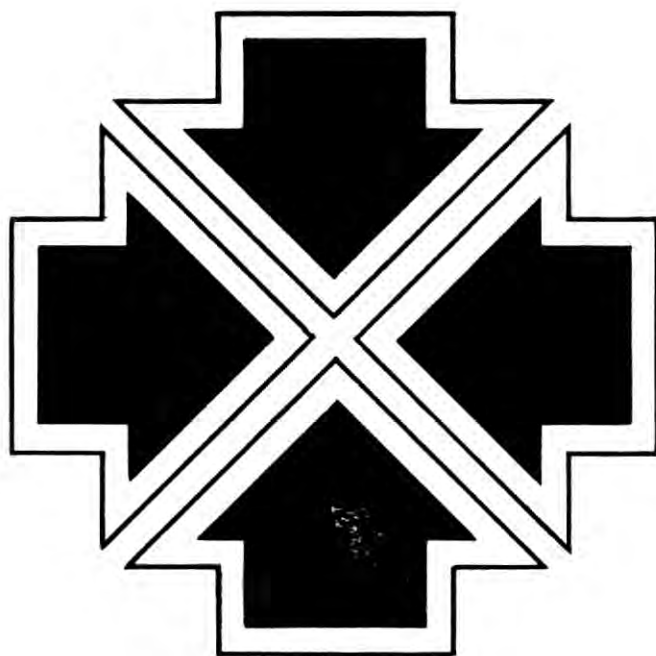A SYNTHESIS OF POPULATION
COMMUNICATION EXPERIENCE

PAPER 5

MANAGEMENT AND UTILIZATION OF
POPULATION COMMUNICATION RESEARCH

Snehendu B. Kar

ıst-West Center
ıst-West Communication Institute

THE EAST-WEST CENTER—officially known as the Center for Cultural and Technical Interchange Between East and West—is a national educational institution established in Hawaii by the U.S. Congress in 1960 to promote better relations and understanding between the United States and the nations of Asia and the Pacific through cooperative study, training, and research. The Center is administered by a public, nonprofit corporation whose international Board of Governors consists of distinguished scholars, business leaders, and public servants.

Each year more than 1,500 men and women from many nations and cultures participate in Center programs that seek cooperative solutions to problems of mutual consequence to East and West. Working with the Center's multidisciplinary and multicultural staff, participants include visiting scholars and researchers; leaders and professionals from the academic, government, and business communities; and graduate degree students, most of whom are enrolled at the University of Hawaii. For each Center participant from the United States, two participants are sought from the Asian and Pacific area.

Center programs are conducted by institutes addressing problems of communication, culture learning, environment and policy, population, and resource systems. A limited number of "open" grants are available to degree scholars and research fellows whose academic interests are not encompassed by institute programs.

The U.S. Congress provides basic funding for Center programs and a variety of awards to participants. Because of the cooperative nature of Center programs, financial support and cost-sharing are also provided by Asian and Pacific governments, regional agencies, private enterprise and foundations. The Center is on land adjacent to and provided by the University of Hawaii.

THE EAST-WEST COMMUNICATION INSTITUTE concentrates on the role of communication in economic and social development and in the sharing of knowledge across cultural barriers. The Institute awards scholarships for graduate study in communication and related disciplines, primarily at the University of Hawaii; conducts a variety of professional development projects for communication workers in specialized fields of economic and social development; invites Fellows and visiting scholars to the Center for study and research in communication and to help design projects; offers Jefferson Fellowships for Asian, Pacific, and U.S. journalists for a semester at the Center and the University of Hawaii; conducts and assists in designing and carrying out research; arranges conferences and seminars relating to significant topics in communication; assembles relevant communication materials with emphasis on Asian and Pacific material and makes these available for students, scholars, and practitioners at the Center and elsewhere; and publishes papers, reports, newsletters, and other materials emanating from the above activities.

MANAGEMENT AND UTILIZATION OF POPULATION COMMUNICATION RESEARCH

Snehendu B. Kar

with the assistance of
Timothy Irgens and Joy Wilson

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ABSTRACT

This paper reviews the factors that influence the management, conduct and utilization of social science research related to population communication policies and strategies. These factors include assumptions of causality, communication between planners and researchers, power and control of relevant decisions, the concept of good and useful research, communication complexity and semantics, perceptions of effective use of research, time perspectives, situational factors, general versus specific applications, feedback of research results, the researchers' dilemma, and reward and reference groups for planners and researchers. The second part of the paper analyzes patterns of past research including the clinic and KAP phase and the extension education and field campaign phase, the impact of funding on research, and implications for future research.

CONTENTS

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Dr. Snehendu B. Kar is an Associate Professor in the School of Public Health at the University of Michigan, Ann Arbor. He holds a joint appointment with the Department of Population Planning and the Department of Health Behavior and Health Education. His area of specialization is Social Psychology of Communication. Before coming to the University of Michigan he served as Director of the Research and Evaluation Division of the Central Health Education Bureau in India. He has published widely in the field of health and family planning communication and has served as consultant to organizations such as UNESCO, the Pan American Health Organization, the United Nations Development Programme, and the United States Agency for International Development. He received his Ph.D. in Social Psychology from the University of California at Berkeley.

Timothy Irgens recently graduated from the University of Michigan with a Masters of Public Health in Population Planning. Joy Wilson is a graduate student in Health Education and Population Planning.

SERIES PREFACE

In 1970, the East-West Communication Institute undertook to develop and carry out a special program, involving numerous activities in the area of population and family planning communication under a major institution building grant from the United States Agency for International Development (USAID). Its activities for the past six years have included research; the development of innovative professional development activities for family planning communication specialists; international conferences and workshops; a variety of information sharing activities and services; and a large publications program that has produced: a population/family planning communication newsletter, research case studies, conference reports, an inventory of family planning communication activities and needs in 20 countries, a series of reports on donor and technical assistance agencies in the field, reference tools on sources of population information and materials, and 12 modules for family planning communication training.

As a final activity in its six-year program in population communication, the Institute has undertaken to publish a series of 11 papers which summarize developments in population communication over the last several years. The Synthesis Papers, as they have come to be called, cover the various public-oriented components of population/family planning communication programs--formal, in-school population education; education for adults and out-of-school youth; public information activities; use of mass media; and field extension programs--as well as the organizational and administrative concerns of national family planning programs including training for family planning communication personnel; the operation and strategies of family planning programs; the conduct and utilization of program-related research; professional and technical information services in support of population activities; and the integration of family planning with other development sectors. In addition, two of the papers survey the international and regional activities that have

had a significant impact on the overall development of national family planning programs and activities: technical and economic assistance, and meetings and conferences.

The papers are written by experts in the field--people who have had close personal involvement with the development and evolution of national and international programs over the years. In these papers, the authors have attempted to address several major questions: How have population communication programs developed? What has been accomplished? What has been learned? What do past experiences suggest for future efforts?

The Synthesis of Population Communication Experience Project was planned and initiated by Dr. Robert P. Worrall, who directed the East-West Communication Institute's activities in population communication from the beginning of the program in 1970 until he left in July 1976 to become Vice President of the Population Reference Bureau. Under his leadership, the Institute established contact with people in 133 countries and territories and involved in its programs more than 500 middle- and upper-level specialists in information, education, and communication.

Mr. Lyle Saunders, former Ford Foundation Program Officer in Population was a Visiting Researcher at the Institute from November 1975 to November 1976. During that year he was closely involved in the planning and implementation of the project. He has continued to serve as special advisor and consultant to the project, and has been one of the two substantive editors of the Synthesis Papers.

Dr. James R. Echols, former President of the Population Reference Bureau and now Population Communication Consultant to several organizations, has also served as Project consultant and as the other substantive editor for the papers.

Barbara Yount, Writer/Editor of the Institute's IEC Newsletter, which under her editorship grew from a 4-page to a 28-page quarterly newsletter reaching 8,000 people, has been general editor of the series.

Millicent Sanchez assisted the general editor with the copy-editing and the seemingly never-ending bibliographic work such a project requires.

Kay Garrett, EWCI Publications Officer, has been responsible for the design, production, and distribution of the series.

Alison Miura, Karen Katayama, and Roberta Morgan typeset the papers; Jill McEdward and Louise Good cheerfully helped with the volume of proofreading.

Shana Hurst has served as Secretary to the Project since 1975 and has taken care of a million necessary details.

To all of these people, including the writers themselves, I owe an immense debt of gratitude for their time, effort, and dedication to the Synthesis Project.

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Elizabeth Buck
Assistant Director for
AID Activities

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CHAPTER 1

Introduction

The purpose of this paper is to review the factors that influence the management, conduct, and utilization of social science research related to population communication for policies and intervention strategies in population planning programs.[1] The objective is not to summarize various research findings; such summaries are available elsewhere (Rogers, 1973; Kar et al., 1975), nor is it to develop sets of generalizations or theoretical models. The emphasis is on the process of management and utilization of research and on discussion of the factors that can influence this process. Thus the paper will avoid historical discourse and evaluation of the quality and impact of specific research efforts unless such discussion is central to an understanding of the process or conditions that determine this process. The aim is to review the state of the art of management and utilization of communication research for population planning, policies, and programs, as well as to address questions such as: 1) What is the current state of affairs? 2) How did we get here? 3) What are the issues we must face now? 4) What are the prospects for the future?

The primary audience of this document includes those people who are responsible for management and utilization of research for policies and programs and therefore those who are planners of policies and management of programs.[2] The secondary audience would be the professionals who are expected to make specific use of research findings in their respective professional roles within the constraints of the overall policy and programs and assignments. The researcher[3] has a primary role in the utilization of results by planners, professionals, and peers; thus, this document is also addressed to the concerned researcher, particularly those who have influence on research development and management of policies and programs.

The text of this paper is organized under two major categories: 1) Management and Utilization of Population Communication Research, and 2) The Patterns of Past Research and Current Status. The first category deals with a set of factors extrinsic to the nature and quality of actual research efforts and results (that is, priority, decision and selection of problem, and management, conduct, and utilization of research). The second category deals with the intrinsic nature of the research efforts and outcomes and how these may have contributed to the current status of research utilization. This section also has implications for future research management and utilization.

MANAGEMENT AND UTILIZATION
OF POPULATION COMMUNICATION RESEARCH

Communication is defined here as all those planned and unplanned processes through which one or more persons share and influence other persons' knowledge, attitudes, and actions. A communication research is thus a scientific study of the causes and consequences of this process of interpersonal influence; it may or may not involve study of media, hardware, and gadgets. Communication research in population planning is, therefore, an effort to identify those determinants and processes that will help design and implement intervention strategies to achieve predetermined behavioral change that will have direct consequences on individual fertility and thus on the achievement of population program goals.

In order to be effective, such an intervention should begin with a sound understanding of the determinants of the particular behavior. From this perspective, the process of planning and implementing an intervention is analogous to the steps involved in the process of clinical treatment in which a physician begins with a diagnosis of the illness before he administers effective treatment. Similarly, a process aimed at changing behavior through planned intervention must begin with: (a) a sound understanding of the causal factors or determinants of the behavior, (b) a determination of which of these causal factors are amenable to change through communication intervention, and (c) a careful evaluation of which of the various alternative forms of intervention are more effective and efficient (Kar et al., 1975, pp. 5-6).

A communication researcher is often expected to identify and validate the factors and sequences that influence fertility behavior and to suggest specific interventions through which predetermined behavioral change can be achieved more efficiently. More significantly, these suggestions are made available to the planners when they are needed. The extent to which such expectations are fulfilled depends upon the system of interaction between the planners, researchers, and professionals who are working within various political, professional, and organizational constraints. An attempt is made here to identify several factors and issues that determine the effectiveness of this system of interaction between the planners and researchers (see Figure 1).

Figure 1 illustrates a system of interaction among the principals involved in the conduct and utilization of research, the dominant pattern of control of reward and resources for research, the linkages between subsystems, and the reference groups external to the immediate organizational environments of the principals who also influence the overall outcome. The key features of this system are that the nature and use of research is determined by several forces, both external and internal to the program.

Exogenous Units

These are external to the population program and are not subject to direct control by either planners or researchers, do have significant influence on the process and outcome of research use. Major among these units are: a) political and socioeconomic systems which define the policies and priorities of the socially relevant issues for action; b) availability of the theoretical developments, empirical experiences, and methodologies to the planners and researchers; c) the level of social science research capacity and infrastructure; and d) the influence of external agencies such as research institutions, funding agencies, and peers among the academic community who control the reward system as well as resource allocation. These exogenous units, to a large extent, define the degrees of freedoms which affect both the planners and researchers.

Level of Control and Power

The level of control over operational decision varies significantly by the hierarchical order of the program organization. For instance, a top administrator has greater power and control
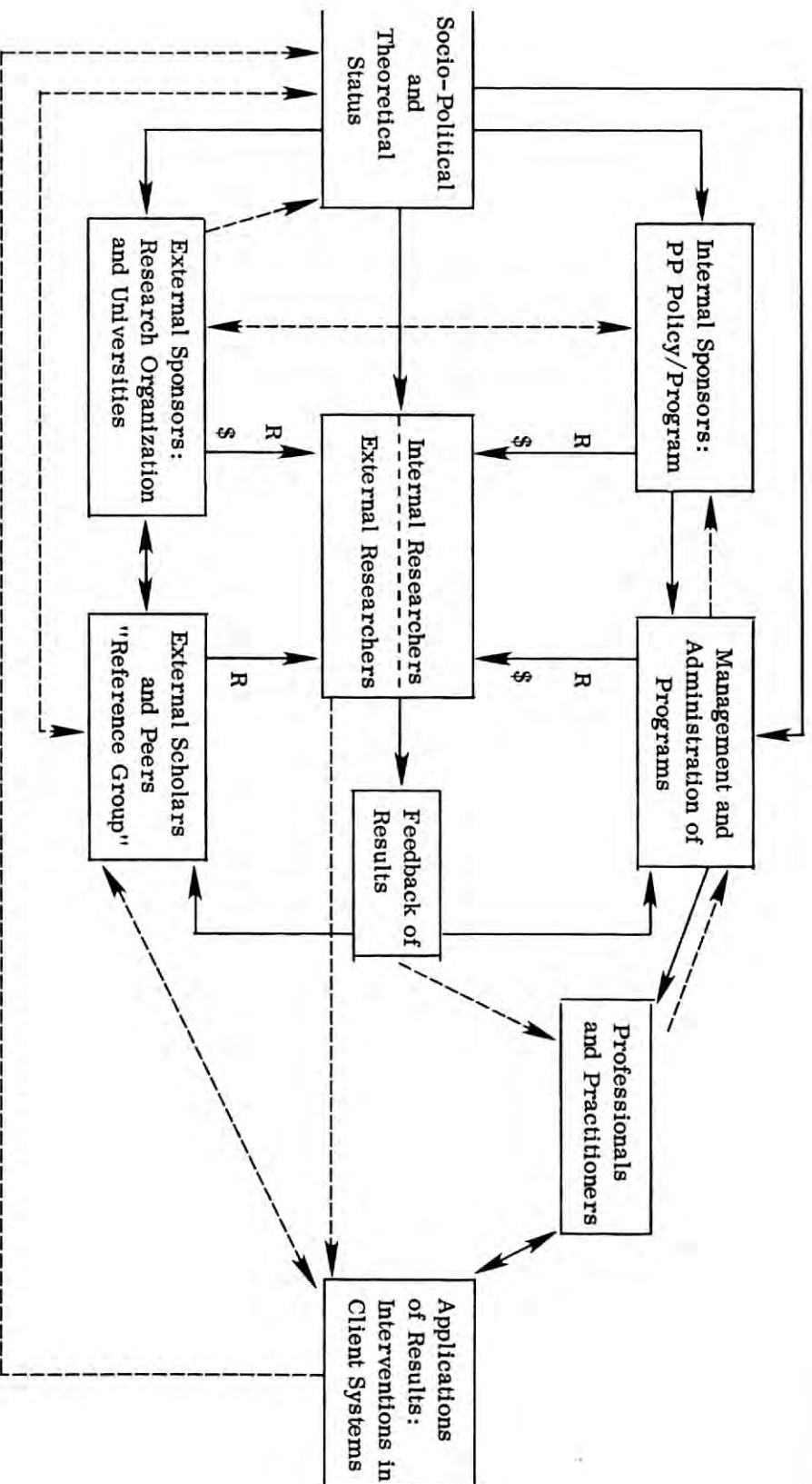
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Figure 1. A System of Interaction among Researchers, Planners, and Professionals with Reference to Management and Use of Research

$ – Control of resources
R – Control of reward

Direct Influence
Indirect Influence

over an internal research unit, through his or her control of resources and rewards, than a researcher has over an administrator. Thus, depending upon the nature of organizational leadership (authoritarian-to-participatory decision) and bureaucratic system, the action and decision outcome will vary when a planner and a researcher differ in terms of their perception of priority and plan of action. In an extreme situation, an internal research unit could be used as an instrument by an administrator to generate research to confirm his/her beliefs and support his/her claims for program success. The other extreme, and a very desirable one, would be that in which both administrator and researcher (even in a hierarchical power system) participate freely in defining the research needs, priorities, resource allocations, and, most significantly, in deciding when and what to expect from a particular research. External researchers, on the other hand, are not under the direct control of program administrators; they are therefore capable of being more objective in their research, but at the same time, due to lack of their direct contact with administrators, the feedback process could be difficult.

The Process of Interaction and Feedback

This is as critical as the availability of research "outcomes" and organizational capabilities for the conduct of research. A key principle is that good feedback is a sharing process in which each partner actively participates. Thus, in order to identify the weaknesses of a feedback and research utilization system, one must look into various points (interfaces) of the system, rather than indulge in self-serving "scapegoating" behavior.

FACTORS THAT AFFECT
RESEARCH MANAGEMENT AND USE

The system presented in Figure 1 provides a framework for identifying and locating various factors that affect research utilization and thus, hopefully, it enables us to "look" for problems where they actually belong. In the next section, several major factors are discussed; they are not presented in any rank order. The basic criterion for selection is that each factor has a significant influence on the process of research management and utilization and that each is amenable to change through conscious cooperation between the planners, the researchers, and the professionals.

1. Assumption of Causality

A population planner is primarily concerned with designing and implementing interventions to change contraceptive and fertility behavior to predetermined levels; the selection of these interventions by the planners is primarily influenced by what a planner believes or assumes to be: (a) the causal factors and (b) the relative feasibility and efficiencies of various alternatives. If planners and researchers differ significantly on what they believe or assume to be the causes of fertility behavior, it is likely that they will differ in terms of research priorities and intervention choices. In the field of social science and population literature, one encounters two categories of causal assumptions that guide planners' and researchers' behavior. Caplan and Nelson (1973) title these two categories <u>Person Blame</u> and <u>Situation Blame</u> theories and approaches. A person blame theory or assumption attributes the causes of a behavior primarily to factors internal to the individuals. Such intra-individual causal assumptions include a wide range of variables such as knowledge, awareness, attitudes, beliefs, motivations, internalized values, and roles. Some <u>person blame</u> theorists deal exclusively with variables such as inherited qualities and subconscious and unconscious aspects of the individual. A <u>situation blame</u> theorist, on the other hand, looks for causal variables in the external environment of the individual, including political, social, economic, physical, and geographic settings. An analysis of the population policies and programs suggests that most planners tend to lean heavily in favor of the situation blame causal assumption. In the early phase they more frequently asked: Is the political and social situation conducive to a massive fertility control program? Thus they vigorously supported KAP-type studies. Simultaneously, they asked: If the situation is ripe for a massive program, are there effective contraceptive methods available at an acceptable price for all? Thus there was considerable support for research to develop "perfect" contraceptives at low cost. In making the decision to launch a massive program, they asked: Do we have the supply system to make contraceptives and information available to individuals in their immediate environment so that the people will accept and use them? This process legitimized support for developing a network of clinics and clinic-based services. In each of these questions, the assumption was that the barrier to family planning acceptance was in the immediate environment and thus, major emphasis for research and intervention should be directed toward external situational factors and improvement of family planning services.

The social scientists, on the other hand, depending upon their disciplinary orientations, were more dispersed in terms of their causal assumptions. For example, while psychologists were more preoccupied with person blame assumption, anthropologists preferred to look hard and deeply into the cultural traditions as determinants of fertility behavior. Demographers and sociologists were preoccupied with the causes and consequences at a much larger level and in issues "beyond family planning." Economists and political scientists were more interested in collective behavior at levels that were quite different from those of other social scientists. There was thus greater diversity of causal assumption used by various groups of social scientists in the research relevant to fertility behavior. Although such diversity of approach is healthy at an exploratory phase of a research, this does not offer the planner a sound empirical basis from which he or she can formulate policies. Thus while the social scientists, for understandable reasons, approached the search for the determinants of fertility behavior with diversified causal assumptions, such apparent lack of consensus or a unified theory left most planners to choose those causal assumptions with which they were familiar and comfortable. The result was a clear preference for research that promised development of better contraceptives and family planning services. R. Freedman and B. Berelson have summarized the controversy about causal assumptions used in intervention strategies as: "The supply/demand equation is close to the heart of the controversy over family planning programs. Is there 'enough' existing motivation (demand) to make for a significant fertility decline if it were met (supply)?" (1976, p. 3)

While this debate is alive, the preference of the planner was clearly in favor of increasing the supply or intervening to alter the external situational factors while assuming that motivation for contraception was self-evident. The existence of motivation for family planning was based upon: (a) favorable response to general attitudinal measurements in the KAP studies, (b) evidence of unwanted pregnancies and resultant induced abortions, and (c) excessive faith in the rational nature of man, which holds that, since unplanned pregnancies and unlimited births are not good for the peoples' self interest, they would use family planning methods when these were made available. As Freedman and Berelson state, interventions so far have clearly emphasized the improvement of supply.

The distinguishing key is that family planning programs work primarily on the supply side of the behavioral equation.

As for demand, the family planning rationale 1) takes that as more or less given at a particular time, and/or 2) considers that the most realistic way to extend motivation is to satisfy existing motivation, and/or 3) addresses motivation through symbolic appeals ("education" or "propaganda") rather than through basic social and economic changes in the society, and/or 4) believes that legitimizing family planning in this manner will tend to make latent demand manifest, and/or 5) considers that motivation will build with the process of historical modernization now being sought in the developing world and that minimizing supply problems will significantly facilitate the total process (1976).

Until now, particularly during the early phase of population programs, the different causal assumptions preferred by the planners (situation blame) and the researchers (diversity based upon disciplines used either or both situation and person blame assumption), and the absence of a clearly defined, unified theory contributed toward a lack of appreciation of the value of social science research for action strategies. Furthermore, particularly in the early phases of the programs, the serious researchers themselves were struggling to understand a complex process and were considerably less prepared to offer concrete recommendations based upon pragmatic and empirical experience with fertility intervention at a massive scale. This is a phase characterized by the predominance of the planner's pragmatic attitudes over the researcher's uncertainty and skepticism about effective ways in dealing with this new and very complex issue.

2. Empathy and Communication

John Dewey viewed communication as a central factor in social thoughts and actions, and two concepts are critical in understanding this perspective of communication: empathy and foresight (Belman, 1977). The concepts of empathy and foresight are particularly relevant in understanding the quality of communication between planners and researchers, which in turn influences effective management and utilization of research. As a general rule, the mutual empathy between planners and researchers is rather low, and each tends to maintain unflattering stereotypes about the other. Planners stereotype researchers as persons who are: 1) preoccupied with the pursuit of abstract, theoretical, and often esoteric problems that have little immediate relevance for actions; 2) more

intrigued by most recent developments of research methodologies and technology, regardless of their social relevance and the feasibility of their application (that is, numerous large-scale surveys that require modern data processing systems and complex model-building efforts are used to support this stereotype) than by the day-to-day, real problems of family planning programs; and 3) involved in time-consuming activities, the costs of which far outweigh their benefits to a specific program such as population planning programs (that is, research on modernization; socialization; changing sex roles which are beyond family planning and thus outside the scope of family planning; and public health programs).

The researchers, on the other hand, stereotype the planners as persons who are: 1) primarily interested in achieving immediate tangible results and annual program targets; 2) impatient and often unprepared to deal effectively with complex factors (internal or external to a program's scope) that influence the long-range outcomes; 3) much too nearsighted and influenced by the constraints of a program to see the relevance and justification for any serious research which, although it could be expensive and time-consuming, would have a major impact on future policies; and 4) expecting the research to produce miraculous solutions of problems through "quickie" studies. Under such circumstances, internal researchers may feel a genuine lack of appreciation and often resign themselves to carrying out the wishes of the planners rather than initiating and advocating new ideas. When external researchers, who are free from the domination of the program planners, feel that they are unappreciated, they tend to withdraw and avoid communication with planners. These stereotypes, based upon lack of empathy and communication, are serious barriers in the research management and utilization for population policies. There is no simple and sure solution to this problem; however, an initial, essential step toward resolving the stereotype barriers would be to design mechanisms for the increased understanding of mutual roles, responsibilities, constraints, and realistic expectations.

3. Collaborative Management and Utilization

Lack of agreement between planners and researchers about major issues and questions can seriously affect the conduct and utilization of research. Chief among these issues and questions are the following: Which research is important, why and when? How much does it cost in money, manpower, and hardware? Who should do the research? How long would it take before results are available?

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What kind of results and solutions can be expected? How would these results be made available to those who are expected to use them? Only collaborative decisions by planners and researchers can effectively answer these questions. Often a planner is under pressure to justify the "success" of his or her effort to those who control fiscal allocations and budgets; annual and time-bound programs (that is, five-year plans) must therefore be justified by actual or potential gains due to these efforts. Any research that does not help achieve program goals within a given time frame and is not considered cost efficient is not likely to be supported by the planners; even if such a research is sponsored by the external donors, the chances of its effective utilization by the planner would be rather slim (key areas of collaborative decisions are underscored). Thus, researchers and planners have the joint responsibility to define these issues clearly.

4. Concept of Good and Useful Research

In the opening sentences of his book The Conduct of Inquiry: Methodology for Behavioral Science, philosopher Abraham Kaplan states the declaration of scientific independence as:

> It is one of the themes of this book that the various sciences, taken together, are not colonies subject to the governance of logic, methodology, philosophy of science, or any other discipline whatever, but are, and of right ought to be, free and independent. Following John Dewey, I shall refer to this declaration of scientific independence as the principle of autonomy of inquiry. It is the principle that the pursuit of truth is accountable to nothing and to no one not a part of that pursuit itself (1964, p. 3).

Those who are committed to the principles of scientific autonomy would have an entirely different concept of a good or useful research from that of the planners who evaluate a research in terms of its usefulness to solve specific problems. Even those researchers who are not "purists" frequently differ from the pragmatic planners in their respective concepts of useful research. For example, a theoretically and methodologically sound research, even if it does not "prove" or establish a relationship between two variables (presumed to have a cause and effect relationship), could be considered very useful by researchers. The fact that no relationship between these two variables was observed is a significant outcome to the

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researcher. The planners, on the other hand, are more interested in knowing the relationships between variables that would help them plan actions. They are more concerned with ascertaining the following: What are the major determinants of a problem? Which of these are amenable to change? What inputs are needed for these changes? What are the likely outcomes of these inputs? Thus a research that does not identify a relationship (does not reject a null hypothesis) or answer these questions, is likely to be judged by planners as relatively useless to them. Second, most researchers would define "successful" research as one which: (a) generates new ideas and thus stimulates many more research efforts; (b) reformulates a question or a problem in the light of new findings; and (c) leaves the readers with more questions than answers. Most planners may not consider such research as successful or useful to them. Such efforts would not frequently be supported by planners.

There needs to be a greater agreement between the planners and researchers about what constitutes a "good and useful" research, if such research were to be used for policy. In spite of good intentions, consensus in this area may not evolve unless there are organized efforts by both. In many cases such efforts would have to include: structural changes (selection of the right person for the right job and an organizational structure that would require planner and researcher to participate in decisions about which research is to be supported and how it is to be used); cognitive changes (reorientation and redefinition of useful research); formal mechanism of integration of efforts by both; and ongoing feedback during the conduct of a particular research for dissemination of available research findings. The specific solutions would have to be worked out within each situational context; no standard simple solution is meaningful. However, unless such solutions are found within each programmatic context, the problem will not disappear by merely wishing that it would.

5. Communication Complexity and Semantics

Communication of a research is a necessary condition for its utilization. A major reason for inadequate utilization is the barrier to communications between the planners and researchers within organizations. The factors or barriers that influence an adequate communication of researchers comprise the following categories:

Personal Factors. Motivation to seek new ideas and solutions,

familiarity and ability to deal with the substantive results within a sound conceptual or theoretical framework, and personal situational factors that determine whether a planner is able to invest the effort and whether he or she is willing to take the risk in terms of initiating innovations in policies and actions.

Complexity of the Content. A complex research report must be distinguished from an unnecessarily complicated or confusing one. Some research may be difficult to understand because it deals with complex theoretical formulations and sophisticated methodological and analytical designs. The users of such research must possess adequate preparation to deal with the intrinsic complexities. Thus the degree to which a particular research is effectively used is determined by both the intrinsic complexity of the research as well as the personal competency of the readers. However it is difficult to think of many social science concepts and theories that are too complex for intelligent planners to understand when properly communicated.

Semantic Differences. This is the third and probably the most significant factor that determines the degree to which a piece of research is considered complex by its readers. This includes both differences between the perceptions of the reality and the symbols or words used to express these perceptions and ideas. The communication gap created by the differences of perceptions of reality and causal conditions between researcher and planner has been discussed earlier (see pp. 6-10). While these differences can cause serious problems, the barriers due to the symbols and formats used can cause equally serious and at times greater problems in the use of research. The problem caused by the use (abuse) of technical terminology in research communication can be looked at from the perspectives of scientific tradition. Each science has developed its own vocabulary to communicate specialized concepts and meanings. Not only are these scientific terms needed to communicate specialized concepts, but also they are the most efficient way to communicate complex and specialized meanings to those who are familiar with this vocabulary. Social scientists are no exception; they are trained in and expected to use scientific terminologies effectively. There is no reason to object seriously to the use of scientific terms (without glossaries or definitions of terms) by the social scientists when communicating with their peers. The problem arises when the targets of such communication are not familiar with such scientific terms; the use of undefined scientific terms in

communicating with those audiences defeats communication. Many social scientists find it difficult to write in simple English because they are not trained to do so, and it requires considerable effort to explain simply each technical term. The second reason is that social scientists are not often sensitive to those who are unfamiliar with technical terms; this is primarily because most social scientists aim their writings at other social scientists and thus are not sensitive to their impact on others. The first problem requires training and practice for the social scientists to develop the art of writing for the non-scientific community; the second problem will require considerable incentives for writing non-scientific reports that are not considered scholarly by their peers.

6. The Researcher's Dilemma

A major dilemma of social science is that, while it empirically tests and explains the psycho-social processes or the causes and consequences of human behavior within a well-defined context, these processes are not totally unknown to perceptive individuals who may have either personally experienced them or have observed most of these processes. In addition, folk wisdom and common knowledge evolved from and confirmed by the collective experiences of a group are often valid generalizations tested over time. Thus the scientific explanations of many social processes and the general propositions that govern such explanations are often well-known to many persons with social insight. These individuals, without using the formal theories and methodologies of the social sciences, may come to conclusions similar to those generated by the social scientists after considerable time and effort. Thus a social scientist, after a rigorous research effort, may present his/her conclusions to such persons only to be confronted by a response such as: "So what's so special about this? That's nothing new; I have always known that--so why do you need an expensive research to confirm what everyone knows?"

One dilemma is that, if research data supports some of the personal beliefs and conclusions based upon common sense, many hard-nosed planners, instead of saying, "I am delighted to see that my beliefs are proven to be true; and now I can be more confident when I base my decisions on these confirmed hunches," choose to evaluate the research as a waste since it only confirmed what they had already known or believed to be true. The second dilemma is that, if a research disproves some of the basic beliefs and convictions

upon which the planners had already based major decisions and commitments, such results are not likely to be easily accepted. When one is faced with evidence that disproves deeply held beliefs and convictions, it is not uncommon to question and reject the validity of such evidence. The dilemma thus is, if a research confirms a planner's beliefs and convictions, it could be perceived as a luxury of questionable value; on the other hand, if a research disproves deeply held convictions upon which major decisions have been based, then not too many planners would be inclined to accept these findings readily. George Homans, a distinguished sociologist, summed up one of the major problems in the following words:

> The difficulties of social science lie in explanation rather than discovery. Explanation is the process of showing how empirical findings follow from, can be deduced from, general propositions under particular given conditions. The general propositions of all the social sciences are psychological, propositions about the behavior of men rather than about societies or other social groups as such (p. 79).

> These propositions are not only very general but also, in the sense I have already described, very well known (1967, p. 80).

Not too many cost- and efficiency-minded planners are willing to be impressed with research that tests only what is common knowledge or the obvious. Yet we must remember those numerous instances wherein later experiences confirmed that what everyone believed to be true and obvious was not necessarily true. For example, most people in Western societies today would not believe that the world is flat; that the sun moves around the earth; that mental disorders are caused by evil spirits; that hysteria is caused by the malfunction within the uterus, and so on. Therefore, even if social science has little to "discover" in the sense that Homans defines it, one of its major contributions is in the area of empirical confirmation or refutation of the numerous beliefs and convictions upon which we base our decisions.

Yet another major dilemma of social science is that even if it conclusively confirms a process or the relationship between two variables assumed to be causally related, such a particular research does not necessarily tell us what can be done about it. For example, research shows that modernization and women's status significantly

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affect fertility. But these studies do not tell the reader how to change the level of modernization or women's status in a given society. Thus, even if a social research confirms a relationship, one is likely still to be confronted with the question: "O.K., you tell me that standard of living is related to fertility. So what can I do with this information? Can you tell me how the standard of living can be improved more efficiently?" Most social scientists would agree that it is too much to expect one researcher to answer both the question of what causes what, as well as how to change the causal factors more effectively with least cost.

7. Reward and Reference Groups

According to various motivation theories, incentives and disincentives have powerful influences on behavior. Thus, those who control a reward system also control the respective behavior. It is therefore highly relevant to review the nature of reward systems and their controllers for the planners and for the social scientists (see Figure 1). Planners are evaluated by their superiors who, because they are often politicians, must evaluate acheivements and priorities in terms of the wider political and power system within which they function. Top planners cannot afford to ignore those political realities; when faced with difficult decisions, it is not unlikely that they would first try to satisfy the expectations of their superiors. If a research fails to find means to achieve these expectations or, worse still, suggests actions that may conflict with meeting these expectations, such findings are not likely to be used. An intramural researcher who is under the control of such a planner often faces a dual problem. He or she must satisfy his/her boss (planner), which often means compromising scientific preferences on the one hand, and he/she must maintain his/her reputation as a sound researcher within the scientific community. Although an external researcher may be immune to this conflict, he or she runs the risk of his/her research contribution not being fully utilized. Thus the reference groups for the planners and researchers (that is, individuals or organizations who serve as points of reference for expectations, norms, and rewards for action) are often separate. This in turn may cause these planners and researchers to maintain conflicting positions about the desirable course of action to achieve the ultimate program goals. If a social scientist is to be effective, he or she must have an open and two-way communication with the planner; and such communication involves mutual influence. But when the two maintain conflicting positions and when one has greater power over the other, the result is,

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at best, ineffective management and use of research. As D. M. McGregor states, "If the communicator begins with the conviction that his position is right and must prevail, the process is not transactional but coercive. The process is one-way no matter how many words may be said by those receiving the communication" (1977, p. 335). The need to prevail, whether due to the convictions about what is right or the need to comply with different sets of reference groups and expectations, causes the outcome to be detrimental.

While specific solutions would depend upon a given situation, a general principle for understanding such conflict is this--if the organizational goals are in conflict with the personal and professional goals, the transaction between the planner and researcher would not be effective. It would be unrealistic to assume that people are fully rational, and any solution to be effective must find a workable balance between the two sets of goals, rewards, and controls.

8. The Meaning of Effective Use

To researchers, an effective use of a research may mean scholarly publications and the use of such publications by the scientific community in further studies and in teaching. To these persons, a research could be highly useful even if it raises more questions than it answers--and if it explains complex social processes regardless of whether they can be solved. To a planner, on the other hand, a research to be useful must provide better answers rather than raise more questions. This problem is further compounded by the need of the planners to formulate action solutions within a short time frame, which social scientists are often unable to provide rapidly through direct research. But, at the same time, social scientists are reluctant to search for "solutions" in existing literature and research done by others. This is partly because, to most academically oriented social scientists, publications which are typed as "review papers," "working papers," and "think papers," are not as prestigious as publications based upon original empirical research. Thus, when faced with the problem of finding solutions for operational problems presented by the planners, the academically oriented social scientists emphasize the importance of empirical studies or research-cum-action (RCA) projects. Such studies not only take time but also consume considerable resources. Often planners and administrators who do not have direct experience in conducting research fail to see why researchers use elaborate

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study designs, spend so much time and resources for developing the instrument for data collection, use large samples, and generally spend so much money and effort to analyze and write reports. Unless one has gone through these steps or is willing to learn through open communication, it is almost impossible to comprehend the need and usefulness of such an intensive resource and time-consuming project. If and when a planner is willing to support such "expensive" projects, he/she then expects "useful" outcomes in terms of specific solutions. Anything that does not meet those expectations may be considered useless (see pp. 13-15, "Researcher's Dilemma"). Much of the problem has to do with differences between the two in: (a) perception of useful research outcomes, (b) definition of good "use" of the outcome, (c) judgments about the reasonable time and resources needed for a particular research, and (d) inadequate initial and ongoing two-way communication between the researcher and the social scientist.

9. Time Perspectives

Planner and researchers often operate on different "actual" and "ideal" time scales. Planners are accustomed to annual goals and tend to measure achievements relative to these goals and the cost of output. If the actual achievement is considerably lower than the predetermined goals, the common reaction of the planner is to find a better means of achieving these goals within the set time frame (partly because, once adopted, the annual or five-year plan goals are not always easily or politically feasibly changed). They would be more inclined to make major changes in their strategies rather than to lower the program goals drastically or to extend the time period (some planners fear that lowering the target or extending time are admissions of failure). The researchers on the other hand, particularly those outside the programs, may not find it unusual to choose a longitudinal study design to test effectiveness of various action strategies that may take many years to complete. They are neither willing nor free to change their research designs drastically to meet the immediate problems of a planner. To a researcher, any drastic change in research design in midstream may mean a disaster since such change threatens the reliability and validity of the research. Due to their preoccupation with time-bound program targets, when the planners face operational problems, they are not willing to wait for years for a researcher to generate the solutions. Thus the tendency is to discourage or reject plans for long-term studies no matter how fundamental these may be for future

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policies and actions. This budget-bound, time orientation often restricts the degree of freedom of the researchers to choose the appropriate time frame and design dictated by the nature of the problem in the real world. The pressure for doing one quick study after another within the framework of the annual budget and targets, often discourages serious researchers from participating in operational research within the limits of a program. A serious researcher, when chance permits, would rather operate from an academic base and with sponsorship from private foundations. (This is generally true in most research directly relevant to communication strategies and policies; the situation is somewhat different in some areas of research such as biomedical and demographic aspects.) Such organizational separation and the communication gap inherent in this arrangement make it difficult for the planners to benefit from the interim or experience of a long-range study conducted by researchers based elsewhere. This then constitutes a vicious cycle: the planners' and administrators' preoccupation with targets and budgets makes them unresponsive to research that takes longer to complete; this discourages many researchers from undertaking serious research on social processes of fundamental value to future policies and actions; and this, in turn, reduces the availability of sound research findings to the planners of the next generation or cohort. This cycle continues except when imaginative planners, private donors, and social scientists make conscious efforts to design research and feedback mechanisms that are not seriously limited by the divergent time perspectives of planners and researchers.

10. Situational Factors: Contact and Accessibility

The first of these situational factors is the physical and social distance between the planners and social scientists. Often they are located in different units within an organization, and the social distance due to the difference in power and status does not encourage informal communication and feedback between the two. Informal communication is a major means for change and adoption of new ideas both at the individual level as well as at the organizational level (Rogers and Shoemaker, 1971; Thomas and Bennis [eds.], 1972; David, 1977; Lawrence and Lorsch, 1967). Most planners are too busy to read bulky scientific reports; and even if they are willing to read these final reports, they are few and far between. Moreover, even if such reports are read by planners, it is not easy for them to penetrate the barriers built by technical

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terms, professional jargons, and complicated tables, charts, and statistics. The net effect is that final technical reports are not usually the best means for communicating a research message to the planners. If planners and researchers are in a situation that allows them to interact continuously, then personal contact and mutual accessibility will greatly facilitate the flow of information between the two. In such a situation, final reports are not the only means for research communication to the planners; results could be made available much earlier than when they are available in published form. Such mechanisms also allow for two-way clarifications of the meanings and evaluation of implications of the research experience. Situational planning to reduce the physical and social distance between the researchers and planners is a major and yet neglected area in the management of and utilization of research. (See item No. 12 which deals with the problem of feedback in general and touches on some of the means through which the contact and accessibility can be increased for better flow of information.)

11. Unified General Theory or Action

Some critics argue that the social sciences do not possess general theories or laws similar to other sciences and therefore are not sciences. Others believe that social sciences are radically different from other sciences and primarily offer a lower order of generality and theories. An excellent discussion of this issue is presented by Homans who argues: "I cannot repeat too often that our actual explanations are our theories. What is needed is the most utter intellectual honesty, including the humiliating honesty of admitting the obvious" (1967, p. 107).

The dilemma of a social scientist who validates the obvious scientifically was presented earlier. Such outcomes of a specific research based upon a social science that is perceived as not possessing a unifying theory does not often have much impact on the critics and planners. The problem is compounded by the fact that the various social sciences often differ among themselves about the explanation of a particular social process. Faced with the problem of not having a theory that would help predict the effective solutions in all or most situations and with conflicting advice from different social scientists (depending upon their particular background), the planners may begin to question the validity of the social sciences as effective bases for policy decisions. True, there are social scientists who claim general theories, but these are often too

general to be useful to the planners for specific predictions and actions. On the other hand, the social scientists have many explanations and propositions that are well-tested empirically. These propositions, although not theories, can be valid within a specific situational context, such as the proposition dealing with the effect of a specific psychosocial variable (that is, reward, success, perception, dissonance, attitudes, social and marital status, income, education) on a behavior within a given context. Much can be gained by using a set of propositions for action policies in situations that are similar to the one in which these propositions were tested. The role of social scientists is to explain the process and define the context in which the proposition is valid. Social scientists who wish to participate at this level can be of far more value to the planners than those who wish to present unified or general theories for action in all situations. The planners, on the other hand, need to recognize that the general theories are not useful for specific social actions, and thus seek the help of the social scientists to develop policies based upon well-tested propositions within a clearly-defined situational context.

12. Feedback of Research Results

Effective feedback links the researchers with the planners, professionals, and fellow researchers. Thus a researcher's contribution depends greatly on the quality of the various linking mechanisms. The three categories of linking mechanisms often used are formal, semiformal, and informal.

The formal feedback mechanism includes published reports and formal presentations of completed research papers at conferences and seminars. While the formal feedback mechanism is rather effective in communicating with the scientific community, it is limited as an effective mechanism to link the researchers with the planners (see sections 8 and 10 for discussions of the problem with scientific publications as a major means for communication with planners).

The semiformal mechanisms include feedback of ongoing experiences in somewhat planned and structured formats before the final report is published. Periodic planning/staff meetings wherein the planners, researchers, and the professionals can jointly review the progress, discuss findings, evaluate their implications, and plan future actions is a good mechnism. Periodic

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brief intra- and inter-organizational memoranda, newsletters, meetings, and workshops designed to deal with specific problems, as well as the use of consultants, are some of the other effective semiformal mechanisms of feedback. While none of these mechanisms is unknown to anyone, the full potentials of these semiformal mechanisms are not usually exploited by most organizations. These semiformal and formal mechanisms have another significant role in the feedback of research among social scientists. It is well-known that in many LDCs (Lesser Developed Countries) there is a serious problem of accessibility to recent literature and journals. Thus social scientists are not often up-to-date about recent and ongoing research. In addition, lack of an effective network of communication among the social scientists leads to wasteful duplication of research efforts, repetition of the same mistakes made by others, failure to utilize the relevant literature in the formulation of research problems and designs, and a serious barrier in the process of analysis and synthesis of research for formulating generalizations and evaluating specific results against these general propositions. Finally, the lack of access to available research makes it rather difficult to use existing research for policy and research decisions. Thus the semiformal mechanism has an extremely significant role in the utilization of research by the researchers as well as by the planners.

The informal mechanisms include those unplanned face-to-face situations (due to chance or choice) in which individuals share information of mutual interest. The literature dealing with the diffusion of innovations suggests that, with the exception of those who are innovators, informal communication plays a greater role in the adoption of a new idea or a practice. It is also well known how an unplanned encounter could significantly influence the right person at the right moment. These informal encounters could be more effective if one is sensitive, alert, and psychologically prepared to capitalize on these occasions.

Feedback also involves the flow of information and its content concerning the effectiveness of a policy or intervention. This raises the question: Who should evaluate? The questions can be approached from different perspectives. From the strictly technical perspective, evaluation of social impacts of a program should be done by a social scientist who is competent to deal with the task. It is important that any conflict of interest should not interfere with the process of evaluation and that the evaluator should not be

afraid to point out serious failures when they occur. From this perspective, an evaluation should be done by someone who is objective and also external to the organization whose effect is being evaluated. The second perspective is concerned with the impact of feedback on those who receive it. Negative feedback, especially from outside sources, could be threatening, and the receiver may reject such feedback. When this occurs, the positive value of feedback is greatly minimized. Thus, from the motivational perspective, when an organization that has the capacity and willingness to evaluate its own performance is threatened by an external evaluation, it is not unreasonable to allow self-evaluation to take place. Self-evaluation has the added advantage of a built-in feedback mechanism; when an honest internal evaluation is made, the information gathered is fully available to the organization that conducts this task.

The third and last question is whether the planners or the social scientists working for an organization should be evaluators. Once again, the objective should determine what is most desirable. If the objective is self discovery of the process and barriers (rather than the outcome), then self-evaluation by planners (with technical assistance from social scientists) has considerable merit. On the other hand, such persons are usually too busy to do a thorough job. In addition, they may also lack the objectivity and the skills needed for a valid evaluation.

CHAPTER 2

Patterns of Past Research and Current Status

The earliest research in the field that was later to become population communication was initiated by concerned private foundations that began supporting demographic research. The pioneering works of Margaret Sanger, Hannah Stone, Abraham Stone, and Alan Guttmacher had created considerable interest and support for birth control research and services particularly in the Americas and in Europe. The Scripps Foundation for Research in Population Problems was established in 1922 and the Milbank Memorial Fund in 1928, to provide centralized clearinghouses for the review and promotion of research on demographic phenomena in the United States. The Office of Population Research at Princeton was formed in 1936 with a US$250,000 grant from the Milbank Memorial Fund (Harkavy, 1974). The significance of these early efforts for later population research is twofold: 1) it established the precedence of population problems as a somewhat independent field of study, and 2) it placed this field within the jurisdiction of demography, which was to have far-reaching consequences for the theoretical and methodological perspectives of the field for decades.

In spite of this early interest in population problems and related research, the subject received only relatively minor attention until after World War II. At that time, concern over rapid population growth in the developing countries of the world, and the resulting negative consequences on their economic development efforts, once again stimulated private foundations to become active in the field; this time, however, the emphasis was on the Third World. In 1952, John D. Rockefeller 3d founded the Population Council; this act came after his proposal for the Rockefeller Foundation to accept population as one of its main fields of interest had been turned down by the foundation trustees. The Population Council "concentrated on stimulating governmental awareness of population matters and on fostering training and research in the demographic and biomedical fields" (Johnson et al., 1973, p. 170).

The early 1960's really marked the promotion of population to the status of a field of widespread interest and involvement. National family planning programs with the explicit objective of reducing population growth rates were established in India (1952), Pakistan (1960), and Korea (1961). The United States Agency for International Development (USAID) in 1965 and the United Nations in 1967, began active promotion and support of population control activities after realizing that their development efforts and monies in the Third World were being negated by rapid expansion of populations.

THE CLINIC AND KAP PHASE

The initial phase was characterized by a clinical approach to the organization and provision of family planning services and by a demographic approach to population research. This period also witnessed the conduct of hundreds of KAP surveys, which attempted to measure the levels of knowledge, attitudes, and practices of populations as these factors related to contraception and family size norms. These studies, which have been much criticized on methodological grounds, reported that among the respondents there were:

1. widespread desire to limit their family size

2. substantial amounts of approval of the concept of family planning and interest in learning how to practice contraception

3. elementary knowledge about contraceptive methods, but low levels of knowledge about reproductive physiology

4. low levels of family planning practice throughout the developing world, in spite of higher levels of awareness and knowledge.

These findings often relieved apprehensions and confirmed the convictions of the planners in many countries that people were ready for vigorous family/population planning programs. The results also led many planners to believe that once services were provided acceptance of family planning would follow. But experience proved otherwise; and criticism of the usefulness of these studies for planning action strategy and specific interventions began to mount. In spite of a large gap between attitudes toward fertility and

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actual behavior, the high level of interest and positive attitude toward family planning documented by the KAP studies was used by policy makers to legitimize and launch vigorous family planning programs in many LDCs. There are some who challenged the need for studying the relationship between fertility attitudes and behavior on the grounds that motivation and positive attitudes for family planning are self-evident, and thus such studies are redundant; what is needed most are better supplies of contraceptives.[4] There are yet others who did not believe in attitude change strategy, and thus study of consistency between attitude and behavior was of inconsequential significance to them. They would argue that fertility attitudes are most difficult to change and that, even if attitudes are changed, this does not result in actions (see T. J. Crawford's 1974 insightful analysis on this issue). While there are some who criticize the KAP studies on the grounds of self-evident "optimum felt need" for fertility control that makes these studies unnecessary and some who challenge the notion that attitude change will promote corresponding behavior, most of the critics of the KAP studies are those who question the adequacy of the research designs and thus the validity of their results. The last category of critics of KAP studies as well as those who are in search of sound theoretical bases for intervention strategies question seriously the validity of these results and thus the wisdom of accepting these results as the basis of policy and strategy formulations. While they challenge the methods and results of these studies, they do not necessarily question the notion of consistency between attitudes and behavior, nor do they deemphasize the importance of studying the attitudinal determinants of fertility behavior. If anything, these critics are disturbed by the methodological shortcomings of the KAP studies and argue for better conceptualization of the problem and more methodological sophistication (Berelson, 1966; Blake and Das Gupta, 1975; Cleland, 1973; Coombs, 1974; Coombs et al., 1975; Crawford, 1974; Fawcett, 1970; Fishbein, 1972, 1973; Freedman et al., 1975; Freedman and Berelson, 1976; Hauser, 1967; Kar, 1971, 1976; Kar et al., 1975; Ryder, 1973; and Ware, 1974).

It is relevant here to review the limitations of KAP and similar studies from the standpoint of their usefulness and impact on research and action policies. The major criticisms of the KAP studies can be categorized as follows: 1) conceptual and operational definitions of attitudes; 2) conceptualization of attitudes as the sole determinant of behavior; and 3) methodological and measurement problems of the KAP studies.

1. Conceptual and Operational Definitions of Attitudes

Attitude toward fertility and family size has been variously operationalized and measured in terms of "ideal family size," "desired family size," "expected family size," and the desire for additional children (Coombs, 1974; Freedman et al., 1975; Ryder, 1973; and Ware, 1974). A lack of strong relationship between these variables and contraceptive behavior has led to several criticisms against these measures of attitude as predictors of fertility behavior. One criticism is about the level of generality of these variables and measures. The critics argue that these measures elicit general and stereotyped responses in hypothetical contexts while behavior is influenced by specific situations; that the responses represent the respondents' feelings about what they think they should say rather than what they actually feel; that many respondents (especially those who are young and have few or no children) may not hold a firm and stable family size preference at the time they are interviewed; and that the respondents' initial and spontaneous response need not represent a firm choice or underlying family size preference (see Coombs, 1974 and Coombs et al., 1975 for an excellent analysis that shows that respondents do indeed vary significantly in terms of these underlying predictors of family size even though they give identical initial preferences). Furthermore, the ideal or desired family size increases with actual number of children, and people usually tend to have more children than they consider desirable or ideal; thus, the causal sequence between actual and ideal number of children is often questioned.

The second criticism concerns the lack of measures of the strength or intensity of the attitudes. The intensity or strength of feeling associated with an attitudinal object and with action within a specific situation is a significant component of attitude and acts as a major determinant of corresponding behavior; consequently, the theories of attitude measurement place heavy emphasis on this component (Katz, 1960; Kelman, 1974; and Fishbein, 1972). Yet most KAP studies ignore the intensity of fertility and family planning attitudes, and attitude toward fertility is measured through simple and often single statements about family size norm. Respondents desiring the same number of children may differ in terms of how strongly they feel about their desired family size and how concerned and determined they are about not having children beyond the number desired. The author's study with a sample of low-income women in

the United States indicated that, while early acceptors and late acceptors did not vary significantly in terms of their desired family size, there was a significant difference between these two groups in terms of their "tolerable limits of family size." Tolerable limits of family size were measured by asking how many more children they were willing to tolerate beyond the number they desired, and there was a significant and negative relationship between the number of additional children the respondents were willing to tolerate and actual use of modern contraceptives (Kar, 1971). This lack of adequate measures of the intensity of attitudes has been a major concern among the critiques of these studies.

Inadequate measures of stability of attitudes and consistency between attitudes relevant to family planning behavior is yet another reason for criticism of the KAP studies. Since it is believed that the formation of family size norm is a gradual process and that attitudes toward family planning may undergo considerable transformation over a period of many years from marriage to multiple birth experience, it is a questionable assumption that all women (men) regardless of age, number of living children, and pregnancies possess equally strong and stable attitudes toward a family size at the time they are interviewed. An analysis of survey data that fails to differentiate the level of crystallization of attitudes by life stages and experiences may risk the predictability of behavior considerably. It can also be argued that the stability of attitude is a significant determinant of a behavior in the future and that the attitude–behavior consistency over a period of time can best be tested through a longitudinal study of the same respondents (Crawford, 1974; Ryder, 1973; Hauser, 1967; Freedman and Berelson, 1976; and Freedman et al., 1975). In addition to the stability of a specific attitude, it is likely that fertility behavior at a given time is also influenced by the interaction between a set of relevant competing and conflicting attitudes within the same person. For instance, an individual woman may have a positive attitude toward a small family and may want to limit her own fertility, and yet concurrently, her attitude toward the use of contraceptive pills or other available methods may be quite negative due to perceived or actual health hazards of these methods. Under such conditions, measurement of attitude toward family size alone is not likely to predict actual action since the positive attitude toward small family size is cancelled by an equally powerful attitude for preservation of personal health, which acts as a negative force against contraception.

2. Conceptualization of Attitudes as
   the Sole Determinant of Behavior

There is no reason to believe that the attitudes of the respondents are the sole determinants of a behavior, and yet the frequent use of this unitary causal assumption in the attitude-behavior consistency and KAP studies has been a reason for dissatisfaction with these designs (Kelman, 1974; Hauser, 1967; Freedman and Berelson, 1976; Ryder, 1973; Cleland, 1973; and Kar et al., 1975, 1976). In addition to personal attitudes, other determinants that can influence the consistency between attitude and behavior are biological, situational, social, and environmental, especially the accessibility of means.

Often, biological and situational factors may make it unnecessary for some women to use contraceptives, even though they do not desire additional children. Such a group would include women who are currently pregnant or have postpartum amenorrhea, and women and spouses who are sterile, are currently ill, or are temporarily separated. Under such circumstances, women who do not desire additional children are not in need of contraceptives. A lack of observed relationship between a desire to have no additional children and non-use of contraception is, in this case, in no way an indication of inconsistency between attitude and behavior. Freedman and Berelson, in their analysis, show that, at times, women who do not want additional children, and yet do not practice contraception, can constitute a significant proportion of a study sample, and often the size of this group is taken to mean a lack of consistency between fertility attitude and behavior. These investigators show that, by eliminating those who are not in need of contraception, often the number of the respondents with inconsistent attitudes and behavior may constitute only 5 to 10 percent of the sample (1976, p. 9).

Socioeconomic and demographic determinants of actual fertility, fertility attitudes, and contraceptive behavior have been well documented and have become an established part of most KAP studies. However, a significant dimension of social determinants on fertility attitudes and behavior needs to be differentiated from the traditional socioeconomic and demographic measures of determinants of fertility. This social determinant constitutes the nature of social support one receives for contraception both from social institutions and, most significantly, from the spouse and members of the reference groups. Numerous studies in planned change, diffusion innovation, and KAP

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indicate that individual decisions and action are significantly affected by informal interpersonal influence from members of the peer groups and significant others. E. Noelle-Neumann (1974) in the discussion of her theory of the "spiral of silence" provides excellent argument and empirical justification of Alexis de Tocqueville's contention that, due to fear of isolation, people would rather join the masses and perform actions that are contrary to their personal judgments and preferences. According to this theory, individuals who disagree with the perceived dominant norms would prefer to remain silent rather than challenge this norm through their words and actions until gradually this silence snowballs into a spiraling process. The influence of significant others as well as the motivation to avoid isolation and disapproval of the social system is particularly important in the area of fertility behavior. In many societies and sub-cultures, the use of modern contraceptives is a deviation from the existing norm rather than a conformity with an established norm; thus contraception may arouse disapproval of spouse and significant others. It is highly unlikely that, in such situations, individuals would act according to their own attitudes alone and disregard the social consequences of such actions in terms of the disapproval and reprimand from peers, spouses, and significant others. Thus, perceived social support can act as a very powerful determinant of family planning behavior independent of the individual's own attitudes toward family size and contraception. It is likely that in an interview situation, a respondent may indicate personal preference and favorable attitude toward contraception, but, unless the person also believes that the behavior has the approval of spouse and other significant individuals, personal attitude may not lead to action.

The lack of differentiation of components of attitudes is also a cause of criticism. Family planning attitudes need to be differentiated into at least three components: attitude toward the family size (goal or object of behavior), attitude toward contraceptive methods (means available to achieve this goal), and attitude toward the sources of contraceptives (provider of the means--this is particularly important in situations in which the perception and belief about the motives, attitudes, and actions of the provider can influence the clients' responses and, consequently, the use of contraceptive services). While KAP studies usually include measures of the first two components, the measures of attitudes toward the provider and the quality and accessibility of the services provided by the family planning program have not received adequate attention. There are good reasons to believe that attitude about the quality of services and the

provider, particularly if it is strongly negative, can act as a significant deterrent of contraception even in the presence of positive attitude toward small family size. This lack of measures of attitude toward provider reduces the predictability of fertility behavior. Finally, the environmental/situational factors can have enormous impact on behavior. Of particular significance are the quality and accessibility of means of services available for contraception. The actual or perceived accessibility of contraceptive methods, particularly in those cultures and social strata in which a person does not have free access to contraceptives except those provided by family planning clinics and programs, would be a major determinant of contraception. Even under highly homogeneous socioeconomic and cultural conditions, such physical/environmental factors as distance and location of the clinic, clinic hours and waiting time, and availability of transportation may have enormous influence on the acceptance rate. In addition, the quality of care received from the clinic and the staff, the relative convenience of storage and use of various means of contraceptives, and the cost (both monetary and non-monetary in obtaining the services) would influence the subjective evaluation of the accessibility of contraceptives, which can act as a significant determinant of contraception.

3. Methodological and Measurement Problems of the KAP Studies

Several criticisms have also been leveled about the validity of using the KAP survey data for testing the consistency between fertility attitudes and behavior. Because most KAP studies are one-time measurements of attitudes and thus are inadequate in determining the causal sequence of events, they are criticized. Some would argue in favor of a longitudinal study to determine the causal sequence between attitude and actions (Crawford, 1974; Freedman et al., 1975; and Freedman and Berelson, 1976). The lack of methodological concern evident in many KAP studies about the intensity and stability of attitudes has been another source of dissatisfaction with these designs. Several serious students of attitude and fertility behavior have argued that a simple and single measure of family size or fertility norm is unlikely to tap the attitude toward contraception, and thus a design to measure consistency between attitude and behavior should place emphasis on measures of specific attitudes and intentions for using various contraceptives (Coombs, 1974; Fishbein, 1972; Freedman et al., 1975; and Freedman and Berelson, 1976). Finally, serious questions have also been raised

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about whose attitude should be measured for predicting fertility behavior--wives only, husbands only, or both spouses equally. N. B. Ryder argues that it is questionable to assume that the locus of fertility decisions rests with the woman alone, and, consequently, a survey of the decision-making process that includes data only from women is, at best, of questionable value (1973). There is a significant body of literature that suggests that the intra-spouse discussion and dynamics of decisions have a powerful influence on fertility decisions and behavior (Blood and Wolfe, 1960; Hill et al., 1959, 1973; Poffenberger, 1969; Rosario, 1970; and Stycos, 1968, 1973).

Thus, whose attitudes are valid and important is an issue of major conceptual as well as methodological concern. Another methodological issue is the need to differentiate between attitude toward family size (ideal family size, desired family size, or desire for additional children) and attitudes toward the use of available contraceptives. The critics argue that the low observed relationship between family size norm and actual contraception is due to lack of measures on attitude toward specific methods and intentions to use them.

A Review of M. Fishbein's Model

In recognition of the limitations of the traditional KAP designs and other studies concerning measurement and consistency between attitudes and behavior, Fishbein suggests a model that concerns itself with the measures of family planning intentions and behavior (1967, 1972; Fishbein and Jaccard, 1973). The central thesis of Fishbein's model is that a person's intention to perform a behavior (termed behavioral intention) is a function of: 1) "his attitude toward performing the behavior and 2) his beliefs about the norms governing the behavior weighted by his motivation to comply with those norms" (1972, p. 217). According to this model, a behavioral intention and a subsequent behavior are determined by a combination of personal attitudinal factors and societal normative influences; consequently, the relative weight or impact of each of these components must be determined empirically.

Fishbein's model is a major conceptual contribution, and it is a significant improvement on the conventional KAP approach and contains several notable strengths. First, this model rightly emphasizes the need for measuring "behavioral intentions" and attitude toward performing a specific action in a given situation as against

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measures of generalized norms (that is, ideal or desired family size) or attitude toward an abstract act (that is, approval of family planning--a concept that may mean different things to different people). Second, this model recognizes the importance of social influence on an action and includes a normative component. Finally, empirical tests of this model have provided encouraging results (Fishbein, 1972; Fishbein and Jaccard, 1973). J. Jaccard and A. R. Davidson (1972) report that, as initially predicted, there is a significant correlation between the two components of the model (attitudinal and normative). While subsequent investigations provide support for Fishbein's model, most of these studies examined the correlation among the various components of this model and therefore test the internal consistency between those components. Unfortunately, evidence is not available to test the direct relationship between behavioral intention and actual fertility behavior. Considering its potential, Fishbein's model deserves further empirical validation with family planning behavior used as the dependent variable.

There are, however, several reasons for questioning the applicability of Fishbein's model in its present form, particularly among populations in which family planning (or use of modern contraceptives) has yet to become a widely shared norm and in which the means to carry out family planning (accessibility of contraception) are not readily available.

One of the key elements of the Fishbein model is the motivation to conform with social norms. We know that, in the developing countries and in certain subcultures and social strata of many developed countries, only a minority of the population uses modern contraceptives. Those who use contraceptives are clearly innovators and creators of new norms; their behavior can hardly be influenced by a motivation to conform with the norm. Although it may be argued that, in such populations the motivation to conform with the norm causes non-use of modern contraceptives, one would seriously question the merit of using the argument that this motivation also causes the use of modern contraceptives. A model for predicting the use of modern contraceptives in these situations should include those components that will explain non-conforming behavior as well as the norm conforming behavior.

Fishbein also assumes that, once there is an intention to act

and a motivation to conform, the means needed to act are readily available and therefore there is no barrier to action. This is a questionable assumption. The studies of unwanted pregnancies (Bumpass and Westoff, 1968), teenage unwed pregnancies, and induced abortion (Packter et al., 1975; Kantner and Zelnick, 1972; and Shah et al., 1975) suggest that, even in a developed country like the United States, contraception information and services are not within easy access to many women. In one of the more liberal campus towns, it is not an uncommon complaint that contraceptive counseling and services are difficult to obtain, and there is evidence that suggests that college women often expose themselves to unwanted pregnancy risks partially due to the lack of easily accessible contraceptive information and services (Marcus, 1975; Scott, 1975; and Tell, 1975).

Thus, the influence of accessibility of means cannot be ignored in any model that explores fertility behavior. Fishbein may argue that accessibility of means, instead of having a direct effect on action, would influence the action through influencing attitudes; thus accessibility should be subsumed under attitude and behavioral intention. This is a debatable position; one could also argue that accessibility of means can have a direct and a very powerful influence on behavior, as well as on attitudes, and therefore should be treated as a separate causal variable on its own merit. The question of relative merit of either of these two positions (that is, the direct versus indirect effect of accessibility of means on an action) is an empirical one and can only be tested empirically. In the model proposed in the present paper, the accessibility of means is conceptualized as an important independent variable.

It is also important to note that Fishbein's model needs to be further tested against behavioral criteria. Much of the support of the model is based upon data on the strength of the relationships between various components of the model, which supports the internal consistency of the model. What is needed is to test the relationship between the attitudinal and normative measures with the behavioral measures. Finally, in Fishbein's model, there is no mention of the influence of socioeconomic, demographic, and biological determinants on fertility behavior. It is not clear how this model will deal with the influence of these determinants on attitudes, on behavior, or on the relationship between attitudes and behavior.

EXTENSION EDUCATION
AND FIELD CAMPAIGN PHASE

The Extension and Field Campaign Phase was ushered in by the failure or very limited successes of family planning programs to meet their objectives. This KAP gap, between assumed "readiness" of populations for family planning and the much lower levels of actual "acceptance," stimulated a change to much more dynamic and novel trends in population communication research and in family planning services. More analytical and scientifically precise research methods began to replace the static, descriptive studies of demographic characteristics. The Taiwan study of the early 1960's established new standards of experimental research (Freedman and Takeshita, 1969). Rogers (1973) characterizes the Field Era as the period of a diffusion of innovations' approach in family planning, based on the agricultural extension experience in the United States. This approach, rather than merely opening clinic doors and waiting for the clients to arrive, explored new techniques of active recruitment of family planning acceptors through educational and persuasive efforts of various change agents and media campaigns. Communication research greatly expanded its role during this period and became concerned largely with investigating and testing methods of communicative intervention for the purpose of educating reluctant target populations of the benefits of contraception and of smaller, more widely-spaced families. "In a communication sense, family planning programs were still source–oriented (medicine), or at least message–oriented (family planning methods), rather than client-oriented. The programs did not begin with the target audience, with their mentality, perceptions, needs, and motivations. On the contrary, the programs implicitly assumed that 'good' family planning innovations, presented in a technically competent manner, would sell themselves" (Rogers, 1973, p. 89).

This period saw innovative research and experimentation performed, which investigated the utility of a variety of professional, semi-professional, and non-professional change agents; incentives for accepting clients and/or change agents; mobile clinics that brought the services to the client; and postpartum approaches that capitalized on the mother's recent experience with pregnancy as a motivating factor for contraceptive adoption. Massive media communications programs were also employed to advertise family planning services, to teach audiences about contraceptive methods and

the benefits of family planning, and to attempt to persuade them to become acceptors.

By the end of the 1960's, the full magnitude of the KAP gap was felt. Communication campaigns had raised the knowledge of contraceptive methods and available services to relatively high levels in many countries, but acceptance rates remained low. Communications research began to focus on the development of motivational strategies. Research-uncovered relationships--between fertility and variables such as women's emancipation and participation in the labor force, infant and child mortality, ages at marriage, and social and cultural norms--have triggered "beyond family planning" proposals and strategies for manipulation of these variables in a more broad-based effort to control fertility rates. Results from mass media attempts to promote family planning adoption have shown that, although these channels may be effective for increasing knowledge and awareness about family planning, it is through interpersonal contacts, especially with established opinion leaders and significant peers and family members, that the practice of family planning is diffused. Research aimed at communicating family planning motivational messages through these informal sources and through pre-existing and traditional communications channels and media have received special emphasis in recent years.

Even before the need for the extension and field phase was recognized and officially launched, several major private organizations had taken initiatives in sponsoring major and ambitious field study and demonstration projects (research-cum-action projects; the better-known among these are Singur, Narangwal, and Gandhigram in India). These projects deviated from the communication efforts and research of the extension phase in several major aspects.

1. Objectives and Scopes. It was recognized that the practice of family planning is determined by interactions between deep-seated factors too complex to be altered by provision of services accompanied by information campaigns alone. These studies thus aimed at examining the determinants more closely and more systematically within a defined population over a long period of time.

2. Intensive Research and Resources. The nature of these projects required input of resources both for research

and action components much beyond the levels available for programs in general. However, the highly intensive resource input required for these studies discouraged many planners. Many even questioned the validity of these projects on the ground that, since they could not afford to invest such a high level of resources for the entire population, the replications of the actions, even when found effective in these projects, would not be feasible and would not be cost effective.

3. Longitudinal design and follow-up. As against the frequently used one-shot surveys, occasional intensive multimedia campaigns, and extension of clinic-based services and messages, these RCA projects were concerned with long-range studies and evaluations of action strategies in terms of stable behavior and fertility changes. While these longitudinal designs were capable of coping with more complex and involved research as well as with the long-range impacts of specific action strategies, the very nature of the time requirement meant that often planners who were under pressure to make decisions, could not afford to wait until such projects were completed. Under such circumstances, unfortunately, instead of balancing the delay against the benefits, the most frequent response was to become less dependent on such projects.

The strengths and weaknesses of the KAP-type research and subsequent research during the extension education phase for policy and action deserves more attention than in the past. For such evaluation will determine the scope of future priorities. A major problem is lack of accessibility of information, which has two possible impacts: (a) decision on research priority, and (b) use of research findings by planners. This paper does not deal with the problems of accessibility of information since the issue is fully covered by papers in the synthesis series written by David Radel and Sumiye Konoshima, and Shawki M. Barghouti. (Nor does this paper deal with other areas central to communication research: these are dealt with by S. M. (Sam) Keeny, R. Lyle Webster, Jack Glattbach, and Rosario P. Alberto and Maria Jesusa A. Ledesma.) The major focus of this paper has been on the discussion of factors that influence research decisions and their utilization. One such factor is

the priorities of agencies that sponsor research and thus to a large extent that influence research outcomes. The next section presents a very brief review of the priorities of funding agencies and their impact on research efforts.

Current Funding Status and Its Impact on Research

Other factors that have exerted great influence on the orientation and emphasis of research in the area are the priorities and program interests of the organizations that provide the monetary and other resource support for research. The greatest proportion of funds for research in all non-biomedical fields that have implications for population communication come from USAID- and from UNFPA-supported activities. A smaller but significant proportion is provided by the following private agencies: Ford Foundation, Rockefeller Foundation, and Population Council (see Appendices A: 1-5 and B: 1, 2).

USAID "emphasizes applied or goal-directed research designed specifically to contribute to the success of AID-assisted population programs" (USAID, 1974, p. 13). The United Nations similarly emphasizes research programs that are intimately coordinated with family planning programs (Buck, 1976). Both organizations also support basic demographic research and national census efforts.

Although the proportion of the total research funds contributed by the private organizations is much less, they have significant impact since they place greater emphasis on basic and policy-oriented research, fields that are largely neglected by USAID and the UN. A.C. Barnes (1973) presents the following advantages to private agencies' research efforts in the field of population:

1. They are more flexible and can respond to research needs more quickly.

2. They are relatively free from political and ideological motivations and are thus able to work more inconspicuously and without raising suspicions of ulterior motives.

3. They are less committed to direct service programs and are thus free to concentrate on all areas of research.

4. They are often more willing to support research of the
    types that countries feel they need, rather than dictating
    which areas should be covered.

5. They have historically been more original and innovative
    in their support.

A review of the number of projects by type and source of
funding shows significant influence of funding on research efforts
(see Appendices A: 1-5 and B: 1,2). The federal sources spent
significantly more funds than did the private agencies in supporting
various types of research; for instance in 1974, the total federal
fund for research was US$13.3 million as compared to US$3.6 mil-
lion by private donors (see Appendices A: 2 and B: 1). Demographic
research has been the single largest category of projects funded
within the broad category of "Social and Behavioral Research"
sponsored by both federal and private agencies. Of all major cate-
gories of research funded by the federal agencies, however, repro-
ductive research and contraceptive technology outrank the social
science research many times in terms of funds received (see
Appendix A: 1). In 1975 for example, US$48 million was spent for
research in reproductive and contraceptive categories as compared
to US$16 million for social and behavioral research. The analysis
of trends in federal funding between 1970 and 1975 (Appendix A: 1)
shows that of all categories, reproductive processes, contraceptive
development and evaluation, and animal behavior for contraceptive
and reproductive analyses remain the largest categories of recipi-
ents of funds. In 1970, of a total of US$35 million, 77 percent was
spent for reproductive and biomedical research including contra-
ceptive research as against only 17 percent for social and behavioral
science research. By 1975, the total amount increased to US$68
million; of which 70 percent was spent for reproductive and bio-
medical research and 23 percent for social and behavioral research.
The trend suggests that, although there has been an increase in the
proportion of funds available for social and behavioral research
during 1970 through 1975, as of 1975 three times as much funds are
being spent on biomedical research as for social and behavioral
research.

Available data shows that within the social and behavioral
sciences category, demographic research remains the single most
important fund consumer. In 1974, of the total number of projects
funded by the federal agencies, 55 percent were demographic studies

that used 64 percent of all funds (Appendix A: 4). In the same year, of the total number of projects funded by private agencies, 43 percent were demographic studies with 48 percent of funds used by them (Appendix B: 2). Funds for research in population policy doubled from US$0.6 million in 1974 to US$1.2 million in 1975. Responsible for the increase was a single US$767,000 USAID-supported project designed, by development of analytical models, to assist countries in gauging consequences of differential birthrates and migration patterns (see Appendices A: 2, 3). The amount of funds available for communication research is difficult to determine from these data since there is no separate line item for such research in the breakdown of project types used by the funding agencies. However we may assume that the funds for communication-related research would come from line items "Family Planning Services" and "General" within the general category of social and behavioral research (Appendices A: 2, 3; B: 1). It is evident (from an analysis using this assumption) that in 1974 about 23 percent of federal funds and 34 percent of private agencies' funds for social and behavioral research were available for communication-related research.

The funding trend clearly shows that, at least so far, the highest research priority has been in areas dealing with reproductive aspects and contraceptive development; social and behavioral research received considerably less emphasis. Furthermore, within the social and behavioral category, demographic research continues to receive the highest priority and the "lion's share" of funds. Such differential emphasis over the past years has had significant impact on the research efforts and outcomes in various areas. While most countries in the Third World are struggling to find better ways for promoting contraceptive services, the trend in research funding and efforts continues to emphasize areas dealing with clinical and demographic aspects. It would be highly desirable to reassess critically the research priorities in view of the collective experiences in these countries that suggest that after the initial phase, all programs tend to level off and that further increases require new solutions and intervention strategies. Better insights into ways for developing effective strategies for promoting family planning acceptance will, to a large extent, depend on: (a) the priorities for research funding and support, and (b) the readiness of the social scientists to formulate applied research projects that take into account the weaknesses and strengths of past research and the current and future needs of the programs. This assessment of needs and priorities requires joint participation of both the planners and the researchers.

CHAPTER 3

Summary and Conclusions

This paper presents a review of factors that determine the effective management and use of social research for communication strategies in population planning programs. The objective here is not to present standardized solutions, for they do not often exist. Effective solutions must be designed within specific situational contexts by those who are involved in the management and use of research. The main aim is to present before such persons a range of critical problems and review how these problems affect research management and use. It would be utterly ludicrous to suggest that if those responsible for managing and utilizing research are unable to find effective solutions, a document of this type could offer ready-made prescriptions for actions. Thus this paper deals with: what the major problems are, why they occur, and what are some of the points of intervention for improving these situations. The perspective is diagnostic and analytic rather than therapeutic.

The first section of the paper presents a discussion of a system of components and the nature of the relationship between these that determines the effective management and use of research. Figure 1 and its accompanying discussion deal with: the location of the principals involved in the utilization of research, relative power, and the nature of the relationship. This section discusses twelve factors that can significantly influence the level of effective management and utilization of research. These are:

1. The causal assumptions used by the planners and the researchers

2. Relative empathy

3. Relative power and control of relevant decisions

4. Perceptions of good and useful research

5. Complexity of the content and semantics

6. The researcher's dilemma

7. Reward system and reference groups

8. Perceptions of effective use of research

9. Relative time perspective

10. Situational factors: contact and accessibility

11. General versus specific applications

12. Feedback and evaluation

These factors have two elements in common: they are all amenable to change and they each require joint efforts to bring about effective change.

The second section deals with the patterns of past research, the current status, and implications for future research. This section extensively deals with the relevant research with particular reference to the KAP-type research. This emphasis is primarily so because there was a great deal of emphasis on KAP-types of research and there were high hopes about their outcomes for effective policy and intervention strategies. The experiences with these studies have had a major impact on the planners' perceptions about the utility of social research for communication policies and interventions. The review of these studies includes the following aspects:

1. Conceptual and operational definitions

2. Conceptualization of attitude as the major determinants

3. Methodological and measurement issues

4. Review of the alternative models (for example, that proposed by Fishbein)

The critique of these research studies is primarily from the perspective of improving the value of social research for developing effective communication strategies aimed at changing attitudinal determinants (create demand or need) for family planning.

This paper ends with a very brief review of salient features of the Extension Education and Field Campaign Phase of family planning programs and corresponding research. The main purpose is to

discuss RCA and KAP-type research from the standpoint of the relative strengths and weaknesses of these alternatives.

It is hoped that the implications of this review for actions would be self-evident to concerned planners and social scientists. The sobering experiences of many social scientists who hastily offered solutions for complex social issues had a restraining effect on the temptations to offer prescriptions for actions in this instance.

APPENDICES

APPENDIX A

1. Inventory of Federal Population Research for Fiscal Years 1970-1975*

(United States Department of Health, Education, and Welfare)

Federal Agencies' Support (in millions of US$) for:

	1970	1971	1972	1973	1974	1975
Reproductive processes	16	18	24	24	30	30
Contraceptive development	6	5	10	6	6	9
Contraceptive evaluation	4	4	8	10	7	7
Animal behavior and ecology	1	2	2	1	2	2
Social and behavioral sciences	6	16	15	11	13	16
Center grants	2	1	2	3	3	4

*Note: The source for all tables in Appendix A--Department of Population Planning, University of Michigan, File No. 3616.

2. Population Research Projects Supported by Federal Agencies for Fiscal Year 1974

(United States Department of Health, Education, and Welfare)

Research Area Supported	Projects Receiving 1974 Funds			Projects Active on Funds from Prior Fiscal Years
	Funds (in thousands of dollars)	Number of Projects		
		Total	With funds reported	
Social and Behavioral Sciences	13,375	226	206	38
Population Change	1,687	27	26	3
Changes, trends, projections	885	13	12	2
Consequences of population change	553	9	9	–
General or multiple	279	5	5	1
Population Characteristics	127	3	3	1
Fertility	6,098	114	101	25
Contraception: Attitudes and Practices	138	3	3	–
Abortion: Attitudes and Practices	496	6	6	2
Sterilization: Attitudes and Practices	50	1	1	–
Family Planning Services	1,054	33	21	14
Differential Fertility	240	5	4	–
Determinants of Fertility	2,316	38	38	4
Trends in Fertility	271	4	4	–

Research Area Supported	Projects Receiving 1974 Funds			Projects Active on Funds from Prior Fiscal Years
	Funds (in thousands of dollars)	Number of Projects		
		Total	With funds reported	
Out-of-wedlock Births	-	-	-	-
Other	150	4	4	1
General or Multiple	1,382	20	20	-
Mortality	472	3	3	-
Migration and Population Distribution	1,573	27	27	5
Marriage, Divorce, and Family	1,062	20	20	-
Population Policy	593	7	7	-
General or Multiple	1,763	25	19	4

3. Population Research Projects Supported by Federal Agencies for Fiscal Year 1975

(United States Department of Health, Education, and Welfare)

| Research Area Supported | Projects Receiving 1975 Funds | | | Projects Active on Funds from Prior Fiscal Years |
| | Funds (in thousands of dollars) | Number of Projects | | |
		Total	With funds reported	
Social and Behavioral Sciences	15,595	220	211	54
Population Change	1,491	29	28	3
Changes, trends, projections	316	9	8	2
Consequences of population change	857	11	11	1
General or multiple	318	9	9	–
Population Characteristics	350	7	7	1
Fertility	8,230	109	104	21
Contraception: Attitudes and Practices	379	5	5	–
Abortion: Attitudes and Practices	378	9	9	1
Sterilization: Attitudes and Practices	139	2	2	–
Family Planning Services	1,284	31	26	6
Differential Fertility	158	3	3	2
Determinants of Fertility	1,451	28	28	8

Research Area Supported	Projects Receiving 1975 Funds			Projects Active on
	Funds (in thousands of dollars)	Number of Projects		Funds from Prior Fiscal Years
		Total	With funds reported	
Trends in Fertility	252	5	5	2
Out-of-wedlock Births	185	3	3	-
Other	30	1	1	1
General or Multiple	3,975	22	22	1
Mortality	625	3	3	-
Migration and Population Distribution	1,221	31	29	12
Marriage, Divorce, and Family	751	18	18	8
Population Policy	1,203	10	9	1
General or Multiple	1,724	13	13	8

4. Population Research Projects by Scientific Discipline Supported by Federal Agencies for Fiscal Year 1974

Scientific Discipline	Projects Receiving 1974 Funds	Number of Projects		Percentage of Total Project	Funds	Projects Active on Prior Funding
	Funds (in thousands of dollars)	Total	With funds reported			
Behavioral Sciences	14,723	253	231	30.2	23.9	35
Psychology	2,315	46	46	5.8	3.8	2
Sociology	1,208	25	24	3.0	2.0	4
Demography	9,107	128	121	15.3	14.8	16
Social and Cultural Anthropology	346	11	10	1.3	0.6	1
Program Evaluation	48	8	1	1.0	0.1	5
Political Science	114	3	3	0.4	0.2	-
Economics	863	11	11	1.3	1.4	-
Operational Research	621	15	11	1.8	1.0	6
Other	12	1	1	0.1	0.05	-
Multidisciplinary	88	5	3	0.6	0.1	1

5. Population Research Projects by Scientific Discipline Supported by Federal Agencies for Fiscal Year 1975

Scientific Discipline	Projects Receiving 1975 Funds Funds (in thousands of dollars)	Number of Projects		Percentage of Total Project	Funds	Projects Active on Prior Funding
		Total	With funds reported			
Behavioral	18,020	247	238	29.5	26.7	58
Psychology	1,993	45	45	5.4	3.0	10
Sociology	1,002	23	23	2.8	1.5	12
Demography	12,174	111	108	13.3	18.0	27
Social and Cultural Anthropology	664	15	15	1.8	1.0	2
Program Evaluation	540	11	10	1.3	0.8	2
Political Science	194	7	7	0.8	0.3	–
Economics	837	14	14	1.7	1.2	2
Operational Research	534	17	13	2.0	0.8	1
Other	21	1	1	0.1	0.05	1
Multidisciplinary	60	3	2	0.4	0.1	1

APPENDIX B
Inventory of Private Agency Population Research; 1974

(United States Department of Health, Education, and Welfare
 includes: Ford Foundation, Rockefeller Foundation, Population
 Council)*

The social and behavioral sciences play a fundamental role
in the analysis of population issues. Investigation of population
change and trends, migration, the various aspects of fertility as
well as family life, help to explain some of the phenomena of popu-
lation growth and assist in policy making to effect it. Approximately
22 percent of all the private agency funds were used for research in
the social and behavioral sciences, and more than one-half of this
came from the Population Council. As expected from examination
of the federal agency response to the population problem over the
years and from the 1973 private agency survey of population re-
search, fertility is the largest category, having received almost
two-thirds of the funds in the social and behavioral area. The Popu-
lation Council's input to fertility research was considerably more
than the other two agencies combined at US$1.7 million. Family
planning research and evaluation claimed 45 percent of the total
fertility funding; the majority here were small projects which re-
ceived US$10,000 or less.

Thirty-two projects received funds as part of the joint
Rockefeller-Ford program of awards in support of social science
research which is relevant to the formulation and implementation
of population policy.

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*Note: The source for all tables in Appendix B--Department of
Population Planning, University of Michigan, File No. 3615.

1. Population Research Projects Sponsored by <u>Private Agencies</u> (Fiscal Year 1974)

Research Area Supported	Projects Receiving 1974 Funds			Projects Active on Funds from Prior Fiscal Years
	Funds (in thousands of dollars)	Number of Projects		
		Total	With funds reported	
Social and Behavioral Sciences	3,678	173	158	41
Population Change	337	12	8	6
Changes, Trends, and Projections	5	3	1	-
Consequences of Population Change	48	2	2	2
General or multiple	284	7	5	4
Population Characteristics	-	-	-	-
Fertility	2,385	105	100	17
Contraception: Attitudes and Practices	22	2	1	-
Abortion: Attitudes and Practices	52	7	7	1
Sterilization: Attitudes and Practices	6	1	1	-
Family Planning Services	1,076	44	44	6
Differential Fertility	52	2	2	-
Determinants of Fertility	430	25	24	4
Trends in Fertility	29	4	3	1

| Research Area Supported | Projects Receiving 1974 Funds | | | Projects Active on Funds from Prior Fiscal Years |
| | Funds (in thousands of dollars) | Number of Projects | | |
		Total	With funds reported	
Out-of-wedlock births	-	-	-	-
Other	49	4	3	1
General or multiple	669	16	15	4
Mortality	-	-	-	-
Migration and Population Distribution	161	12	12	7
Marriage, Divorce, and the Family	36	4	3	2
Population Policy	316	20	18	6
General or Multiple	443	20	17	3

| | Social and Behavioral Science (thousands) | Projects receiving | | Projects Active on Prior Funds |
		Total	With funds	
Ford Foundation	951	33	33	41
Population Council	1,999	112	97	-
Rockefeller Foundation	729	28	28	-
TOTAL	3,678	173	158	41

2. Population Research Projects by Science Discipline Sponsored by Private Agencies in Fiscal Year 1974

Discipline	Projects Receiving 1974 Funds Funds (in thousands of dollars)	Number of Projects Total	With funds reported	Percentage of Total Project	Funds	Projects Active on Prior Funds
Behavioral	4,146	186	172	40.3	24.4	40
Psychology	118	7	7	1.5	0.7	1
Sociology	103	5	5	1.1	0.6	7
Demography	2,050	86	74	18.6	12.1	15
Social and Cultural Anthropology	52	4	4	0.9	0.3	–
Program Evaluation	450	20	20	4.3	2.6	1
Political Science	145	8	8	1.7	0.9	5
Economics	154	8	8	1.7	0.9	7
Operational Research	555	23	22	5.0	3.3	1
Other	110	8	8	1.7	0.6	2
Multidisciplinary	410	17	16	3.7	2.4	1

NOTES

1. The term population planning here is used to include all organized efforts variously labeled (as family planning, population control, planned parenthood, etc.) but all aimed at regulating fertility at family (micro) and national (macro) levels.

2. A planner is here defined as one who participates in policies and programs at top levels and thus has control on both policy and programs including management and use of research.

3. The term researcher is used to include two categories of social scientists: 1) intramural: those employed by a population planning program and 2) extramural: those who are placed in agencies outside the control of such programs.

4. A vigorous proponent of this view is Dr. R. Ravenholt, Director, Office of Population, United States Agency for International Development, Department of State, Washington, D.C., who firmly believes that the basic problem is one of availability of contraceptives and that motivation for family planning and attitude toward contraception are not significant components of strategy planning (in personal conversation, February 1976).

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