practice child spacing, outside Accra and the salaried population traditional or modern family planning is little used. In spite of a stagnant economy and considerable malnutrition, especially in the drought-prone North, standards of living are high by African levels, arable land is not yet short, and population pressure is not widely experienced. Infant mortality is still high although falling, birth rates would normally be expected to rise before they fall, illegal abortion is seen as a minor problem, and receptiveness to family planning is limited. Consistent with the top down approach Ghana enunciated a population policy substantially in advance of public attitudes.

Policy implementation is a chronic weakness of Ghanaian governments. A more charitable explanation maintains that population policy never had a chance in Ghana. Since 1969 the inherited overwhelming political and economic problems have precluded almost any rational policy implementations, especially on problems of less than crisis magnitude such as population. The economy has been on a mostly downward seesaw, the administration has been thoroughly demoralized by bouts of massive corruption, politization, and inefficiency, and politics has been an unceasing quest for power in an ocean of uncertainty. The general malaise of Ghana has done under most policy efforts and no doubt population has suffered less than other sectors. External aid and dedicated elites have kept clinics open, services operating, and research conducted. The policy has not been implemented but it has not been forgotten.

The administrative explanation of Ghana's failure also cites the neglect in the official policy of the private sector and the commercial distribution of contraceptives, and the failure to arrive at a working understanding between the National Family Planning Programme Secretariat and the Ministry of Health. Although recent efforts have been made to rectify these administrative problems it is unlikely that they will substantially increase the number of contraceptive users, at least not to meet population policy targets. Certainly in retrospect it was a mistake to overly rely on an overburdened, uninterested, and demoralized Ministry of Health to provide family planning services. Yet no other national organization was available and the Secretariat has not been able to do the job.
Perhaps it is too early to definitively evaluate the Ghanaian experience? The 1969 statement declared that demographic objectives cannot be achieved through family planning alone, and that demographic change requires generations rather than years. Ghana and all of Africa have benefitted from an intelligent dialogue on population and an impressive document. Experience has been obtained in the management of services and knowledge of contraception is being slowly diffused in a society where its legitimacy has been confirmed over three changes in government. Ghana's policy may be too sophisticated for its population, but does it not indicate the way to the future? It is not better to initiate a comprehensive population policy whose implementation may require generations than to start with more modest measures lacking larger objectives?

Lessons for Africa

The differing explanations of Ghana's experience lead to different lessons for other African states. Ghana still has on paper the most comprehensive and sophisticated population policy in Africa, one that has had a limited effect on policy formulation in a few other states such as Botswana and Liberia. Yet no other sub-Saharan African state has adopted a similar policy and there is some wariness as a result of the Ghanaian experience with policies which cannot be readily implemented.

One clear lesson from the Ghanaian experience is that policy should provide for commercial distribution of contraceptives. Government health services in Africa, and that of Ghana in spite of all its woes is one of the best, simply cannot manage a contraceptive monopoly. An economy as diverse and structured as that of Ghana demands use of commercial channels. During the post-Nkrumah period this has been an administrative and political but not an ideological problem in Ghana. The private sector should probably be given an explicit role in family planning, rather than just tacit acceptance.

A second lesson is that family planning must be made acceptable to the Ministry of Health and its delivery system. In Ghana nurses trained in family planning by the Secretariat were commanded by the Ministry of Health to work on other assignments. Ideally family planning should be incorporated in maternal health and child care services. This means that the priority
will be on safe deliveries and pre and post-natal services with family planning as an add-on. External donors were instrumental in Ghana opting for family planning clinics whose operations were undermined by the Ministry of Health.

A third lesson is that in Ghana and much of Africa birth rates may have to go up for some time before they fall voluntarily. Although it is possible to simultaneously reduce infant mortality and fertility in practice a generation of reduced mortality may have to precede changes in attitudes towards fertility. The limited evidence from Ghana indicates that this may be the case. However it is imperative to convince parents that their children have a high probability of survival. This is a sine qua non of widespread acceptance of voluntary fertility education occurring. During the interim emphasis on spacing childbirths may be most effective, especially in rural areas.

The final lesson from Ghana is that top-down elitist population policies may not do any harm but it is not clear that they do much good. Often encouraged by external donors they do not lead to domestic political commitment, or allocation of scarce resources to tough administrative jobs. More modest policies with greater chances of implementation may do more to promote demand for services, the ultimately most effective basis of political support. It is tempting to work in Ghana with articulate elites on a peer basis. The result is an outstanding population policy as an intellectual exercise whose implementation is another matter. There may not in many countries be viable alternatives to top-down population policies and processes but where they exist they should be explored.
SECTION 4

CULTURE AND FERTILITY:

A LITERATURE REVIEW AND ANALYSIS

By: Barbara G. Furst
INTRODUCTION

Available material on the relationship between culture and fertility is vast and varied, and ranges from comprehensive theoretical concepts to village level monographs. This paper reviews important theories, some of them conflicting, and focuses on material which has the most immediate relevance for understanding fertility in developing countries. It attempts to pinpoint those conditions or sets of conditions which appear to be the most amenable to change resulting from development programs which would have an impact on fertility.

The most interesting and encouraging material in the literature is that which deals with social change and mobility. Changes in the roles of women, values, perceptions about the value of children, living styles, and family structure have far-reaching implications for development in general and for fertility specifically. Fertility rates will not change overnight. There are entrenched beliefs which are resistant to fertility control. But there is movement toward modernization in some areas of the developing world where there is a felt need and, therefore, a place for effective family planning and other fertility related programs. This paper highlights the indicators of that growing demand for family planning which are reflected in the anthropological and sociological literature.
THEORETICAL CONCEPTS OF POPULATION DYNAMICS

In any discussion of the relationships between culture and fertility it is more appropriate to speak of "associations" than "cause-and-effect." Population densities, fertility rates, and economic, political, environmental, social and cultural factors are so closely interrelated that any single condition rarely elicits a single response in fertility rates. For example, urban industrial societies are generally characterized by nuclear family units, independent decision making, and relatively low fertility; traditional agricultural societies, on the other hand, are generally characterized by the extended family or extensive social systems and group or hierarchiacal decision making, and large families tend to be their ideal. However, these generalizations are so broad, and exceptions to them so widespread, that they must be examined more closely if they are to be useful for development planners.

STRUCTURAL THEORY

Kingsley Davis (1955) wrote that the key to understanding fertility lies in the relationship of fertility to socioeconomic structure. Because the socioeconomic structure of developing countries is peasant in nature and is characterized by corporate kinship groupings and extended or joint families, high fertility is encouraged in a number of ways. In agrarian societies, "social organization has retained many of its elaborate mechanisms for inducing a high rate of reproduction. It has done so even though a high birthrate, once functional, has now become strictly disfunctional" (Davis).

Associated with extended families are systems of restriction and avoidance between the sexes and a lack of communication between husband and wife, especially when they are young. "A South Korean family planning official, when asked who made decisions about childbearing and family planning in a typical Korcan family suggested the following hierarchy: husband's mother, husband's father, husband, wife's mother, wife's father, wife" (Newland). A similar hierarchy operates in most entrenched traditional systems. Davis maintains that the system is adapted to self-sufficient
agrarian societies where women and children work from an early age. The "functional" school maintains that changes in fertility or attitudes toward fertility will not occur until the entire social fabric is changed (see also Epstein and Jackson, both volumes).

DEMOGRAPHIC TRANSITION THEORY

Standard "demographic transition" theory attempts to explain shifts in population brought about by technological and economic change. The demographic transition is defined as the shift which occurred in industrial nations "from high mortality and high fertility (to low mortality and low fertility) which (took) place in many countries in association with the development of scientific and mechanical technology" (Lorimer). In Europe the demographic transition was also associated with colonial expansion and immigration. This theory has limited value for understanding population dynamics in developing countries because the range of options for individuals in industrial countries was and remains much wider than for individuals in developing countries. Advanced technology and employment in industry is not accessible to many people in the third world, and there are few new lands to exploit. Migration in developing countries tends to be from the countryside to the city. While relieving population pressures in the countryside, such migration exacerbates population pressure in the cities.

The kind of demographic transition occurring in some areas of the third world, however, is not based on economic growth and expansion, but, on the contrary, to lack of employment and to economic stagnation. In a village study in Sri Lanka, Gunasinghe writes that unemployment among young non-agrarian people has delayed marriage, and the low capacity of the economy to absorb labor has reduced the importance of children. Both of these related factors have reduced fertility. Even among the more affluent, a necessary high investment in children to insure education and employment has acted as a restraint to fertility.
FERTILITY RATES AS AN "ECOLOGICAL RESPONSE"

Among the prevailing theories of population dynamics, the one with the most significance for developing countries, though not restricted to them, is the theory that population densities and fertility are "ecological responses" to economic, social or environmental conditions. For example, among hunting and gathering peoples such as the Eskimo and Bushmen, the basic social unit is the nuclear family and the band is very often a kin group. The group is small and geographically mobile. Infanticide is believed to be a relatively common method of limiting family size, especially if an older sibling is too young to walk. Among such peoples the natural environment seems to be the major determinant of low levels of fertility (Nag 1962).

Tribes or clans are characterized by large numbers of people affiliated through geographic affinity, common language and common ancestors, who perceive of themselves as one people with common political interests. Historically, in times of warfare the replacement and expansion of the group encouraged high fertility.

Tribal organizations provided the basis for the classic civilizations, and high fertility supported the development of more complex political systems, technology, and food production. Surplus production was necessary to support those people engaged in non-agricultural activities. In labor intensive agriculture even marginal workers seem to produce more than they consume. Thus in the feudal systems, and the peasant systems which followed in most instances, more labor was wanted, high fertility was encouraged and was probably perceived as beneficial by laborers themselves -- especially given high rates of mortality during the same period.

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1 See Cole, J.W., Estate Inheritance in the Italian Alps, Research Report No. 10, Department of Anthropology, University of Massachusetts, Amherst, December 1971, for a discussion of the means by which landowners prevent the splintering of family holdings in spite of statutes which require the division of landholdings among the heirs.

Colonial expansion, while relieving population pressures in Europe, in some instances created high population densities in colonies. Clifford Geertz, in an analysis of ecological dynamics in Java in the 18th and 19th Centuries, writes that where Javanese families were taxed in labor, it was to their advantage to have as many people possible working the Dutch plantations. This "increased the net utility of large families." Furthermore, the ability of the Javanese to intensively cultivate diminishing land holdings was a forced ecological adaptation. Because land for growing rice was also ideal for growing export crops, the Javanese farmer was forced to grow increased amounts of food on less land. With careful cultivation, the number of people a rice field could feed appeared to be virtually unlimited. The system "always (managed) to work one more man in without a serious fall in per-capita income" and created a "labor-stuffed" local economy.

In a recent study in Nigeria, comparing land holding patterns in the Jos Plateau region among neighboring groups, it was found that among the Kofyar the nuclear or small independent family unit was "peculiarly adapted to the labor needs of intensive agriculture on small compact farms" (Netting). Their neighbors, who practice non-intensive shifting agriculture on a different type of terrain, were organized into extensive kin groupings, more typical of Africa. In each instance, Netting writes that "functional nexus exists which involves household composition, labour needs, and land use."

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1 Steven Polgar, in *Culture and Population* (1971), writes that missionaries further disturbed the traditional balance between fertility and the environment by opposing polygamy, infanticide and abortion, by interfering with the traditional practice of post-partum sexual abstinence, ritual abstinence, and, in some places, the taboo against widow remarriage.
Attempts have been made to determine the relative fertility of women in extended households vs. women in nuclear households, and between women in polygynous households and women in monogamous households. The Davis theory supports the belief that, in the aggregate, women in extended families are more fertile than women in nuclear families. However, according to Lorimer, although the "cultural context in which extended family is idealized is likely to be conducive to high fertility," the "women living in extended families have lower cumulative fertility than those in nuclear families, although in some cases the difference is very small." Lower fertility in extended families might result from the reduced incidence of sexual intercourse because of lack of privacy, or because nuclear family segments of extended families are forced to leave when they become too large, or because extended families often shelter barren or widowed women.

The results of a United Nations study in 1962 in West Bengal, on the other hand, showed that a slightly higher proportion of nuclear families were practicing family limitation than were extended families (Nag 1975). (The study also showed that the influence of the wife's mother-in-law and mother was not as powerful as was expected, and that the husband was likely to be indifferent to the practice of family planning.)

Furthermore, although the extended family and high fertility are the ideal, families do not necessarily abide by that ideal. Nag has written that circumstances more often have a bearing on family structure and that it is necessary to "dispel the idea of the family as a static entity" (United Nations, 1974). He suggests that the fertility of women in a particular family structure should be studied over time. A woman currently residing in her own nuclear household may have begun her family or indeed completed it within an extended family. Her family type would then have changed. If such basic temporal data are not included in comparative studies of family type, the results of course are not reliable.

The association of extended families with high fertility has further been challenged by Burch and Gendell who say that (1) "the extended family is less than ideal in incidence, (2) given high survival rates even extended..."
families must encounter a point of diminishing return with respect to fertility, and (3) women in developing countries typically do not express a desire for many children." The extended family and high fertility may have been associated in the past but sufficient modernization may have taken place to interrupt the association (Burch and Gendell).

Goode writes that there is "no inherent connection between an independent nuclear family system and lower fertility" and he cites the large nuclear family of the American frontier and the small one in industrial cities. There is some indication that the nuclear family may have a "lower cumulative fertility," that is, a tendency toward a smaller number of children ever born.

The exact definition of an extended family can be called into question. Separate residence may not be the key factor in the degree of influence exerted by kin. Relatives, especially the older generation, still exert pressures though from farther away. Even nuclear families in highly industrial societies are influenced by kin systems.

In Panama, Burch measured the number of children in relation to the number of "non-nuclear relatives" of the head of a household. He found that the number of children was lower in relation to the number of non-nuclear relatives present in the household. Burch as concluded that "there is virtually no empirical evidence with which to test the hypothesis that societies in which extended families predominate have higher fertility than societies in which such families are not common." Furthermore, the "cumulative fertility of women under 25 . . . does not show any clear differentiation by family type" (most likely because women in traditional societies rarely consider family limitation until later in their reproductive span.)

A study by the Gulicks in Isfahan found that women were "immersed" in the lives of other relatives and that the attitudes of the mothers of such women regarding family planning varied. The study showed very few associations among separate and extended residences, attitudes, and degree of influence. The old adage about fertility being in inverse relationship with the distance one resides from the mother-in-law does not seem to hold in either Isfahan or, as we saw above, in West Bengal. (It should not be
overlooked in this context that there is probably now an entire generation of mothers-in-law who have been exposed to the gospel of family planning starting at least ten years ago when they were relatively young."

Writing of Africa, S. Onwuazor says that "the orientation of African traditional agriculture is not necessarily toward growth; it is a prestige-oriented economy -- an economy where surplus produce is converted as soon as practicable into items that confer prestige: plural wives, cattle, power, and -- most important -- the command over people." A common practice is to accrue sufficient goods and money to buy a chieftainship. This confers prestige and a certain amount of comfort and support in old age and a certain amount of economic and political dominance.

Included in dominance and prestige are a large number of offspring. Writing about the Ashanti, Meyer Fortes says that there is "an extremely high valuation placed on offspring . . . and on the sexual and marital institutions which make it not only possible but desirable and praiseworthy for a woman to bear children all through her procreative years . . . As children are highly valued, not merely by their parents, but also by the elders of their lineage whose influence in local government affairs depends to some extent on their numbers, no big change in reproductive habits is likely to occur as long as the corporate organization of the lineage remains as important in Ashanti social life as it is today" (1945).

Comparing fertility of African women in polygamous and monogamous households, Angela Molnos writes that many children in a polygamous family represent a smaller number per woman than for monogamous women. On the other hand, Busiu, quoted by Fortes, writes that there is little difference in the fertility of women in monogamous and polygamous households in Ashanti nor between urban and rural women. This is no doubt related to the fact that the Ashanti do not practice post-partum sexual abstinence as do many other African groups (Fortes).

Nukunya supports McInnos' view that women of monogamous households are more fertile than women in polygamous households. This may be because they are more apt to be living in cities, less traditional and, therefore, no longer practicing post-partum sexual abstinence. The absence of other
wives would make such traditional practices untenable for many monogamous husbands. Nukunya also writes that the practice of polygamy increases the family in patrilineal systems but has an adverse affect on fertility of matrilineages.

Few of the hypotheses regarding fertility and marriage type can be applied generally throughout Africa. Nag writes that there is no relationship between polygyny and fertility in Tankanyika and Ghana, and that in the Congo women in polygynous households are less fertile. In addition, the age specific fertility rates of women in polygynous households were generally lower. Childlessness, of course, encourages polygyny which means that chances are there will be barren women in such households.

In the Philippines and Indonesia, the basic economic unit is the nuclear family. However, large families are the ideal.

In the Caribbean region, studies of the various types of relationships between men and women and fertility have shown that there is a direct association between the stability of the relationship and fertility. Three kinds of relationships occur including legal marriage, common-law marriages and visiting relationships. Fertility is highest among legally married women and lowest among women engaged in visiting relationships; the fertility of common-law marriages is in between (Nag 1975). It is further stated that stable units encourage fertility and at the same time fertility encourages stable unions. This is a result of the fact that legal marriage requires by custom that a man buy a house for his wife and until he can do so he does not marry.

On the other hand, Mortara writing about Brazil says "the strongest factor limiting the birth rate in Brazil remains the institution of marriage. A certain degree of economic independence and security are the indispensable adjuncts of marriage. As a result, a man tends to complete his training, or apprenticeship, and even to work at his profession for some time, before he thinks of marrying. The longer period of training necessary for the intellectual compared with the manual worker, the urban compared with the rural worker, contributes to delayed marriage among the more educated and wealthier classes, particularly in the towns." Clearly the effects of
marriage fertility are different depending upon class, education, and degree of urbanization. Perhaps, as Ryder writes, "fertility should be examined in relation to family structure only insofar as family structure is related to control over production and distribution of economic resources ... Individual decisions concerning reproduction are based upon an analysis of the means by which survival can best be facilitated."

It is important to recognize that some of the literature on fertile and family structure is relatively old. Lorimer wrote in 1955 "Any concern about limitation of families as a means of improving the adjustment of population to resources is so foreign to traditional modes of thinking in most tribal societies that any suggestion along this line is likely to be immediately repudiated." Meyer Fortes wrote about the Ashanti of Ghana in 1945. Their perceptions may have been valid, but only at that time and place. Now, after several decades, there are many signs of change. Despite the accelerated population growth of the developing countries, there are encouraging indications (see below) especially among the younger more educated and more liberated that the realities of life are such that they can no longer afford not to limit the size of their families. The trend is toward the nuclear family in a non-agrarian setting and even in rural or transitional settings.
RELIGIOUS VALUES AND FERTILITY

Lorimer makes the statement that "sacred values lie outside the scope of the social sciences." However, fertility is affected by religious beliefs and, therefore, such beliefs must be addressed in any discussion of the relationship between culture and fertility. In all societies sex and procreation were traditionally related to mysterious forces. Sexual behavior is widely perceived as having strong religious sanctions. All cultures have both rules regarding sexual abstinence and rituals for inducing fertility. Sacred writings limit or encourage sexual behavior, and often invoke sanctions concerning "natural" processes.

The range of beliefs and practices and the strength of taboos regarding sexual behavior in some societies demonstrates the ambivalence associated with sexuality and procreation. Despite strong incentives to have children, frequently there are customs which preclude sexual intercourse. Abstinence following childbirth in parts of Africa ranges from the biblical 40 days after the birth of a boy to several years, depending upon the length of lactation, because sexual intercourse during lactation is believed to poison a mother's milk. In many societies around the world, illicit sex is thought to bring misfortune -- especially to offspring. In Micronesia sex is avoided during pregnancy in some societies, before fishing or hunting expeditions or battle by others, and at certain times of the lunar cycle by others. In some societies in India and Pakistan, widows are forbidden to have sexual relations, and in still others mothers of married children are ashamed to become pregnant. Hindus associate excessive "semen loss" with physical debilitation.

Childbirth, even when socially sanctioned, is, like sexuality, associated with ambivalence. The birth may be related to pleasure, love, affection and creativity, but at the same time it is dangerous and painful, and children are a burden. After multiple pregnancies, sex looses its charm for many women -- especially when it is related to excessive childbearing.

Kingsley Davis writes, "Motivation is always motivation within a situacion ... it is worth noting that the religious paraphernalia of agrarian societies is generally in consonance with the institutions producing a high fertility." The "desire for sons in patrilineal societies of the Muslim and Hindu-Buddhist traditions is reinforced by supernatural beliefs and ritualistic practices."
There are limits to the extent to which sacred or religious values exert influence on societies. Lorimer writes "(Sacred) values are constantly in process of development, reinterpretation and new application in any living society." He cites, for example, the ancient religious dogmas as they are interpreted in industrial societies.

Often in Muslim societies one hears that the number of children is determined by the will of Allah. On the other hand in Indonesia, Sujono determines that more than half of all adult Muslims approve of family planning and only a small fraction of them openly disapprove. (One might add that the socioeconomic institutions of Indonesia, despite strong Muslim influence, are also radically different from those in the Near East and the Subcontinent — the perfect example of cultural adaptability of all institutions to a particular setting.)

One other point must be made in relation to fertility and social visibility of the group, and that is that low fertility is often associated with social disfunction. That is to say that societies which have a strong identity and which function well encourage high fertility. When a group becomes marginal or peripheral and other forms of social breakdown appear, a decline in fertility is often a characteristic. Another characteristic associated with decline in fertility is reduced sexual activity. It is a sign of disillusionment, alienation, and despair and social disintegration. To attempt then to regulate fertility with alien mechanical or chemical means might indeed be perceived as meddling in the affairs of the gods.
Abundant evidence in the literature suggests that fertility is affected by the education and employment of women, their age at marriage, their degree of urbanization, their economic class and their access to health and family planning services.

In India it has been proposed to raise the age of marriage in order to lower fertility. In an analysis of reduced levels of fertility in Kerala, Leela Gulati writes that high age of marriage of women in Kerala is not the sole factor influencing Kerala's comparatively low fertility rate. She points out that traditional Namboodri Brahman and Nair economic and social relationships, including descent and inheritance through the female line among the Nair, restrictive marriage patterns, the education of women, and delayed age at marriage combined with better than average health services, decreased the infant mortality rate and thus also the fertility rate.

Until 1941-50 the infant mortality rate in Kerala was higher than the all-India average, this "in spite of the higher than average female age at marriage." Mortality rates have declined and "life expectancy has doubled in the last 40 years." Gulati goes on to say that, to the extent that rising female age at marriage contributes to improved child survival, particularly when it is combined with improvements in medical and public health services, it can be said to contribute to reduction in fertility rates...A mere shift in the age of marriage, without female education, did not decrease the number of children a woman had. Decreases occurred in association with reductions in infant mortality as a result of improved health services.

It would appear then that the traditional autonomy of women in Kerala combined with an increase in the education of women and delayed age at marriage set the stage for a distinctive improvement in infant and maternal life expectancy once health services become available.
Gulati concludes:

The postponement of marriage can be viewed as a device not only to reduce the reproduction span but also to increase the chances of child survivorship and to improve the level of female education; its usefulness as a demographic instrument therefore can be considerable. But unless postponement of female marriage is accompanied by a significant improvement in medical and public health facilities on the one hand and educational facilities on the other hand, raising the age of marriage alone may not secure the demographic results the New Population Policy...is aiming at.

The inverse relationship between education and fertility among women is neatly summarized by Kathleen Newland:

In a 1972 study from Jordan of women aged 30-34, illiterate women were found to have an average of 6.4 children while those with a primary school education averaged 5.9. For secondary-school graduates, the average was 4.0; for university-degree holders, only 2.7. Studies in Turkey and Egypt showed the same pattern. In Turkey, the average number of children ranged from 1.4 for college graduates to 4.2 for unschooled women. In the Egyptian survey, women who had finished university averaged less than four children, compared with more than seven for illiterate women.

In a study of working women in Latin America, Nadia Youssef has demonstrated a similar inverse relationship between employment of women and fertility. The data from six countries shows that "urban working women--at the aggregate level--have a lower number of children than non-working women." Furthermore, that white collar workers have fewer children than blue collar workers, that full-time workers have fewer than part-time (with the exceptions of Mexico City and Caracas), and that women working outside the home have fewer children than those working inside the home and that the latter have fewer children than non-working women (Youssef 1975).

The question arises, of course, whether it is not the result of having fewer children and thus less domestic responsibility which makes work outside the home more feasible. Youssef concludes, however, that education and approval of non-domestic activities is just as effective in reducing fertility and encouraging higher employment of women as is the incidence of small families among employed women. There
is more contraception practiced among urban, better educated upper class women and the incidence of abortion is "exceedingly high" in urban areas of Latin America. Furthermore, there is "no clearcut relationship between abortion and socio-economic class and educational background."

The results of a study by Chi and Harris in Columbia comparing the use of contraception by women in four cities showed that the two most important variables associated with higher rates of contraception were the literacy of the women and the proximity of family planning services. Two of the cities had such services and two did not. In addition to literacy and the proximity of services, other variables included the employment of the women, age at marriage, and income levels. They learned that women working outside the home had lower cumulative fertility but were less likely than non-working women to use contraception (suggesting that "employment may be a result of fertility rather than a cause"), that later married women had higher pregnancy rates than those who married early, that a woman's desired fertility was usually lower than her actual fertility, although there was some association, and most importantly that accessibility to family planning services "may have had some effect on fertility of literate respondents but no clearcut one on the fertility of illiterates."

In another study Youssef compares the positions of women in Latin America and in Muslim societies of North Africa and East Asia (Youssef 1974). Muslim women have very little autonomy and few options. So long as they adhere to their expected role behavior, they will have and gain respect. Youssef draws an interesting comparison between status and respect and says Muslim women have respect but little status. Latin American women on the other hand have considerable status but less respect—especially among the poor. Thus a Muslim woman is locked into a fixed pattern which includes economic dependence, seclusion, modesty, chastity and child-bearing. Youssef says that the gap is wide between her legally available options and rights and her ability to act upon them.

In Latin America such rigid social structures and expectations do
not exist: at least among the poor and lower middle classes, to provide women with security, nor do they restrict her sexually or economically as much. Extended kin residence is not the ideal or necessarily the norm. Many women must of necessity work outside the home.

Muslim women are characterized by low literacy and almost universal marriage and high fertility. They marry young and there are few spinsters. Any education of women is considered undesirable by some and a high level of education is considered undesirable by most. Furthermore, the jobs which women usually perform outside the home, according to Youssef, are for the most part occupied by men in Muslim countries. Youssef notes "the systematic absence of women from the industrial and occupational sectors which involve public activities and visible interaction with the opposite sex...Unfortunately these are the precise sectors which are associated with heavy female employment both in the experience of the now industrialized world and in that of the currently developing nations."

The relevance of the above for family planning is enormous especially given the relationship between female education and employment and fertility. There is already abundant indication that the urban women of Latin America want and, in some instances, are demanding family planning services. The demand is of course based on the knowledge that such services exist.

The validity of the Youssef analysis is further borne out by the statistics on married fertility of women of Latin America as compared to women in Muslim societies. For instance in Chile 59% of the women have three children or fewer. In Egypt 53% have four or more (Youssef 1974).

The women of the Philippines and Indonesia, despite Islamic influence have a great deal of autonomy and status. They are members of societies which value children and where there are kin support groups and fixed female role expectations but not a preponderance of extended

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families nor severe restrictions on female behavior. Reining et al write, "The Filipino woman cannot be liberated--she has never been in a state of servitude." Furthermore, "economic activity is essential to family survival for the lower class and frequently it provides the income that allows a family to be described as middle class." Nuclear families are the rule, and extended family residences are a luxury found in upper income zones of the community.

No data came readily to hand which analyzed the family structure and its relation to fertility in either the Philippines or Indonesia. In both places the nuclear family is the basic unit and in both places children are highly valued. In the Philippines it is unclear whether this is because the country has a strong Roman Catholic influence because extended families are associated with upward mobility or other reasons.

The position of women in Indonesia socially and economically appears similar to that in the Philippines. According to Papanek et al and Hildrud Geertz, women are, if anything, more independent in Indonesia. Women reign supreme in the household, and they make major decisions among themselves and their female peers regarding work, allocation of family resources and the education of children. Geertz writes that kin groups make "relatively few contributions to the function of society." Households make decisions, and there are no preferential marriage patterns. "All these diverse factors, working simultaneously--the dominant status of the women in the family, the attitudes of restraint and avoidance among men of the family, the contrasting closeness of women" produce a mistrust of relatives by marriage, a women-oriented focus and a "solitary core of related women within a loose periphery of the men of the family"(H. Geertz). This means that if and when the women decide to limit their own fertility there will be fewer obstacles in their way than as was seen above in other countries.

Indonesia is an interesting exception to the inverse relationship between fertility and education among women, according to Newland. All
economic levels Indonesians value large numbers of children, "but only the well-off can afford to put the ideal into practice--just as it is only the relatively well-off who can afford to keep their daughters in school. The relationship between education and fertility is so closely entangled with the income-fertility link that the direct influence of education is obscured" (Newland 1977).

Among urban women and, by Indonesian standards, middle class women in Jakarta, child spacing is relatively common using folk, traditional or modern methods. As in Latin America, educated women and women working outside the home had significantly lower fertility than others. According to Papanek et al 37% of the women in the survey sample used contraception after the first child and 25% after the second; 43% of housewives used modern methods and 63% of employed women used them.

Most of the material regarding African women and cultural factors affecting fertility was related to the status of women in the traditional socioeconomic structure. Molnos records changing perceptions of women regarding the value of children (see below) and also states that the traditional African woman has sufficient status to be considered economically autonomous. However, she still measures her status to a great degree by children because until recently children were necessary to assure that status both socially and economically.

Perdita Huston, in a survey of among women of several African countries, found a mixture of attitudes toward the value and costs of children. Her evidence suggests that there is a rising awareness of the costs and burden of children and also of options which allow women to limit their fertility. In many instances it is the men who are opposed to change the traditional system. This is consistent with Ronald Cohen's survey in Nigeria among post primary school students: "With remarkable consensus the girls want higher status, more monogamy, more affection, and a closer approximation to Western marriage. The boys clearly want to continue with traditional marriages." Cohen goes on to say, "Since the authority sides with males and tradition, the prospects for rapid change
in the immediate future seem quite dim." Similarly Gerardo Gonzales writing about the marginality of many people in the urban areas of Latin America says that influence of husbands is an "important obstacle to contraception" and that men are more traditional than women in attitudes toward the family.

Esterlin writes that:

Evidence indicates in various ways that women in underdeveloped areas are more interested in stopping births. On the whole, women have little interest in fertility control early in their pregnancy history. For reasons of prestige, marital legitimation solidifying otherwise unstable unions, etc., women in cultures where kinship is of special importance want a few children, or at least one or two sons, as soon as possible after marriage. Having discharged their obligations and achieved their status as fertile women, they subsequently become concerned about economic, rearing and health difficulties.

To summarize this section on the status of women, their education, employment, and related fertility, it is necessary to caution against an oversimplified use of such associations for development assistance and family planning programs. In her detailed analysis of these issues, Kathleen Newland emphasizes that many women with low paying jobs outside the home undergo untold hardship out of necessity and further that work does not necessarily mean compensatory fulfillment for having fewer children. In fact, it is seen at times as lowered status and shame that a woman must go to work rather than stay home and care for the household. In addition, the growing perception of girls and women as earners for the larger household may cause the increased exploitation of young women. Newland goes further and says:

A sound policy must aim to expand women's choices, on the assumption that women are no more naturally inclined to limit themselves to motherhood than men are inclined to limit themselves to fatherhood...Programs that confine their efforts to family planning deal with women only in their reproductive role. A contradictory message is implicit: they seek to diminish the only role that they explicitly recognize for women. Integrated programs, on the other hand, support women in a variety of roles. In so doing,
they enhance the credibility of family planning by presenting it as one of a number of steps that women can take to build a better life for themselves, their families, their countries and themselves.

Evidence suggests that with more education, economic opportunity, and social autonomy women are limiting the number of children they have. Furthermore, the higher degree of education, the better the employment and the greater the autonomy, the more dramatic the decrease in fertility. The significance of these facts for development policy need not be spelled out.
THE VALUE OF CHILDREN AND CHILDREN AS UNITS OF PRODUCTION

Most children are highly valued in traditional societies. Too many children have not, until recently perhaps, been perceived as a problem. In many societies, "excess" children are lent or given to relatives who have none, or who have an insufficient number. While methods to control fertility under certain circumstances are available almost universally, methods to induce fertility or fecundity are more highly institutionalized. Fertility and fecundity are associated with prosperity, plenty, social solidarity, emotional well-being and happiness. Barrenness is cause for rejection, despair and unhappiness and associated with witchcraft (Molnos, Richards and Reining).

Contraceptive practices are rare before the birth of the first child to a married couple—especially when in many places modern methods of contraception are believed to make one sterile (Papanek, Poffenberger). According to Ssennonyong, in Kenya it is common for some young men to assure that their wives are pregnant before they marry. New brides in the Philippines, Indonesia, the Subcontinent and Africa often want children immediately to prove their worth as a wife, and the bridegroom wants children in order to contribute to the expansion and extension of his lineage or tribe and to prove that he has truly come of age. In Africa God's love for a woman is reflected in her having many children (Molnos). In Java they say "If you are happy in your heart you will have children" (H. Geertz).

Molnos writes that the "functional problem" for an East African man who has no children "or a dangerously small number, namely one, is to die without descendants." Man and his lineage are extinct without descendants. Furthermore, everyone perceives the value of siblings. This is especially true where brothers and sisters form strong emotional and economic bonds and where in parts of Africa the child often turns to his mother's brother rather than his father as his sponsor or advisor.

The desired number of children in the developing countries ranges from at least four (preferably with at least two males) in India and
Pakistan and some urbanized folk elsewhere, to eight or nine in the Philippines (Concepcion) and among women in rural Ghana (Peel).

In agrarian and traditional urban societies, children work from an early age. Benjamin White writes that in Java children are productive starting around six and that children "do more work in large families in all types of activities than do those in smaller families." Thus they contribute to their own survival in a chicken-and-egg process. If there were not extra mouths to feed they would not have to work. Children therefore become necessary units of production because they exist. There is little evidence in the literature to suggest that a decision is made to bear children because they are "units of production." The social, cultural and economic setting is conducive to large families. Children are more likely to be thought of in economic terms in decisions concerning contraception. It is very likely also that such perceptions were not conscious until modern family planning services became available.

Having said all that, however, children are thought of as units of production among other things. According to Arnold et al. this is especially true of rural folk more than among urban dwellers. In a survey performed in Korea, the Philippines, Thailand and Japan, he says that "the emotional satisfactions of having children happiness, love, companionship—were ranked first in importance by a substantial percentage of respondents in all countries, particularly urban respondents. By contrast, economic benefits and security were more often given first ranking by rural respondents." The transitional urban poor "showed a higher sensitivity to costs" of children than the rural people or upper class urban people. Big families in the Philippines appear to be especially valued. In a study of attitudes it was found that in the Philippines the word "smallness" pertaining to a family has no linguistic meaning. Families are by definition large and that five to eight children were considered a good number "with variations from eight to ten" (Concepcion).

Arnold reports that "middle class respondents in the Philippines have greater importance to economic benefits and security than did middle class
respondents in other countries." A high value is placed on children in the Philippines in all categories including social, economic, and psychological. "Relatively few respondents, except for Filipinos, rated the enjoyment of babies as an important reason for wanting another child" (Arnold).

Attempts to measure the economic contribution of children have shown that in at least Java and Nepal large families are more productive per capita than are small families. Benjamin White says that, "Children from large families tend to be not less but more productive than those in small families." In a paper by Nag, Peet and White it is stated that:

The microeconomic theory of fertility recognizes children's work input to the household productivity as a factor influencing fertility behavior of parents in peasant societies, but the relevant data available so far have been used to show that 'work-input by children under 15 in peasant agriculture is quite limited' and that 'children have negative economic value in peasant agriculture.'* The data presented in this report tend to contradict these conclusions. They demonstrate that the work-input by children under 15 in the Javanese and Nepalese villages is quite substantial. They also suggest that at the current rate of reproduction and under the present circumstances, children most probably have net positive economic value to their parents in these villages, aside from the old-age security provided by them to their parents.

The differences in socioeconomic status between men and women is reflected in their respective perceptions regarding the value of children. Whereas the men of Africa and Asia were more likely to stress the expansion of the lineage and the importance of boys for funeral rites and ancestor worship, the women were much more pragmatic. They tend to stress the importance of children for economic well-being. In Gujerat, according to Poffenberger, the men were more willing to consider birth control if they had three girls and no boys than the women. Girls, although helpful and loving, would after all go to another household and provide that household with support services and children. A woman's sons in both India and Pakistan are the ones to assure her a relatively comfortable

old age. This is especially so since she is likely, after a certain age, to survive her husband. Only as the matriarch of a household of sons, daughters-in-law and grandchildren does she truly come into her own.

In Africa, the woman and her children make up the autonomous economic unit—especially in polygynous households. Often the most supportive adult male is not the husband. The African woman also, therefore, is more likely to perceive of her children as economic support and old age security than are the men.

Thus, the sexual differences in the perceptions of the value of children run parallel, as do the socioeconomic functions of the sexes. These perceptions and functions, of course, are complementary and until now have served traditional agrarian societies quite well.

Evidence is accumulating, however, that modernization, communication, industrialization, education and concomitant changes in economic activity are influencing attitudes and changing perceptions regarding fertility. Angela Molnos, in her study of East Africa, says that 50% of the women she studied said that children create work and are therefore burdens. 20% of the women said children help mothers to do the work. Molnos writes that "The two types of motives seem to contradict each other. But, in fact, the positive ones reflect the traditional and the negative ones the modern situation. A relatively high number of ambivalent reactions (21.6%) indicate the conflict between old values and present requirements" (Molnos). Furthermore, she says that urbanization and the separation of men and women has brought about a "diminution of responsibility in many men" and left women and children to struggle on their own. She writes that children are more of a burden in the city and that the African man realizes this, especially if he wishes to educate his children. The high cost and the value of education for a child and his family seems to be major concerns among many urban and a substantial number of rural people in the developing countries. In Africa several sons in one family will work so that one may go to university. In Indonesia Papanek writes that "The women's emphasis on education in their own lives reflects the same
values associated with problems of gaining admission for their children to a good school and anxiety about being able to pay tuition."

In summary then, children contribute to family and clan immortality, emotional well-being, affection, economic and psychological security, and have usually been perceived as direct benefits to the family and to the parents. But these perceptions are changing—rapidly in the urban setting and slowly in the countryside.
CURRENT SOCIAL CHANGE AND IMPLICATIONS FOR FERTILITY

The structuralists maintain that while traditional modes of social and economic organization are operative, large families will continue to remain the ideal and that anything short of a "radical restructuring" of society will prevent the successful implementation of fertility control programs (Epstein and Jackson 1977).

Where peasant and pre-peasant societies exist untouched by outside influences, the evidence suggests that this may be true. However, there are few such societies left anywhere in the world today. Few societies are untouched by attempts to upgrade agriculture, education, or public health. Roads and radios have closed to some degree the information gap, and it is the rare village in Asia or Latin America, at least, if not also Africa, which has not heard about family planning.

The Poffenberger studies of India present a mixed bag of evidence whether people in the studies are generally for or against family planning. Sometimes their attitudes are associated with the age of the respondent but at other times with the reality of the economic environment and the range of options. There are indications that young married couples are demanding more say in their own lives and they are thinking about limiting their family size.

Many of the old saws about the reasons for resistance to family planning—children as old age security, machismo, the interfering mother-in-law—though legitimate in many instances, have often been exaggerated. Often the resistance to family planning services on the part of potential clients relates to insensitivity of the clinic personnel, inaccessibility of services, or misunderstandings about the effects and methods of contraception by the clients and the clinicians. Polgar, in referring to the "epidemic" of clandestine abortions in Puerto Rico, writes "What cultural blocks exist at the level of government bureaucracies, medical personnel or top decision makers?" (1971)
This is not to say that the "ideal" family with two children will soon become the norm. However, change is taking place—especially among transitional and marginal people. Migrants to the city or even those setting up households in locations different from their native villages exhibit changed fertility behavior as part of their new perceptions or new ways of life. Susan Scrimshaw, in a study in Guayaquil, writes that migrants quickly adapt their fertility patterns to achieve upward mobility; they perceive advantages in having fewer children, and also recognize the importance of education for the children they have. She studied the fertility of non-migrant women married to migrant men, migrant women married to non-migrant men and non-migrant women married to non-migrant men. She writes:

What is so surprising is that even those migrants who married while in the village show no significant differences in fertility from the other three groups in the city, including long term urban dwellers when the differences in length of union are adjusted for. That is very fast adaptation indeed, particularly because the data from the rural villages show a mean family size of several children more than the urban family-size mean.

In a comparative study of Portuguese and non-Portuguese Brazilians, Georgio Mortara writes that the relatively low cumulative fertility rates of Brazilian Portuguese women can probably be attributed to the "concentration of many of the Portuguese immigrants in the large towns, where social conditions are not conducive to high fertility."

Ann Van Dusen writes that "The family planners [of suburban Beirut] tended to be recent in-migrants from other parts of the country, and they frequently complained of their outsider status." Karam Elahi writes that among the Pathans of the Northwest Frontier of Pakistan who are forced into the towns as land is splintered through the system of Muslim inheritance, children are beginning to be perceived as burdens in the nuclear family households.

Ssenyounaga, writing of Kenya and the "road side elites," says that "movement away from their paternal compound to establish new homes along or near the road" shows changed perceptions of the value of children. This is so partly because "Their close connections with the
mortality reducing institutions. . . coupled with their superior technology, arms them more efficiently to deal with and minimize the fears 'parental death.' (1977) (Unfortunately, they often wait until after they have had nine or ten children before attempting contraception!)

There are also indications that receptivity to family planning is greater among marginal people than among middle or upper socioeconomic groups. Marginal people enjoy neither the socioeconomic security of the established castes nor are they constrained by expected caste behavior. For instance, Poffenberger says that communication between husband and wife among the lower castes in Gujerat village is greater than among the established castes. My own work in a Pakistani village revealed a much greater use of the IUD among marginal women after several of their children had survived the precarious infant and toddler stages. This is consistent with Goode's comment in another context that "when industrialization begins, it is the lower-class family that loses least by participation in it and that lower-class family patterns are the first to change in the society."

Whenever people opt for alternatives to the traditional mode of life—whether in employment, residence or family organization, they have already set in motion new ways of looking at things. To the degree that they have changed their perceptions, they are usually equally as keen to learn about, it not devour, other alternate options. It is because they can do nothing but improve their lives compared to their old ones.

CONCLUSIONS

The Chi and Harris study of women, employment, literacy and the proximity of family planning services, showed that the closer the family planning services and the higher the literacy rate among the women, the greater the use of contraception. Chi and Harris "support the interaction position that a higher level of education in connection with a higher degree of family planning exposure would generate greater use of contraception." They suggest an alternative to the "family planners vs. the structuralists" in the population program debate and propose that since family planning programs have very limited success
in areas of high illiteracy, in efforts to reduce fertility in such areas a "better alternative" toward the same end might be adult education programs.

It is certain that what is suitable in the way of programs affecting fertility for one segment of the people of developing countries may not be suitable for others. There are obvious differences in perceived needs between the countryside and the city, between men and women, between literates and illiterates, between male-oriented and female-oriented societies, between entrenched traditional peasant societies and wage earners, between urban middle classes and urban poor. Market research surveys should indicate quite clearly the most appropriate programs for particular settings.

There are roughly three levels of receptivity or non-receptivity in the literature. The most resistant are those who do not perceive it as an advantage in any way to limit fertility and who are furthermore threatened by the very idea. There is then the intermediate level consisting of those who are beginning to perceive that excessive fertility is a burden, but who are confused or inept regarding contraception. And finally, there are the urbanized, transitional, or marginal who perceive already the benefits of contraception.

For the last group, courteous and efficient family planning services will no doubt make the greatest impact on fertility. For the confused, it is obvious that more information and consciousness-raising would be most appropriate and also, of course, family planning services. For the most resistant group, non-family planning-specific programs would probably be most effective in reducing fertility in the longer term.

The Cl.1-Harris proposal has obvious significance for long-term population strategies. There is certainly a need for appropriate and timely family planning services everywhere. However, it is quite apparent that the cost effectiveness of such programs depends upon the readiness of the potential clients for such programs. Where they are not ready, non-family planning-specific but fertility-related programs may be more effective including community development, women's welfare programs, and education.


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EXPERTS INTERVIEWED IN WASHINGTON
BY
Jason Finkle and Kenneth Godwin
July 17-18, 1978

DAVE DENMAN
Population Officer
Latin America Bureau
A.I.D.

PENNY FARLEY
Desk Officer, Costa Rica
Latin America Bureau
A.I.D.

MARSHALL GREEN, Ambassador
Chairman, Interagency Task Force
on Population Policy
Co-ordinator for Population Affairs
Bureau of Oceans and Internation
Environmental and Scientific Affairs
State Department

MARGARET KRANZ
Population Division Director for
Latin America and the Caribbean
A.I.D.

BOB LAYTON
Population Officer
Development Support Bureau
Asia Bureau
Office of Population
A.I.D.

KEYS MAC MANUS
Deputy Director
Office of Technical Support
Near East Bureau
A.I.D.

RICARDO MORAN
Population Analyst
Population/ Human Resources Division
World Bank

EMILINE OTT
Social Science Analyst of the
Population Policy Division
Development Support Bureau
Office of Population
A.I.D.

JOHN PEABODY
Population Adviser
Asia Bureau
A.I.D.

BARRY RILEY
Desk Officer for Equador and Peru
Latin America Bureau
A.I.D.

LEONARD ROBINSON
Assistant Director
Africa Bureau
A.I.D.

STEVEN SINDING
Population Adviser
Studies Division
Office of Evaluation
Bureau for Program and Policy
Coordination
A.I.D.
(Now -- Population Division
Director Asia Bureau
A.I.D.)

JOHN SULLIVAN
Assistant Administrator
Asia Bureau
A.I.D.

SAMUEL TAYLOR
Population Officer
Latin America Bureau
Office of Population
A.I.D.

There were also unscheduled and less formal interviews with other A.I.D. staff
and World Bank staff.
ORGANIZATIONS
Where Experts Were Interviewed In
New York City
by
Jason Finkle and Kenneth Godwin
July 20-21, 1978

FORD FOUNDATION
    Several Officers

POPULATION COUNCIL
    Various Officers

UNITED NATIONS FUND FOR POPULATION ACTIVITIES (UNFPA)
    3 Members

INTERNATIONAL PLANNED PARENTHOOD FEDERATION (IPPF)
    1 Staff Member
Political-Administrative Determinants of Family Planning
Program Performance
Questions for Washington & New York Interviews
J.L. Finkle July 17-21, 1978

I. The Political and Administrative Systems

1. Do you feel that a country's political system affects its family planning program performance?

2. Of the countries you have observed, where was political leadership most committed to family planning?
   a. What does "commitment" mean; what evidence or behavior do you have in mind when you speak of high commitment?
   b. What caused, or lay behind this high level of commitment?

3. Of the countries you have observed, where was political commitment to family planning the weakest, or even the most antagonistic?
   a. What behavior or evidence do you have reference to here?
   b. What caused, or how do you explain this low level of commitment?

4. How does a country's administrative system affect its family planning program?

5. Of the countries you have observed, which have had the strongest overall administrative system?
   a. What evidence do you have in mind for a strong administrative system?
   b. What causes a strong administrative system?

6. Of the countries you have observed, which had the weakest administrative systems?
   a. What evidence do you have in mind? Where does corruption fit in your conception of strong and weak administrative systems?
   b. What causes weakness in an administrative system?
II. External Involvement in Political and Administrative Systems

1. How much, and how, can an external organization (like yours, or like AID) become involved in attempting to increase political commitment?
   a. What forms of leverage exist, and which should or should not be used?

2. How much and how can external agencies (such as yours or AID) become involved in strengthening a country's administrative system?
   a. What forms of leverage exist and should or should not be used?

III. Technical FP Personnel Sensitivity to Political Realities

1. In countries you have observed, how much contact was there between the technical FP personnel and
   a. US Embassy political officers?
   b. Non-government, journalist, political observers? (indigenous or foreign)
   c. Host government political leaders?
   d. In these cases, was there difference in contacts between technical officers at different levels of the agency?

2. How sensitive do you feel technical FP types are to political conditions, and especially to the political implications of FP programs?

3. Can you identify major experiences in your agency where sensitivity to political conditions and implications of FP helped to produce distinct successes in program effectiveness?

4. Can you identify major experiences in your agency where failure to be sensitive to political conditions and implications led to major fiascoes in FP?

IV. Relations Between Washington and the Field

1. What guidance does Washington (or New York, etc.) give to field people?
   a. In what areas is guidance given?
   b. Is any guidance given specifically in political areas?
2. Have you observed any ways in which Washington/New York has obstructed field operations or field personnel?

V. Dynamics

1. In all of the above areas, have you observed major changes in performance? For example, during the 1960's Pakistan shifted dramatically from high to low in political commitment, and Indonesia shifted from low to high. Have you seen any other examples of this type of shift in

a. Political commitment
   1. What caused the shift?
   2. What impact did it have on FP?

b. Administrative strength or weakness?
   1. What caused the shift?
   2. What impact did it have on FP performance?

c. External involvement in political commitment
   1. Cause?
   2. Impact?

d. External involvement in administrative reform?
   1. Cause?
   2. Impact?

e. Political sensitivity of FP technical staff?
   1. Cause?
   2. Impact?

f. Relations between HQ and the field?
   1. Cause?
   2. Impact?
VI. Summary and Prescriptions

1. Overall, what do you consider are the most important determinants of family planning program performance?

2. What do you feel AID could do to increase its own capacity to give effective assistance to FP programming?

3. What can be done in the future to avoid past mistakes and to ensure success?
APPENDIX 4

SOCIO-ECONOMIC CHANGE AND FAMILY PLANNING:
THEIR IMPACT ON FERTILITY
SOCIOECONOMIC CHANGE AND FAMILY PLANNING:
THEIR IMPACT ON FERTILITY

Battelle PDP Working
Paper No. 1

William Paul McGreevey¹
and
Barbara von Elm²

¹Battelle Population and Development Policy Program
²International Center for Research on Women

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April 1979

We wish to thank Nancy Birdsall, Ramon Daubon, Dennis DeTray, David Mutchler and Steven W. Sinding for comments on an earlier draft. Several of the authors cited made available their work prior to publication for review in this paper; we regret and accept responsibility for any errors arising from further revision of their work.
PREFATORY NOTE

In June 1978 AID's Evaluation Office, a part of the Program and Policy Coordination Bureau, asked Battelle PDP for

a report on the most recent research findings regarding the socioeconomic determinants of fertility giving particular emphasis to empirical, quantitative studies which utilize multivariate analysis techniques and which attempt to disaggregate the explanatory power of socioeconomic and family planning program variables....It will not only report on the findings of individual studies; it will also evaluate the overall quality of the studies and the confidence which can be placed in the relationships which have been discovered.

Barbara Von Elm, Research Associate, International Center for Research on Women, prepared the annotations, gathered much of the bibliographical material and data for several of the tables. She supervised preparation and editing of a first draft.

That draft, submitted to Dr. Steven W. Sinding on 30 August, benefited from his comments. Equally helpful were the comments of Nancy Birdsall, Ramon Daubon, Dennis De Tray and David Mutchler. None of these friends and colleagues is responsible for remaining errors and opinions.

William Paul McGreevey, Director
Battelle PDP, Washington, D.C.
1 October 1978.
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<td>21</td>
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<td>Table 7</td>
<td>Length of Closed Pregnancy Interval Regressions, Malaysia.</td>
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</table>
I. Abstract

The development versus family planning debate has changed. Protagonists have moved to a middle ground of mutual recognition that the reinforcing, joint effects of both supply of services and expanded demand though socioeconomic change help bring down fertility in the developing countries.

Debate now centers on tougher budgetary questions. How much for service delivery? How much for measures beyond family planning?

Scientific research pertinent to the debate has changed also. A few household data sets for developing countries have been analyzed to identify the relative impact of socioeconomic factors and family planning in causing fertility decline. They show a significant role for family planning in Malaysia and Taiwan, less significant in rural Philippines and no discernible impact in Guatemala. These differences in impact reflect differences in service availability. Fertility differentials with respect to wife's schooling had expected negative correlations in Taiwan and the Philippines, even when taking the family planning variable into account. The Guatemalan data show higher fertility for more educated women, but other factors - missing variables in the analysis - could well alter that unexpected result.

These micro-data results are consistent with both service availability and socioeconomic change hypotheses about the determinants of fertility, i.e., the findings do not help us to reject one hypothesis in favor of another.

International cross-section studies emphasize the jointness of effect of family planning and social setting. Accounting techniques developed to show the role of family planning programs demonstrate their importance without in any way reducing the role of socioeconomic change.

The findings do not lead readily to policy conclusions relevant to funding allocations. They do not address the issue of what combination of programs to reduce fertility would be most cost-effective.

As the policy debate has centered more sharply on resource-allocation decisions, it should now be possible to clarify the information needs of policymakers and to establish guidelines for future applied research.
II. The Debate: Has it changed?

The debate regarding the relative effectiveness of specific family planning expenditure versus general development expenditures is well known to population and development specialists. What contribution has scientific research to make to the rejection of alternative hypotheses relevant to the debate?

A. Is development the best pill?

Ansley Coale, in a 1978 review of population change in Mexico over the past quarter century, notes that the controversy over the demographic transition, the effectiveness of family planning, and the role of socioeconomic change in effecting lower fertility has altered little since his 1958 book.* This is not quite true. AID's Office of Population, for example, has acknowledged, both in its pattern of expenditures and in unofficial papers given at professional meetings, that service delivery alone is not its sole business. For its part, the academic social science community now accepts family planning as more than an epiphenomenal feature of demographic transition theory. The debate is no longer on an either/or level; it centers less on effectiveness of alternatives than on their cost-effectiveness in different contexts, i.e. on specific resource allocation decisions.

The Congress earmarks funds under Title X of the Foreign Assistance Act specifically to population. Over the years the Office of Population (POP) has sought to increase its expenditures under Title X on those activities which expand and facilitate the availability of modern means of contraception. The POP budget allocation process encapsulates debate as to whether too much goes to supplies and too little to activities other than family planning. A considerable amount of POP funds—nearly $100 million in a decade—went for population research.

In Table 1 appear summary totals of actual and estimated project expenditures,1965-77, according to major categories developed for this paper. The project descriptions on which Table 1 is based are not very detailed, and many large projects have multiple purposes. Most research projects, and other projects with major research components, are listed in the appendix by the category established here.

Table 1 shows only the distribution of funds which could be considered as a contribution to research. Over the period 1965-77, POP expended roughly

Table 1
DISTRIBUTION OF AID POPULATION RESEARCH FUNDS 1966-77
BY RESEARCH CATEGORY

<table>
<thead>
<tr>
<th>Research Category</th>
<th>Thousand $</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. RESEARCH: FAMILY PLANNING AS A DETERMINANT OF FERTILITY</td>
<td>1,637</td>
<td>1.72</td>
</tr>
<tr>
<td>II. RESEARCH: IMPACT OF SOCIOECONOMIC STATUS ON FERTILITY</td>
<td>1,038</td>
<td>1.09</td>
</tr>
<tr>
<td>III. RESEARCH: IMPACT OF FAMILY PLANNING AND SOCIOECONOMIC STATUS ON FERTILITY</td>
<td>9,611</td>
<td>10.12</td>
</tr>
<tr>
<td>IV. FAMILY PLANNING EVALUATION</td>
<td>3,298</td>
<td>3.48</td>
</tr>
<tr>
<td>V. INSTITUTIONAL SUPPORT, RESEARCH AND TRAINING</td>
<td>3,680</td>
<td>3.88</td>
</tr>
<tr>
<td>VI. INSTITUTIONAL SUPPORT, RESEARCH RELATED</td>
<td>22,112</td>
<td>23.30</td>
</tr>
<tr>
<td>VII. OPERATIONAL ASPECTS OF FAMILY PLANNING PROGRAMS</td>
<td>13,453</td>
<td>14.17</td>
</tr>
<tr>
<td>VIII. IMPROVED METHODS OF FERTILITY REGULATIONS</td>
<td>35,734</td>
<td>37.65</td>
</tr>
<tr>
<td>IX. CONSEQUENCES OF HIGH FERTILITY</td>
<td>4,354</td>
<td>4.59</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$ 94,917</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

Source: AID (1978), project summaries (compiled by Miriam Labbok, Research Division, Office of Population). For details of projects see Appendix table.
one billion dollars; thus the research component was just under ten percent of total funds allocated. (Ravenholt 1978, Table 1).

Within that approximately ten percent devoted to research, Table 1 shows the distribution to nine major purposes. Several of the larger projects which make up the elements of the table were multipurpose, particularly the large projects with the U.S. Census Bureau, the World Fertility Survey, the East West Population Institute, and GE-TEMPO. Those projects gathered demographic data, have analyzed those data and have presented results sometimes narrowly geared to program evaluation, sometimes broadly aimed at assessing the impact of various factors affecting or affected by fertility change. The difficulty of assigning components of these multipurpose projects to one or another of the categories pertinent here may lead to some differences of interpretation as to how much money has been devoted to research on socioeconomic factors, on family planning, and on the two combined. Nonetheless, some general patterns do emerge.

Of the total research budget, about 10 percent (category III) went to research which takes into account both family planning and socioeconomic determinants of fertility. The largest component thereof is the $8.3 million spent on the World Fertility Survey. WFS has proved to be a rich resource for many research purposes.*

Relatively little has been spent on other socioeconomic and family planning research which would ferret out the relative impact of those variables on fertility change. Most research-related expenditures of the Office of Population have gone to improved methods of fertility regulation (37.65 percent).

Data in Table 1 aggregate spending behavior over more than a decade. Projects examining the impact of family planning and socioeconomic factors have almost all begun recently.

Earlier research efforts concentrated on the consequences of rapid population growth, on actual and expected rates of family planning program expansion (as measured by new acceptors, for example) and only secondarily on the demographic impact of family planning and socioeconomic change. An

*WFS has left out, in many country reports, such essential information as individual and family income, infant mortality, breastfeeding practices and details of contraceptive use and availability, all factors which may be important in multivariate analyses of the determinants of fertility.

No survey can, or should, try to do everything. The greatest utility of WFS may prove to be its descriptive content on fertility trends rather than its potential to establish fertility differentials. If the quality of the descriptive data were marred by inclusion of questions not easily understood by interview subjects (the meaning of 'income' is sometimes unclear in developed countries), then it would not have been wise to include inquiries into some socioeconomic factors.
addition to the Foreign Assistance Act in 1977 was Section 104d which calls for analysis of the impact of all foreign assistance on population growth. Fulfillment of the requirements of that provision will necessitate much more analysis, and hence a greater expenditure of research funds, on the determinants of fertility, particularly as they are influenced by public programs.

In an effort to adopt a rational strategy for support of social science research on population, the Office of Population has recently taken the position that studies of the determinants of fertility can be done usefully only under conditions in which supplies of modern, technological means of fertility control are fully available. Most poor countries do not have "full availability" (i.e., conditions under which most people could use pills, condoms, or sterilization procedures if they so wished). This condition virtually precludes research on the determinants of fertility except among those groups in which village and household distribution programs are already ongoing.

In the argument over which research to support, this generic condition becomes the basis for regarding many otherwise competent proposals for studies of the determinants of fertility as technically inadequate. The labeling of such studies as technically inadequate is likely to be interpreted as a dilatory tactic to freeze out research efforts that might indicate fertility declines in the absence of full availability of modern contraceptives. Since modern contraceptives are usually most available where prior demand for them exists anyway, the restriction certainly limits research to areas where declines are most likely, and delays understanding of circumstances in which high fertility persists. These observations add up to two conclusions:

(a) It is important to know, insofar as one can, what role family planning programs and socioeconomic change play in fertility change. Scientific research may help policy makers to know this.

(b) Even a "correct" apportioning of a given country's fertility change to these two factors would not resolve the policy debate outlined here. Certainly expanded family-planning availability will result in lower fertility. The socioeconomic change, induced in part by development programs, will also yield fertility change. The policy-maker still needs to know what balance of expenditures to make between family planning programs and development programs of various kinds in order to achieve the most cost-effective blend of programs. One manifestation of the search for cost-effectiveness is the effort to identify selective interventions outside the traditional realm of family planning which could result in lower fertility (Ridker 1976).

The debate has moved to a higher plane partly as a result of prior research efforts. What then are the questions and research approaches to which we should now turn?
B. What does science say?

Gunnar Myrdal reminded us that social science cannot be value-free. Since values and beliefs necessarily muddy perceptions of real relationships, he advocated a clear and open statement of those values.

One suspects that the heat surrounding the debate arises from deep antagonisms between persons' values (about the value of children) and beliefs (about the efficacy of scientific method). In such an atmosphere scientific method must proceed with the effort to reject one or another of alternative hypotheses about the causes of fertility decisions.

Scientific procedure is particularly difficult for the following reason:

An evaluation of the impact of family planning on fertility must assess what caused an event not to occur. Acceptable evaluation analysis requires that the analyst establish with a high degree of certitude what would have happened without, as well as what happened with, the family planning program (McGreevey & Birdsall 1974, p. 43).

Analysis of program effects -- and attribution of cause -- requires comparison of reality with a hypothesized alternative to reality that is a matter of judgement. What would have happened in the absence of family planning cannot be made a subject of scientific verification. That methodological problem plagues all efforts to determine cause.

It guarantees that debate must go on as long as the question is interesting to the protagonists.

The development-family planning debate has changed. As we will see below in Section III statistical studies show that a proportion of the variance of fertility across time and space can be attributed to family planning, a proportion can be attributed to socioeconomic characteristics (or change), and the greatest part (in almost all studies which we have checked) can be attributed to the presumed interaction between the two kinds of variables. In effect the conclusion is inconclusive with respect to any such relevant policy questions as:

- Are we spending enough (or too little or too much) on family planning service delivery?
- Should more Title X population money go to research, influencing policy, raising women's status and incentives for fertility reduction?

Research does not answer these questions because it is still too often cast in the outdated, either/or mold that guided research two decades ago and dominates it still.

In 1974, one of the authors of this paper concluded an agenda for research with an indication of the need to develop a hierarchy of research findings
addressed to public policy (see Table 2). Little progress on that agenda has been made. Progress in developing policy-relevant research would have meant that some studies at Levels 6 and 7 of the table would have to have been published. Such studies would demonstrate the relative cost-effectiveness of alternative packages of public programs of family planning and socioeconomic change.

One reason for the lack of progress is that the move from international cross-section data to individual-level data in such countries as Guatemala, Malaysia, Taiwan, India, and the Philippines has increased doubts about the efficacy of statistical techniques to explicate the determinants of fertility behavior.

The proportion of the variance explained in individual cross-section data (the \( r^2 \) value) is almost always very much lower than is observed for any aggregated data. Anomalies about the relationship of fertility to female schooling and labor-force participation sometimes show up in individual-level data which cast doubt on the underlying theories from the New Home Economics on which many of the contentions about the demographic transition and the role of economic change rest.

We know now that explaining the fertility decision is extremely complex. In 1974, four works collected partial correlation coefficients from a number of studies which purported to show the elasticity of fertility with respect to changes in such variables as literacy, labor force participation, age at marriage, and income and its distribution (King 1974; Schultz 1974; McGreevey and Birdsall 1974; Williams 1974 -- all cited in McGreevey and Birdsall). Four years later investigators seem much more cautious in their conclusions. Some of the studies mentioned below present the coefficients from regression equations, but their texts emphasize the sign of coefficients, the t- and F-statistics and their statistical significance much more than the magnitude of coefficients -- or the presumed elasticity of response of the dependent to one or more independent variables. Thus Science has in a sense backed off from Level 5 in the hierarchy in Table 2 in favor of a more thoughtful return to Level 4, Causation.

Science is not answering the questions of 1974 any better today than it was then. To some extent the questions themselves have changed, perhaps for the better. Scientific research in population may today be doing a somewhat better job of articulating the internal concerns of demography as a science: the Journal Demography looks, if anything, more scientific, with a healthier sprinkling of mathematics and abstract reasoning in 1977 than in 1973. But the capacity to address policy issues seems to have lessened rather than increased. Having stated that general view, we turn to specific studies, reviewing first the latest development in (and possibly the last gasp of) international cross sections.
### TABLE 2

A Hierarchy of Research Findings Addressed to Public Policy

<table>
<thead>
<tr>
<th>TYPE</th>
<th>CHARACTERISTIC</th>
<th>EXAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Observation</td>
<td>Awareness of a relationship between fertility and some other variable without specific examination of the nature, direction or strength of the relationship.</td>
<td>Many non-empirical statements exist: none were examined for this review.</td>
</tr>
<tr>
<td>Correlation</td>
<td></td>
<td>Harrington (n.d.)</td>
</tr>
<tr>
<td>3. Multiple</td>
<td>Findings of relationship between multiple ecological, personal and social characteristic and fertility which may suggest targeting procedure for population policy.</td>
<td>Adelamn (1963)</td>
</tr>
<tr>
<td>Correlation</td>
<td></td>
<td>Heer (1966)</td>
</tr>
<tr>
<td>4. Causation</td>
<td>Demonstration of correlation plus reasoned argument for the direction and scope of causation of such form as to indicate that a given policy act would produce fertility change in a predictable direction.</td>
<td>Gendell (1967)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hassan (1973)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mueller (1972)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rosen &amp; Simmons (1971)</td>
</tr>
<tr>
<td>5. Elasticity</td>
<td>Given correlation and causation an elasticity offers a specific prediction that a stated percentage change in an independent variable would produce a given percentage change in fertility.</td>
<td>Cain &amp; Weininger (1973)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Williams (1973)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T. Paul Schultz (1973)</td>
</tr>
</tbody>
</table>
### TABLE 2 (cont.)

<table>
<thead>
<tr>
<th>TYPE</th>
<th>CHARACTERISTIC</th>
<th>EXAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Expenditure</td>
<td>At this level of analysis one could predict that a stated percentage change in public sector expenditure would produce a predicted fertility reduction.</td>
<td>None reviewed</td>
</tr>
<tr>
<td>7. Economizing</td>
<td>Research demonstrating that a given balance of resources between sectors could not be replaced by any alternative, more cost-effective mix of expenditures.</td>
<td>None reviewed</td>
</tr>
</tbody>
</table>

**NOTE:** Full citations may be found in McGreevey and Birdsall (1974).
III. International cross-sectional studies

Parker Mauldin and Bernard Berelson combine a careful eye for detail and scientific accuracy, a sense of policy relevance, and a willingness to make their scientific work accessible to the policy community. In their latest work (Mauldin and Berelson 1978) they follow up on an earlier effort of Freedman and Berelson (1976) to assess the impact of family planning and social setting on fertility. As an heroic simplification, they develop composite indices of supply of family planning services and demand for them (and indirectly for children) in such a way as to permit allocation of observed international fertility differentials and changes in fertility, 1965-75, to the supply and demand blades of the scissors which cut fertility. In the course of their work they reviewed similar studies consistent with their own. The work emphasizes the jointness and interactions between social setting and family planning as fertility determinants.

For the bottom line on the possible causes of fertility reduction, Mauldin and Berelson break down the Crude Birth Rate (CBR) into three components: age structure, marital patterns, and marital fertility (see Table 3). The authors attribute a 5 to 10 percent rise of fertility to a decline in age structure and a 35-45 percent decline in fertility to marriage delay. Declining marital fertility accounts for 60-75 percent of the CBR decline 1965-75. They attribute 40-45 percent of the marital fertility decline to modernization, with a 5 percent rise due to reduced breastfeeding. The family-planning program effort gets credit for a fifth of the fertility decline; and a quarter of population change remains unexplained.

In short, about 65 percent of the CBR decline from 1965 to 1975 is due to social setting effects; about 15-20 percent is a function of program effect.

Their summary, however, does not in all respects reflect the findings of the various statistical analyses they performed and which are summarized in Table 4. For example, the multiple regressions show that while social setting has a high association with CBR declines ($r^2 = 0.66$), the addition of program effects into the equation a further increase of the $r^2$ to 0.83. Most of the association with fertility declines is joint; the net effects of program effort and social setting taken singly are only 0.17 and 0.05, respectively.

Path analysis shows that while social setting has a small direct effect of 0.23, its indirect effect via program effort is larger (0.44), giving it a total effect of 0.67. Family planning programs appear to be significantly influenced by social and economic development. However, this analysis also indicates that the total effect of program effort is 0.89, which is greater than the social setting effect by a 4:3 ratio.

Analysis of interaction effects indicates that the development variables are less closely associated with fertility declines prior to organized
Table 3

Mauldin and Berelson's Bottom Line on the
Social Setting and Family Planning Impact upon Fertility

<table>
<thead>
<tr>
<th>Variable</th>
<th>Age structure</th>
<th>Marital patterns</th>
<th>Marital fertility</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social setting</td>
<td>25 percent</td>
<td>40-45 percent</td>
<td>60-65 percent</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>— 5 percent lactation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>35-40 percent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program effort family planning</td>
<td></td>
<td>10-15 percent</td>
<td>15-20 percent</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>+ 5 percent spillover</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>= 15-20 percent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>legal sanctions and organized pressure</td>
<td></td>
<td>5-10 percent</td>
<td>5-10 percent</td>
<td></td>
</tr>
<tr>
<td>Consequence of earlier demographic trends</td>
<td>—5-10 percent</td>
<td></td>
<td>—5-10 percent</td>
<td></td>
</tr>
<tr>
<td>Unknown</td>
<td>—5-10 percent</td>
<td>10-15 percent</td>
<td>15-25 percent</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>35-45 percent</td>
<td>60-75 percent</td>
<td>approximately 100 percent</td>
<td></td>
</tr>
</tbody>
</table>

family planning programs than after their inception. This finding provides further evidence of the importance of family planning for fertility reduction.

The authors are ambivalent about their findings because of inherent inaccuracies of the data. They acknowledge the inability of available methodological and statistical techniques to provide precise figures. Given these caveats, however, Mauldin & Berelson do feel secure in these conclusions:

- Program effort and social setting are more effective jointly;
- Program effort makes a substantial difference, not merely a trivial one.

"For policy purposes," they write, "given the wide disparity in developmental and family planning funding, great precision is not required for economic judgement as to policy" (p. 123). Presumably they mean to say that the money spent on family planning programs is not too much but too little. Few countries allocate even one percent of central government budgets to family planning; a shift of all family planning budgets to schooling would yield but a trivial increase in number of schooling-days made available to children (Gwatkin 1977).

But who in the debate suggests a cut in money for population programs? The issue is: should funds be transferred from service delivery to other uses which might have an even greater impact on population growth? Their conclusion is not altogether pertinent to the debate.

Mauldin & Berelson's analysis may suffer from "the problem of the missing variable," i.e., the possibility that some factor excluded from the analysis is fundamental in explaining observed behavior. Their social-setting variable includes GNP and GNP per capita but not national income distribution. This factor may be important given that increases in national income will not affect fertility unless they reach the poorest sectors (World Bank 1974). Using World Bank statistics for 32 countries with available data, we found a positive relationship (+ 0.34) between level of fertility in 1975 and percentage of national income received by the highest 5 percent of income earners:

\[
\text{Fertility 1975} = 2.8 \text{ INSHARE} - 86.3
\]

\[
N = 32 \\
r = + 0.34
\]

The relationship is negative for the decline in fertility, 1965-75:

\[
\text{Change Fert} = 53.1 - 2.6 \text{ INSHARE}
\]

\[
N = 32 \\
r = -0.30
\]
TABLE 4
Mauldin and Berelson's Summary of Findings on Relative Impact Using Several Statistical Methods

<table>
<thead>
<tr>
<th>Major Analysis</th>
<th>1970 socioeconomic factors, program effort, and 1965-75 CBR declines using:</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>From 1-7 socioeconomic factors</td>
<td>$R^2$ = .58-.68</td>
<td>Analysis found strong association of CBR decline with socioeconomic factors, with even a few socioeconomic variables indicative of the complex whole. Significant additional association was found with addition of program effort (about 25 percent). Most of the effect was found to be joint, essentially in conformity with earlier study by Freedman and Berelson.</td>
</tr>
<tr>
<td>Program effort alone</td>
<td>.70</td>
<td></td>
</tr>
<tr>
<td>Socioeconomic factors plus program effort</td>
<td>.83</td>
<td></td>
</tr>
<tr>
<td>Net effect of social setting</td>
<td>.05</td>
<td></td>
</tr>
<tr>
<td>Net effect of program effort</td>
<td>.17</td>
<td></td>
</tr>
<tr>
<td>Joint effect</td>
<td>.58</td>
<td></td>
</tr>
<tr>
<td>Further Modes of Analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Path analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social setting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct effect</td>
<td>.67</td>
<td></td>
</tr>
<tr>
<td>Joint and indirect effect</td>
<td>.23</td>
<td></td>
</tr>
<tr>
<td>Program effort</td>
<td>.44</td>
<td></td>
</tr>
<tr>
<td>Direct effect</td>
<td>.89</td>
<td></td>
</tr>
<tr>
<td>Joint and indirect effect</td>
<td>.75</td>
<td></td>
</tr>
<tr>
<td>2. Interaction effects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1960 socioeconomic values and CBR declines, 1955-65 (38 cases)</td>
<td>$R^2$ = .57</td>
<td></td>
</tr>
<tr>
<td>Using those Beta coefficients:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1970 socioeconomic values with CBR declines, 1965-75 (38 cases)</td>
<td>.53</td>
<td></td>
</tr>
<tr>
<td>1970 socioeconomic values with CBR declines, 1965-75 (39 cases)</td>
<td>.47</td>
<td></td>
</tr>
<tr>
<td>The last two, plus program effort</td>
<td>.78</td>
<td></td>
</tr>
<tr>
<td>3. Change analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in socioeconomic factors, 1960-70 with CBR declines, 1965-75 (35 cases)</td>
<td>$R^2$ = .55</td>
<td></td>
</tr>
<tr>
<td>That plus program effort</td>
<td>.86</td>
<td></td>
</tr>
<tr>
<td>4. Lag analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Socioeconomic factors for 1960 with CBR declines, 1965-75 (48 cases)</td>
<td>$R^2$ = .72</td>
<td></td>
</tr>
<tr>
<td>That plus program effort</td>
<td>.87</td>
<td></td>
</tr>
<tr>
<td>5. Absolute CBR declines, 1965-75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 socioeconomic values, 1970 (69 cases)</td>
<td>.81</td>
<td></td>
</tr>
<tr>
<td>7 socioeconomic values, 1960 (38 cases)</td>
<td>.84</td>
<td></td>
</tr>
<tr>
<td>1970 socioeconomic values plus program effort</td>
<td>.79</td>
<td></td>
</tr>
</tbody>
</table>

Fertility is positively related to the rich group's share (and hence negatively to the poor's share), whereas the rate at which fertility declines is negatively related to the rich group's share. Fertility is higher where the poor are poorer relative to the rich, and it is declining more slowly where the poor are poorer relative to the rich.

Another instance of a missing variable in the Mauldin-Berelson approach may have been discovered by Clinton and Godwin (1978). They combine a summary index of democracy, administrative capability, and decentralization for seven Latin American countries and compare it to the percentage decline in fertility in Mauldin-Berelson. We calculated the following relationship:

\[ \Delta FERT = +0.158 \text{DEMADEC} - 29.7 \]

\[ N = 7 \]
\[ r = 0.82 \]

The positive sign for the government-quality variable DEMACD indicates that fertility decline among the seven countries has been significantly faster in those countries with relatively high rates on that index. The jointness between social setting and family-planning program effort that Mauldin & Berelson found is no doubt mediated through some measures of government quality in general. As analysts learn more about those third or missing variables, it could turn out that program effort is simply a proxy for good government.

The modernization indicators used by Mauldin & Berelson do not by themselves tell the whole story of socioeconomic change as it may be affecting demand for family planning services. Thus, the finality of their conclusions remains in doubt until they can reject alternative hypotheses about the role of third or nonincluded variables in the determination of levels in and changes of fertility.

In passing, one must mention that the hypothesis that a higher score on the democracy index leads to fuller family planning program development, and thence to lower fertility, would hardly seem to be supported by Asian experience. In fact, Singapore, Taiwan, and Korea -- the rather more authoritarian regimes -- would seem, on the face of it, to have been more actively antinatalist and to have achieved in their societies lower fertility levels than have such overtly democratic societies as India and Malaysia. Where, then, are the Philippines, Pakistan, and Bangladesh to be ranked? Links between such specific features and political styles as national political regimes present and the adoption of family planning or low-fertility norms may be a chimerical search.

Gwatkin (1977) summarizes findings from two international cross sections and three cross sections of the states of India (see Table 5). His categories are much like those used by Mauldin and Berelson (1978). He concludes as follows:

- Family planning and development indicators taken together explain 70-90 percent of fertility variations;
- Differences in social setting alone, net of the influence of family planning program effort, get 10-25 percent of the credit;
- Family planning services are 15 to 55 percent of the total explanation;
- The interaction of family planning and development indicators as they together affect fertility gets 12 to 65 percent of the credit for fertility differentials.

He goes on to argue that a factor such as income distribution may have additional explanatory power. He cites the Repetto study included in World Bank (1974), which showed the elasticity of fertility with respect to the share of income received by the lowest 40 percent of income earners.

The day of international cross-section studies of the determinants of fertility may nearly be over. So many confounding and missing variables enter darkly and mysteriously into the estimated equations that only with a leap of faith can one conclude anything much about causal links. Nations may behave in certain ways in some respects, but fertility is still a family matter and so must be understood at the level of the decision-making unit. We will continue to wish to aggregate together the sum of human actions in order to determine a nation's birth rate. It is another matter to go from the statistical purpose of describing behavior to attempting to interpret individual decisions through examination of the sums of those decisions.

Greater scientific and policy payoff seems to lie with careful studies of family units that are at least as comparable as those who share space and nationhood. To a few of these studies we now turn.
### Impact of Social Setting and Family Planning Programmes on Contraceptive Acceptance and Use, and on Fertility.a/

<table>
<thead>
<tr>
<th>Percentage of Variations in Contraceptive Use, Acceptance and Fertility Associated with:</th>
<th>Inter-Country Studies</th>
<th>Inter-State Studies Within India</th>
<th>Averageg/</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Freedman and Berelsonb/</td>
<td>World Bankc/</td>
<td>World Bankd/</td>
</tr>
<tr>
<td>Social Setting Considered Alone</td>
<td>54.7</td>
<td>59</td>
<td>78</td>
</tr>
<tr>
<td>Family Planning Program Effort Considered Alone</td>
<td>63.8</td>
<td>64</td>
<td>81</td>
</tr>
<tr>
<td>Social Setting and Program Effort Together</td>
<td>72.2</td>
<td>89</td>
<td>94</td>
</tr>
<tr>
<td>Net Effect of Social Setting (3-2)</td>
<td>8.4</td>
<td>25</td>
<td>13</td>
</tr>
<tr>
<td>Net Effect of Program Effort (3-1)</td>
<td>17.4</td>
<td>30</td>
<td>16</td>
</tr>
<tr>
<td>Joint Effect (3)-(4+5)</td>
<td>46.4</td>
<td>34</td>
<td>65</td>
</tr>
</tbody>
</table>

### NOTES:

a/ The figures in the table are the squared correlation coefficients of regression analyses of the impact of variables representing social setting and/or family planning inputs on variables representing contraceptive acceptance/use or fertility.


NOTES: (Cont.)


g/ Average of Freedman and Berelson, Agarwala, and two World Bank studies. Omits Misra because of incompleteness.

Source: Gwatkin (1977), Table 3.
IV. Studies using national-level micro-data

After observing the impressive declines in fertility in Costa Rica, Colombia, Taiwan, Korea, and Singapore, one wag observed that fertility seems to fall when AID pulls out. Country-based micro-data analysis is much more serious than that. We present here four examples from Taiwan, Malaysia, the Philippines, and Guatemala. They use excellent data sets, take into account both social setting and family planning program variables. Several offer partial correlation coefficients for policy consideration. In the tables, we have extracted only those variables found to be statistically significantly related to the dependent fertility variable. The variables used in the multiple regression analyses which were not found to be significant go unmentioned here.

This procedure is at variance with the normal form in which regression results are published. Analysts list all the independent variables included in a regression whether significant or not.

A better presentation of the data in these tables would offer the beta coefficients or elasticities estimated at the means of variables since such coefficients offer the best comparison between the several independent variables of relative impact on the dependent variable. However, the studies cited did not generally report results in that form.

Nonetheless, the presentation here permits us to emphasize relevant findings. We have moreover sought to rank the variables in strength and importance from top to bottom of each of the tables. This ranking gives no attention to the relative ease or difficulty of altering fertility via the given independent variable. Schooling changes may have a big impact on fertility, but such changes are costly to achieve.

These studies infrequently produce elasticities or beta coefficients which could guide an estimation of how changing any one of them through policy action would in turn yield an expected change in fertility. The signs or direction of causation can be taken as significant, but they are fairly poor guides to policy.

A. Taiwan

As the years go by, the classic work of T. Paul Schultz in estimating the effects of socioeconomic change and family planning in Taiwan looks ever more classic (Schultz, 1974). In Table 6, we have summarized, from the many regressions he did, one set of coefficients and the related t-statistics. They demonstrate a significant role for infant mortality, both male and female education, and two kinds of family planning inputs in influencing age-specific fertility.

One salient aspect of his analysis was the finding that the village health education nurse, although a general maternal and child health worker rather than a family planning specialist, played a more important role in fertility decline, per unit of time and cost input, than did the pre-pregnancy health
### Table 6
Determinants of Birth Rate Levels in Taiwan

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t-statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child-death Adjustment</td>
<td>2,748</td>
<td>8.06</td>
</tr>
<tr>
<td>Family-Planning Program (in person months)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Village Health Education Nurse</td>
<td>-218</td>
<td>-10.1</td>
</tr>
<tr>
<td>Pre-Pregnancy Health Worker</td>
<td>-60.6</td>
<td>-14.15</td>
</tr>
<tr>
<td>Female Education</td>
<td>-1,860</td>
<td>-6.91</td>
</tr>
<tr>
<td>Male Education</td>
<td>-2,454</td>
<td>-6.78</td>
</tr>
</tbody>
</table>

Source: Schultz, T., Paul. 1974. Table 4, p. 278.
worker, a family planning program specialist. That finding is significant because it focuses attention on the blend of services for fertility reduction which is most cost-effective. Surprisingly, there seem not to have been many such policy-relevant studies following the Schultz analysis.

Schultz did not attempt to apportion responsibility for fertility decline to program and socioeconomic variables. If he had, his finding would probably not be inconsistent with those that Freedman suggested recently in reviewing population change in Asia before the House Select Committee on Population.

Freedman (1978) cites Sri Lanka, Kerala, and the People's Republic of China as good examples of fertility decline associated with four substantive changes:

1. Better health and longer life;
2. Higher education for both boys and girls;
3. Welfare institutions providing minimum subsistence (food) for these masses; and
4. Communication and transportation facilities capable of providing the information, services, and goods which have led to the other changes.

He then considers a broader topic:

But there is something more than these objective changes. What I think is crucial is that increasing numbers of people are becoming aware of alternatives to traditional lifestyles and aspiring to something different, even though these aspirations often are poorly defined (p. 5).

Freedman refers here to a change in the ethos of the community, i.e., a change of complexity, completeness, and mystery. One may sense it and describe some of its symptoms, but its fundamentals dissolve chimerically when any effort is made to turn them into statistical artifacts.

B. Malaysia

Under an AID contract, the Rand Corporation has for several years managed a data-gathering project in Malaysia aimed at explicating a number of features of family behavior. Along with a number of technical papers describing the project, one lengthy summary paper has been issued in draft form subject to revision (Butz and DaVanzo 1978). It includes several regressions on the determinants of contraceptive use, as well as regressions explaining the principal demographic variables used in the analysis of pregnancy histories, the closed pregnancy intervals -- i.e., the length of time between successive parities as well as between marriage and first birth. Variables which figured in regression equations to explain the length of the intervals, and which were statistically significant, appear in Table 7. The contraceptive variable as an independent variable was the number of months in which the contraceptive was used during the interval.
Table 7
Length of Closed Pregnancy Interval Regressions, Malaysia
(n = 3553)*

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Contraceptive Variable Equals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. Mos. The Contraceptive Was</td>
</tr>
<tr>
<td></td>
<td>Used in the Interval</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Missing or different Husband</td>
<td>2.513</td>
</tr>
<tr>
<td>First Method Modern</td>
<td>.810</td>
</tr>
<tr>
<td>IUD</td>
<td>.807</td>
</tr>
<tr>
<td>Two Modern Methods</td>
<td>.770</td>
</tr>
<tr>
<td>Pill</td>
<td>.638</td>
</tr>
<tr>
<td>Length of Partial Breastfeeding</td>
<td>.565</td>
</tr>
<tr>
<td>Safe Time Method</td>
<td>.559</td>
</tr>
<tr>
<td>Other Female Methods</td>
<td>.538</td>
</tr>
<tr>
<td>Condom</td>
<td>.532</td>
</tr>
<tr>
<td>Abstinence</td>
<td>.455</td>
</tr>
<tr>
<td>Length of Full Breastfeeding</td>
<td>.454</td>
</tr>
<tr>
<td>Two Traditional Methods</td>
<td>.423</td>
</tr>
<tr>
<td>Folk Method</td>
<td>.358</td>
</tr>
<tr>
<td>Age of Mother</td>
<td>.320</td>
</tr>
<tr>
<td>Second Method Modern</td>
<td>.308</td>
</tr>
<tr>
<td>Separation from Husband</td>
<td>.0800</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>.753</td>
</tr>
<tr>
<td>Calendar Year</td>
<td>-.194</td>
</tr>
<tr>
<td>No. Mos. Partial Breastfeeding* Use of Modern Contraceptive</td>
<td>-.275</td>
</tr>
<tr>
<td>Parity</td>
<td>-.294</td>
</tr>
<tr>
<td>House Sanitation Index</td>
<td>-.544</td>
</tr>
</tbody>
</table>

Source: Butz, William P. and DaVanzo, Julie (1978), Table 12.
The independent variables which were significant have been ranked in Table 7 according to which had the greatest impact on the length of the birth interval. Thus the higher a variable in the table the greater its impact on fertility. For a woman to have had no husband present had the strongest impact in lengthening the period between births. Next most important was the use of any modern method of contraceptive -- as part of the regression the analysts asked in effect about the role of contraceptives regardless of which specific method was used. Use of an IUD was next in importance followed by the use of two modern methods: In any given birth interval a woman might, for example, try the Pill then switch to IUD or condoms. The Pill came next in the ranking followed by one of the measures of breastfeeding. Folk methods of fertility control proved not to be too important in determining the length of the pregnancy interval. The only indicator of socioeconomic status was the house sanitation index which was negatively related to the length of the birth interval, an anomalous finding.

However, the breastfeeding decision and length of breastfeeding are inverse surrogates for a modernization variable; thus the significance of that variable in lengthening the birth interval is worth noting. Women who have short breastfeeding periods tend to replace that means of contraception with modern means, such as the pill.

Full breastfeeding, though it is strongly related to birthspacing, is among the least effective of the contraceptive methods employed. Full breastfeeding appears less effective per month of use than safe time methods, on a par with abstinence, and more effective than folk methods and withdrawal (Butz and DaVanzo 1978, p. 67).

As women give up the practice of breastfeeding, a certain amount of modern family planning has to be adopted just to keep fertility from rising. That finding is consistent with the international cross sections described by Mauldin and Berelson above. To some extent, then, modern methods of family planning are simply a means by which the impact of modernization on family life and fertility is mitigated.

C. Guatemala

Two institutions, the Institute for Nutrition in Central America and Panama (INCAP) and the Rand Corporation, executed a joint project in four rural and two semiurban villages to gather information on determinants of fertility. Out of the data set created, some two hundred research papers have already been written (many drawing on INCAP's earlier project, a longitudinal study of nutrition in the four villages). Only a few have attempted multivariate analysis. In one, Anderson (1978) examined the determinants of the number of live births in the pooled sample. The coefficients and t-statistics for the significant variables appear in Table 8.
Table 8
Determinants of Number of Live Births, Rural-Urban
Guatemala (INCAP Sample)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t-statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Squared Female Wages</td>
<td>2131.505</td>
<td>2.609</td>
</tr>
<tr>
<td>Child Mortality Rate:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 if the 1st child lives</td>
<td>1.433</td>
<td>3.567</td>
</tr>
<tr>
<td>1 if the 1st child dies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of years of schooling completed by wife</td>
<td>1.383</td>
<td>5.952</td>
</tr>
<tr>
<td>Child Mortality Rate:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 if 2nd child lives</td>
<td>.947</td>
<td>2.153</td>
</tr>
<tr>
<td>1 if 2nd child dies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support old age; Instrument for expected present value</td>
<td>.827</td>
<td>2.355</td>
</tr>
<tr>
<td>Contraceptive Use Rate:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 if contraception is not used</td>
<td>.731</td>
<td>1.825</td>
</tr>
<tr>
<td>1 if contraception is used</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Husband's Imputed Wage Rate</td>
<td>.526</td>
<td>2.507</td>
</tr>
<tr>
<td>Modernity Rate:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 if oldest child was born in the home</td>
<td>-1.462</td>
<td>-3.002</td>
</tr>
<tr>
<td>1 if born in hospital or clinic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wife's Imputed Wage Rate</td>
<td>-516.711</td>
<td>-5.225</td>
</tr>
</tbody>
</table>

Note: Only variables which are significant at the .10 level are included.

The most significant results are the estimated wage effects, schooling effects, and mortality effects. Wage effects are significant and are comparable to previous research. Higher child wages and male wages tend to increase the desired number of births; higher female wages encourage a substitution away from home production and reduce the desired number of births. Female schooling is a positive determinant of demand; schooling raises a woman's productive efficiency, and she produces more children. Finally, the expectations effect of mortality is not a significant determinant of fertility, but the replacement effect is very important. If a death occurs among the lower birth orders, the death is replaced with a birth. Deaths among higher birth orders reduce fertility because higher order births are more costly to the household (Anderson, 1978).

Use of contraceptives was positively related to number of births. That relationship may have emerged, albeit weakly, in the regression because older women with more live births are more likely than younger women to have used contraception. Had the regression been done by age group, this result would probably have disappeared.

D. The Philippines

The University of the Philippines, Los Banos, in collaboration with the Agricultural Development Council, gathered detailed data on some 250 rural households in Laguna Province in 1976 and 1977. A principal objective was to measure subsistence and by-employment income of such households. Among data collected was information on family size, numbers of children living in households and pertinent socioeconomic and family-planning access variables. The data have not yet been fully analyzed; a preliminary paper by Navera (1978) does offer some regressions of number of children on pertinent variables (see Table 9).

Age of father is a good proxy for age of the household, i.e., the number of years in which births could have occurred in the family. Not surprisingly that variable is the most important in explaining differences in number of total births between households: the older the father, the more children in the household among the 246 rural households surveyed.

Second in importance, though with a smaller F-statistic, is land area operated: richer peasants have more children. Again, this observation may be simply because older families have had longer to accumulate land. One cannot conclude that with age held constant, those with more land will have more children.

The negative relationship between years of schooling for the mother and number of children is found in most studies. The negative relationship between father's schooling and number of children is less typical; again, the age factor may be confounding the relationship because younger men are more likely than older to have gone to school regardless of their overall fertility patterns.
### Table 9
Regression on the Number of Children Living, 246 Rural Households, Laguna, Philippines, 1977

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Coefficient</th>
<th>F-statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of Father</td>
<td>0.9424</td>
<td>78.912</td>
</tr>
<tr>
<td>Land Area Operated</td>
<td>0.7290</td>
<td>2.449</td>
</tr>
<tr>
<td>Distance to Nearest Family Planning Clinic</td>
<td>0.2635</td>
<td>1.147</td>
</tr>
<tr>
<td>Age of Mother</td>
<td>0.2348</td>
<td>4.145</td>
</tr>
<tr>
<td>Value of Fixed Assets Net of Debts</td>
<td>-0.1223</td>
<td>-0.331</td>
</tr>
<tr>
<td>Education of Father</td>
<td>-0.1609</td>
<td>-28.741</td>
</tr>
<tr>
<td>Education of Mother</td>
<td>-0.7289</td>
<td>-5.271</td>
</tr>
</tbody>
</table>

The greater the distance to a family planning clinic the larger is the number of children in the household. This finding might suggest that the Philippine program to spread clinics throughout the countryside would have the desired effect of lowering fertility.

Further analysis of the fertility aspects of the Laguna survey can be expected in the future. This preliminary work underscores the need to isolate age effects and the length of the period from marriage to time of survey. As a fertility variable, number of living children in the household is far from satisfactory. Use of a birth-interval variable such as that constructed for the Rand/Malaysia survey could give better results. The Laguna survey data are well worth further analysis because they include a rich base of time-use information that can be eventually linked to fertility variables and other features of the New Home Economics.
V. Accounting for Fertility Decline

The Community and Family Study Center (CFSC) at the University of Chicago, under the direction of Professor Donald Bogue, has developed a useful system of accounting for fertility change in developing countries. The essentials of the method are as follows: Observe number of births at some recent past date in a given country in which fertility has declined. Apply the earlier fertility rates to the number of women in the country in a recent year. Subtract the actual recent-year number of births from the number which would have been born had the earlier rates continued to prevail. The difference is the birth-rate decline to be explained by the accounting procedure. Three explanatory factors can be identified:

1) Use of modern family planning;
2) Use of folk methods of fertility control; and
3) Abortion.

The CFSC procedure then estimates from family planning program data, from information about changes in marriage age and abstinence, and the prevalence of abortion how much of the fertility change to attribute to each factor. Thus the accounting system achieves closure in a manner similar to double-entry bookkeeping.

The technique has been applied in three countries: Colombia, Indonesia, and Thailand. We will review briefly the results for each study.

A. Colombia

Variations of the CFSC work have appeared in several versions. A publication in Spanish which translates as, "Fertility decline and family planning in Colombia, 1964-1975," was prepared by a committee coordinated by Juan B. Londono, formerly a Bogue student (Londono 1976; see annotated bibliography). An English-language edition appeared as, "The amazing impact of family planning in Colombia" (Londono 1977).

Consistent with the observations above about the difficulty of attributing fertility declines to a specific cause, the committee writes, "It is not possible to say with certainty what might have happened to the birth rate in Colombia if the three major family planning programs had not been established there" (Londono 1977, p. 10). However, they go on several pages later to state:

It is most impressive to realize that between 1970 and 1975, 46 percent of all fertility regulation (including abortion) performed in Colombia was provided through the three organized family planning programs. Probably not less than 32 percent and more probably greater than 60 percent of the observed fall in fertility rates was provided by these programs and very plausibly would not
happened without them (Londono 1977, p. 14).

These last observations are at first carefully limited by probabilistic language only to be followed by an expression of the historical necessity of family planning for fertility decline to have occurred at all. There is no direct reference in the text to the socioeconomic changes which played some role in fertility decline.

Another group, which even included some overlap with the Londono committee wrote about the same time that, "By all evidence, the increased demand for contraception was generated by the process of modernization in Colombia" (Potter et al. 1976, p. 525). They express the view, admittedly not well defended by scientific method, that fertility change before 1970 was mostly due to growing demand for family limitation even in the absence of expanded supply of modern services. After 1970, and in this they agree with the Londono committee, modern contraception played a major role in the accelerated decline of fertility.

Neither the Potter nor the Londono group makes a serious attempt to partial out the respective roles of socioeconomic change and family planning services in effecting the fertility decline. A study currently underway by Bean and Conroy of the University of Texas, in collaboration with a Colombian group, is aimed at establishing these relative roles (see appendix table for study).

B. Indonesia

The application of fertility accounting to the recent declines in Indonesian fertility appears in an unpublished, but now widely circulated, paper by Teachman (CFSC 1978). His work offers a clear nontechnical discussion of computer programs called PROJTAG developed at the University of Chicago and TABRAP and CONVERSE developed at the Population Council.

In a cover letter attached to the paper, Teachman writes that

The report rather fully documents the success of the Indonesian National Family Planning Program in lowering Javanese fertility. Most astounding, perhaps, is that this decline has occurred despite a general lack of significant socioeconomic development in the country. (Teachman to Cornelius, 25 Apr 78).

There is nothing in the paper to support such a conclusion. The computer techniques mentioned merely account for fertility change; they do not explain it. To explain it would require identifying how it was that women decided to limit their fertility more in 1976 than they had in 1971. The process of explaining that decision must involve systematic examination of such intermediate fertility variables as schooling, literacy, labor-force participation and mortality expectations.

In the face of such strongly-held views, it is surprising to read on page 12 of the paper, "Unfortunately, the Indonesian data do not provide a sufficient estimate of recent fertility levels... Even though we cannot
estimate the proportion of an observed birth rate decline accounted for by the program, an estimate of the birth rate decline attributable to the program can be calculated, and as we shall see for the Indonesian case, the extent of such declines is quite large." (CFSC 1978, p. 12). The author then proceeds to estimate the change in fertility which presumably emerged from the expansion of the numbers of family planning acceptors. He used the CONVERSE program which presents births averted by various contraceptive methods. Averted births then yield the presumed change in fertility. The presumed change in fertility is then attributed to the presumably effective contraceptive methods. Altogether too many presumptions -- at least until a better linkage can be made between measured fertility for a recent date and both availability of services and altered demand for them.

Leachman does make a case for the absence of significant socioeconomic change in Indonesia, 1971-76. The country is still largely rural, fewer than half the adult women can read and write. But there was a jump from 28 percent to 50 percent in the number of adults who had completed elementary school from beginning to end of the 1960s. There was a significant shift of workers from agriculture to industry and service occupations. Missing in his review is a clear appreciation of two factors which may be critical. The position of women in Southeast Asian society is different from that of other world regions; that position does not result in low (or high) fertility, but its potential for change is substantial. Second, the administrative role of the Indonesian government, not only as a distributor of services for family planning but also as a source of influence of individual and family behavior has not been analyzed as yet. If people adopt family planning because it is recommended by the government, and if the government is effective because it enjoys the confidence of the citizenry, then it is not so much availability of services as it is effective government which must be given credit for reducing fertility.

Insufficiency of data on the dependent variable, fertility, as well as a whole range of independent variables, running from family planning through socioeconomic change to good government, makes it premature to attribute Indonesian fertility decline to one or another of the potential causal factors.

C. Thailand

Fertility decline has not been so rapid or so impressive in Thailand as in other countries mentioned above. Nonetheless 1975 fertility was about a fifth lower than it had been a decade earlier; in part that decline was attributable to greater availability of family planning through a national public program (Hogan 1977).

The CFSC analysis of that decline centers on the contribution of the public program as opposed to abortion and traditional means of contraception such as abstinence, safe periods, etc. Hogan uses the PROJTARG model to count up
the difference between 1964 fertility and 1975 fertility. He finds that there was half a million years of protection provided women in the earlier years; it provided about a million of the 1.6 m. years of protection in 1975. To an extent indeterminate from existing data, the public program substituted for traditional methods of fertility control. Moreover, the program's existence must have brought some new users into the fold. (Hogan 1977, p. 19).

These findings, although they do allocate births averted to one or another immediate cause, do not pertain to the availability versus socioeconomic change debate. This approach does not address the issue of how larger numbers of women came to choose fertility control in 1975 than had in 1964.
VI. Summary

Policymakers wanted to know whether the sums spent on family planning programs have caused fertility to decline. Scientific research to date has supported a link between service availability and the waning of population growth.

Now policymakers ask for somewhat more specific information. Are expenditures on family planning the most cost-effective way to lower fertility? Could expenditures on development programs, or on research to identify selective interventions in the family fertility decision process, yield more cost-effective expenditure strategies?

One approach to answering these questions is the effort to determine the relative impact of socioeconomic change and service availability on fertility. Table 10 summarizes briefly the conclusions discussed in some detail in preceding sections.

The methods used do not point readily to the rejection of one and acceptance of the other hypothesis. To the contrary, the studies listed in Table 10 acknowledge the importance of interaction effects between socioeconomic change and service availability in yielding fertility change. One is reminded of the two blades of a pair of scissors. To decide which blade is cutting is not logically impossible but in practice a most difficult task.

Going a step further with this analogy the policymaker may wish to ask: Which blade must we spend more resources to sharpen? Service availability seems more successfully to have been developed to date. The Office of Population of AID has helped family planning programs in many developing countries to be among the outstanding administrative programs of their governments. Knowledge about how factors of socioeconomic change affect fertility is slower to develop. That knowledge is complicated by the jointness of effects of schooling, health improvements and job gains: These changes may lower the number of children families want but they also increase income, lead to rural-urban migration and set in process whole chains of social change. They are not easy changes to analyze; they are not set in motion only to lower fertility. Just as family planning is made available to promote maternal health (as well as to lower fertility), so schooling and jobs raise living standards (as well as possibly to lower fertility).

The remaining contradictions that appear among studies cited in Table 10, as well as the inability to achieve precision about the relative impact of service and social change, argue for a better organized strategy to search for additional, policy-relevant information about the determinants
Table 10
Summary of Findings from Scientific Research on the Relative Impact of Family Planning Availability and Socioeconomic Change on Fertility

<table>
<thead>
<tr>
<th>Date</th>
<th>Researcher</th>
<th>Country</th>
<th>%SES</th>
<th>%FP</th>
<th>Conclusions</th>
<th>Methodology</th>
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<tr>
<td>1978</td>
<td>Anderson</td>
<td>Guatemala</td>
<td></td>
<td></td>
<td>Wife's wages greatest negative effect; contraceptive use is only barely significant.</td>
<td>multiple regression</td>
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<tr>
<td>1978</td>
<td>Butz/DaVanzo</td>
<td>Malaysia</td>
<td></td>
<td></td>
<td>Contraceptive use, including breastfeeding, abstinence and folk methods is significantly associated with length of birth interval; ses variable found to be both positively and negatively correlated.</td>
<td>Multiple regression</td>
</tr>
<tr>
<td>1978</td>
<td>Coale</td>
<td>Mexico</td>
<td></td>
<td></td>
<td>Disputes that development necessarily leads to fertility declines or that high population growth precludes development</td>
<td>Comparison of actual Mexican data with 1950 projections</td>
</tr>
<tr>
<td>1978</td>
<td>Community and Family Study Center</td>
<td>Java (East Java)</td>
<td>62-80</td>
<td>77-97 (Jakarta)</td>
<td>Fertility decline resulted without prior socioeconomic development and that family planning alone can affect reduced fertility.</td>
<td>Number of births averted, TABRAP/ CONVERSE</td>
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<tr>
<td>1977</td>
<td>Gwatkin</td>
<td>Cross-section International</td>
<td>15-55</td>
<td>10-25</td>
<td>Large interaction effects.</td>
<td>Summary of empirical studies</td>
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<tr>
<td>1978</td>
<td>Freedman</td>
<td>Sri Lanka, Kerala, PRC</td>
<td></td>
<td></td>
<td>Western type of social development nor necessary for fertility decline; gives credit to both development and family planning.</td>
<td>Observation</td>
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<td>n.d.</td>
<td>Hogan</td>
<td>Thailand</td>
<td>50-90</td>
<td></td>
<td>National Family Planning Program is probably responsible for about 90% and no less than 50% of the observed fertility decline.</td>
<td>PROJYARG Women-years of protection by contraceptives supplied by NFPR</td>
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<tr>
<td>1977</td>
<td>Londono, Bogue, Ochoa</td>
<td>Colombia</td>
<td>34</td>
<td>39-62</td>
<td>Fertility decline would probably not have occurred in the absence of family planning programs</td>
<td>PROJYARG SERES</td>
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<tr>
<td>1978</td>
<td>Mauldin, Berelson</td>
<td>Cross-section International</td>
<td>60-65</td>
<td>15-20</td>
<td>Effects are mostly joint.</td>
<td>Multiple regression; Path analysis; Interaction effects</td>
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<td>1978</td>
<td>Navere</td>
<td>Philippines</td>
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<td></td>
<td>Significant negative relation between mother's education and fertility; distance to nearest family planning clinic is not significant.</td>
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<td>1976</td>
<td>Potter, Ordonez, Measham</td>
<td>Colombia</td>
<td></td>
<td></td>
<td>Unlikely that family planning programs had an effect on the fertility decline prior to 1969 but was a major factor after that date.</td>
<td>Compilation of historical relationships</td>
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<td>1974</td>
<td>Schultz</td>
<td>Taiwan</td>
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<td>Family planning is negatively correlated with fertility except for women under 24 years.</td>
<td>Multiple Regression</td>
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<td>1974</td>
<td>World Bank</td>
<td>Interstate (India) Intercountry</td>
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<td></td>
<td>While family planning programs tend to have a greater impact on fertility than do socioeconomic factors, the greatest amount of variation is explained by the interaction effects.</td>
<td>Multiple and Stepwise regression</td>
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</table>
of fertility change. Many assumptions about the course of the demographic transition have already gone the way of pre-Copernican astronomy. A continuing dedication to the search for causes of human behavior is the only path likely to lead to effective policy decisions.
### APPENDIX TABLE

**DISTRIBUTION OF AID POPULATION RESEARCH FUNDS 1967-77**

**BY RESEARCH CATEGORY**

<table>
<thead>
<tr>
<th>Category</th>
<th>Institutions</th>
<th>Principal Investigator</th>
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**TOTAL:** $94,917

Using multiple regression techniques, examines determinants of number of live births in a pooled sample in Guatemala. Finds the most significant variable, wife's wage, to be negative, thus corroborating findings of previous studies. Male and child wages as well as female education are found to be significant and positive. Use of contraceptive, which is similarly found to be positive, is barely significant.


Disputes hypotheses that socioeconomic development necessarily leads to fertility declines and that high population growth is a major determinant of problems facing developing countries. Conclusions are based upon comparisons of actual Mexican fertility and socioeconomic changes from the 1950's to the 1970's with projections made using 1955 Mexican data. While fertility rates closely followed higher population projections, measures of socioeconomic development showed much more progress than had been anticipated by projections measuring economic growth. The data do cast doubts on these two hypotheses in the case of Mexico. However, Mexico was initially considered because of its relatively low population density and high level of economic growth. This suggests that: 1) in this instance, population growth might augment development; and 2) the findings can be generalized not to all developing countries but only to those with similar transitional experiences.


TABRAP/CONVERSE computer program incorporating retrospective data to estimate the number of births averted indicates that the Indonesian Family Planning Program is responsible for about 10.4 and no less than 8.1 of the total 13 point decline in crude birth rate in East Java and from 5.1-6.4 of the 6.6 point decline in Jakarta. Citing data on Indonesian economic growth from 1961 to 1971, the report concludes that the fertility decline resulted without prior socioeconomic development and therefore "Java-Bali would appear to...support...the notion that a family planning program alone can have a significant impact on the birth rate." (p. 24) Not all possible effects of socioeconomic development on fertility are explored in this study. For example, the effect of increased transportation and communication facilities on awareness of alternative lifestyles (Freedman, 1978) is not considered, nor is the possible indirect effect of education on fertility via female labor force participation. In short, while methodology estimating births averted due to organized programs is powerful, arguments regarding development are merely suggestive, not conclusive.

Disputes the classical demographic transition theory by arguing that the western model of development is not necessarily the only one that leads to the desire for smaller families. Normative and cultural factors, not socio-structural factors, may have the greatest bearing on fertility behavior. Increased transportation and communication facilities serve to increase people's aspirations and their awareness of alternatives to traditional living arrangements. Social systems which involve the masses are necessary to make the minimum changes in lifestyles and in attitudes which effect changes in demand for birth control. Freedman also posits that the concept of family limitation is not inherent within all societies and that family planning has an added impact on fertility decline. Theoretical discussion is supported primarily by studies done on industrializing Europe and on research done in developing Asian countries. This is not an empirical study.


Using the "PROJTAG" model, Hogan concludes that the National Family Planning Program (NFPP) is probably responsible for about 90 percent and no less than 50 percent of Thailand's observed fertility decline since 1964. The demographic model estimates the number of women-years protected by contraceptives, taking into account female age-size structure, number of women "at risk", and fecundity. Then, the number of women-years of protection provided by the NFPP is calculated. The contribution to reduction in fertility by the private/commercial sector, folk methods, sterilization and abortion is also calculated. While the model does provide a good estimate of the effects of NFPP relative to other sources of protection, it does not examine the relative effects of family planning and socioeconomic development on Thailand's decline in fertility.


Using the "PROJTAG" model to ascertain the percentage of total number of women-years protected from pregnancy that is attributable to organized family planning programs, the authors conclude that from 39 to 62 percent of Colombia's fertility decline from 1964 to 1975 was due to these programs and "very plausibly would not have happened without them" (p. 14). A second model, "SERES" indicated that 44 percent of the decline was "probably" due to family planning, 21.3 percent to endogenous and marriage factors, and 34.6 percent to other factors. While both
models consider age composition and marital status, only the "SERES" model controls for changes in socioeconomic factors. However, these results are estimates and therefore, can only provide an approximation of the relative effects of factors influencing fertility decline.


Concludes that socioeconomic development and family planning have a far greater impact jointly than either variable has alone, and that program effort had a substantial influence on the decline in crude birth rate during the period 1965-1975. This cross-sectional study of 94 developing countries uses a variety of statistical techniques, including multiple regression, path analysis, and analysis of interaction effects. Findings tend to show program efforts are more important than socioeconomic factors. Authors are hesitant to submit their findings as conclusive because of inadequate data and technical limitations.


A preliminary analysis of the Laguna survey data in the Philippines determined a significant positive relationship between numbers of children and mother's age and a significant negative relationship with education. Distance to nearest family planning clinic was not significant.


Concludes that it is unlikely that increased contraceptive availability resulted in Colombia's drastic reduction in fertility during the period 1964-1969, while conceding that increased use of modern contraceptives has been a major factor in the decline since 1970. Authors contend that while family planning programs influenced the fertility decline by increasing the supply of modern methods, "by all evidence, the increased demand for contraception was generated by the process of modernization in Colombia" (p. 525). Evidence is based on the compilation of historical relationships among related socioeconomic indicators (including economic development, education, female labor force participation, and urbanization) which strongly suggest that modernization was well under way prior to, and specially strong during, the period 1964-1969, while family planning services were not effective until 1970. Study is not strong in its methodology, but it does provide substantive evidence which deserves attention when assessing the Colombian situation.
While a causal model indicating the direct and indirect effects of development and the knowledge and use of contraception on fertility is suggested by Holsinger and Kasarda in "Education and human fertility: Sociological perspectives" (p. 176), nowhere in Ridker's book is there any actual empirical data which deals with this issue.


Using simple least squares regression on a cross-section of 361 communities in Taiwan, Schultz finds that the national family planning program was responsible for 4 percent of the aggregate decline in fertility. However, regression on pooled time series of cross-sections, a less biased measure, indicates that family planning efforts resulted in 8 percent of the decline. Family planning is shown to be negatively related to fertility of women 24 years or more, but positively related for younger women. Schultz suggests that family planning allows women to have children within a concentrated time-span.


Concludes that, while family planning program inputs in general have a greater impact on program outputs than do socioeconomic variables, the greatest amount of variation is explained by the interaction effects. Using multiple and stepwise regression techniques on data from 16 Indian states and from 19 countries, the study shows that this conclusion holds at both the inter-state and inter-country levels. However, physical facilities of family planning programs appear to be more dependent on the socioeconomic variables than are program expenditures, suggesting that the effectiveness of programs may in part be a function of development, regardless of funding. Some problems arise out of lack of necessary data, time-lag effects, and multi-collinearity, but the study is methodologically powerful in its assessment of the relative impact of family planning program inputs and socioeconomic development on acceptor and user rates. The study also assesses the impact of independent variables on Indian estimated birth rates, but does not include proportion married or age-sex structure as possible effectors.
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