MAKING RESEARCH RELEVANT TO ACTION: A SOCIAL LEARNING PERSPECTIVE

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INTRODUCTION

Development programs of today are reaching an ever wider spectrum of people in ever more varied ways. As program implementors struggle to understand how to shape programs that will actually be helpful to diverse and dispersed peoples, they are increasingly turning to researchers for help. And researchers, eager to contribute to the development process, are increasingly aiming their research efforts at improving action programs.

One of the most common approaches to applying research to action is to evaluate the impact of an action program; that is, assessing what happened in the field against some set of objectives. After assessing production gains, interviewing beneficiaries, and examining structures built under a project, researchers write up their findings and often make recommendations. These are forwarded to people responsible for the action program through a report, a seminar, or both, in the hope that the research will contribute to improve programs.

But often researchers and implementors alike come away from this process with an uncomfortable feeling that somehow it does not really help. In many cases nothing much changes as a result of the research. One commonly hears complaints from researchers, such as: "No one in the implementing agencies listens to us," or "Our reports just go on the shelf," or "The government is too sensitive to criticism." The implementors complain, "Academics are too theoretical," and "The researchers just criticize without giving constructive suggestions," and "The recommendations aren't realistic; they don't take into account our constraints."

What is the problem here? Why do we so often find researchers and implementors talking past each other? In understanding this impasse, we need to distinguish between two types of policy arenas and two types of planning traditions which shape the very nature of a research process. By using these distinctions, we can match the appropriate set of assumptions and methods to the appropriate policy arena, and thus increase the likelihood that the research conducted will be relevant to the action intended.

MACROPOLICY AND MICROPOLICY

Applied researchers in the development field generally expect their research to be relevant to policy change. But *policy* refers to a great range of possible changes. Korten (1986) has noted that it is useful to divide these into two basic arenas: the macropolicy

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and the micropolicy arenas. The macropolicy arena covers problems calling for a single decision which can be accomplished with a "stroke of the pen" by the appropriate political or administrative authority. These decisions are ones for which major questions of implementation do not exist, either because implementation is not inherently important to the decisions or because methods of implementation are already well known. *Do* or *don't* questions and *how much* questions are often of this type. Common macropolicy decisions involve matters of pricing, subsidy, and trade.

But there are many other problems which fall into the micropolicy arena. Often these focus on the *how* questions, such as how a program should be carried out at the field level and how an agency's capacity can be developed for implementing it effectively. These are issues which cannot simply be mandated by a central authority. When the reform involves a reorientation of approach -- such as from a centrally directed decision making style to one more responsive to the needs of local people -- the changes needed relate to many different organizational characteristics. Implementing personnel may need to develop new skills, attitudes, and assumptions. Evaluation, monitoring, and incentive systems may need to change. The organization's approach to supervision may need restructuring. These are in the arena of micropolicy reform.

POLICY ANALYSIS PERSPECTIVE AND SOCIAL LEARNING PERSPECTIVE

A second important distinction is made by Friedmann (forthcoming). In tracing the intellectual roots of planning theory, he distinguishes the policy analysis tradition from the social learning tradition. While both are approaches to planned change, they have different intellectual heritages and rely on different assumptions and methodologies. These traditions have strongly influenced the perspectives from which researchers view their research and their role in relation to a process of planned change.

The policy analysis tradition derives from economics and public administration.[1] The perspective is based on an assumption that there is some kind of single, powerful, and rational decision maker, who, if provided high quality information and analysis will respond with appropriate decisions which will then automatically set off a chain of events which will remedy the problem under analysis. The process by which those changes come about is not inherently of interest to the policy analysis perspective because it is assumed to be automatic although it may be hampered by a "resistant" bureaucracy (see Allison 1971).

From this perspective the researcher's task is to determine the macrorecommendations that should be provided to a powerful decision maker. To ensure that the answers provided are correct, the researcher focuses on data which can be objectively verified and which allow precise calculation. Organizational issues related to carrying out the recommendations are viewed as details which are better left to the implementors.

The social learning tradition, in contrast, finds its roots in management and social psychology. It assumes that in making change there are many decision makers important

to the change process, and whose decisions are based on many factors -- only one of which is precise, quantitative data. Other important factors include their own experience, their relationships with others, organizational norms, incentive systems, and political considerations. From the social learning perspective, planning issues cannot be separated from implementation. These two blend in interactive sequences, and are inextricably linked. The critical task becomes one of linking multiple decision makers to a continuous flow of information, and building in feedback loops so they all have an improved basis for action.[3]

From the social learning perspective, a researcher's task is to contribute to that flow of new ideas and data either directly, by gathering information that the implementors otherwise may not have, or by helping create tools that will allow them to routinely capture and analyze needed information. The data may or may not be quantitative, and are often geared to elucidate problems and options rather than support a recommendation.

MAKING RESEARCH RELEVANT TO ACTION

The above descriptions reveal the inherent match between each policy arena and each planning tradition. As illustrated in Figure 1, a match occurs when the assumption and methods of the policy analysis tradition are applied to the needs of the macropolicy arena, and when those of the social learning tradition are applied to the micropolicy arena. The impasse between researchers and implementors arises when there is a mismatch -- when we find ourselves in Cell B trying to address micropolicy needs from a policy analysis perspective or, conversely, in Cell C trying to meet macropolicy needs from a social learning perspective.

Figure 1. Matching research to policy.

		POLICY ARENA: Macro	POLICY ARENA: Micro
RESEARCH PERSPECTIVE: Policy analysis		A match	B mismatch
RESEARCH PERSPECTIVE: Social learning		C mismatch	D match

For any type of program there are both macro- and micropolicy questions. In the macro-arena there are basic *do or don't* questions regarding whether government (or others) should invest in a given activity. The main consideration here is effectiveness. For example, does potable water reduce mortality? Does irrigation raise yields? Does nonformal education increase literacy? Research deriving from the policy analysis tradition is suited to providing answers to these questions. The goal is to provide an answer to some central decision maker who is trying to determine whether or how much to invest in such a program.

But if the basic questions relate to *how* a program is carried out -- How can a community manage a potable water system to make it last? How can water be delivered reliably throughout the main canal of an irrigation system? How can adult interest in reading be sustained once a nonformal education program is over? -- then we are in the micropolicy arena and the appropriate research response comes from the social learning tradition.

Paradoxically, a macroquestion cannot be tested effectively until the microprocess has occurred. Thus, the question of whether a potable water system reduces mortality cannot be reasonably tested until there are a fair number of communities which have maintained effective potable water systems long enough for an effect to be observed. And to create a program that can achieve a sufficiently widespread and sustained effect requires careful program development, evolving through a microreform process; that is, through helping an implementing agency figure out how to do its job better.

Implementors are generally working from the micropolicy arena. They are not determining whether a program should be done or even how much is to be spent on it, but rather are shaping how things are done. They need tools, training materials, new procedures, innovative methods -- needs best met through a social learning approach.

But researchers are much more often working from the policy analysis perspective. Their backgrounds usually provide them little exposure to the social learning tradition, which has a fuller history of application in management and private industry. Consequently their attempts to improve programs focus on macrorecommendations. Implicit in their approach is the assumption that the process of implementing these recommendations is relatively automatic or at least sufficiently straightforward so that it does not need their attention. But because this is often not the case, the Cell B mismatch (Figure 1) is common, resulting in frustration for researchers and implementors alike.[4] To contribute fruitfully to the micropolicy arena, researchers need to understand the assumptions and methods of the social learning perspective.

APPLICATION TO ISSUES OF FARMER-MANAGED IRRIGATION

Our workshop is entitled "Public Intervention in Farmer-managed Irrigation Systems." To discover how to make research relevant to action in this field we must first ask what research perspective is most appropriate. Do the key issues fall in the macropolicy arena -- *do or don't* or *how much* questions requiring one-time decisions by a single decision-maker -- or are they *how* questions, involving multiple decisions over many points in time by a variety of different people?

One macropolicy issue would be: "Should the government assist farmer-managed systems or not?" If the answer is "no," then this is indeed a "stroke of the pen" decision suited to the policy analysis research perspective. But if the answer is "yes" and appropriate implementation capacity is well in place and simply needs funding, the decision remains in the macropolicy arena and the major focus of attention would be on how much funding. Or, if the answer is "yes," but the implementation capacity is not in place

methods have been institutionalized as the standard approach to all of the agency's communal irrigation work, including much of its work on larger national systems.[8] In Indonesia, efforts to use participatory methods began in 1982 and are gradually being used more widely.[9]

Researchers have played a critical role in these efforts. In working from a social learning perspective, they have found that both the types of research they carry out and the roles they play have shifted markedly from their more conventional research experiences.

TYPES OF RESEARCH IN A SOCIAL LEARNING PROCESS

In contrast to policy analysis research which is often aimed at generalized findings and macrorecommendations, research based on a social learning perspective is aimed at microreform. The research issues range from the general to the detailed, focusing on what is directly of concern to the implementing agency's program. The research is often not quantitative, although there may be situations calling for quantitative work. It is generally not oriented to providing proof of its findings but rather to exposing the details of how things are done, and with a rough sense of the consequences so that positive experiences can be replicated and negative ones avoided.

Research in the Philippines and Indonesia has focused on three different needs: 1) documenting proven practices in irrigation management, 2) developing the agency's differential response capacity (i.e., the capacity to respond differently to different situations), and 3) documenting agency intervention for micropolicy reform. The research carried out to meet these needs illustrates the types of research relevant to a social learning process.

Documenting Proven Practices in Irrigation Management

When a program is trying to determine what works, an important need is to document what has already been discovered. In a field such as farmer-managed irrigation, a natural experimentation process has been going on for centuries, carried out by the people most strongly motivated to manage water -- the farmers themselves. It is important to exploit this history of experimentation by documenting the management mechanisms that have evolved, and sift through the findings to determine what needs to be disseminated to other sites, what needs to be bolstered by outside intervention, and what needs to be changed.

Case studies are often best suited for this task. For example, in the Philippines in 1977, the NIA and the Ford Foundation funded a major case study program which documented the ways in which farmers in 51 communal systems in different parts of the country managed their irrigation systems (de los Reyes 1980). Valuable lessons were drawn from this work which were later used in training NIA community organizers and engineers.[10] Case studies of the record keeping systems of four communals that were particularly adept at financial management were used as the basis for shaping the financial management systems that NIA taught to hundreds of communals throughout the country.[11] An intensive

or needs reform, then the issues move to the micropolicy arena and appropriately designed research must shift to the social learning perspective.

For example, a reform commonly advocated regarding government construction assistance to farmer-managed irrigation is that such assistance be done in ways that fully involve the farmers. But this is not a decision that can be mandated. In an agency accustomed to more top-down approaches, evoking farmers' participation involves too many changes in the implementing agency's procedures, incentive systems, norms, and personnel skills to be a simple "stroke of the pen" decision.[5]

Because the social learning perspective is suited to many of the issues of interest to this workshop, but is generally unfamiliar to development professionals, the remainder of this paper will examine some examples of applying this approach to issues of government assistance to farmer-managed irrigation in Southeast Asia.

GOVERNMENT ASSISTANCE TO FARMER-MANAGED SYSTEMS IN THE PHILIPPINES AND INDONESIA

As in many other countries, both Indonesia and the Philippines have experienced crash irrigation development programs in the last two decades. These were designed to help the national economy become self-sufficient in rice. Major funding has been provided by international lending agencies, and the projects have been implemented primarily by public works agencies, which have viewed their task mainly in technical engineering terms.

As large-scale irrigation systems have been developed, attention has turned increasingly to smaller scale systems. Developing small-scale systems often involves expanding or improving farmer-constructed and managed systems. But assistance to these systems has generally included no meaningful farmer involvement. While these construction projects have improved some structures and often expanded irrigated area, other structures built have been poorly adapted to the local topography and traditions and, in many cases, after the construction, farmers feel a weakened sense of responsibility for operating and maintaining their system.[6] In Indonesia, government construction projects have commonly resulted in dam and main canal management being transferred from the farmers to the government.[7]

Concerns about some of the negative effects of government efforts have been widespread both inside and outside the relevant implementing agencies in both countries; but actually making the needed changes represents an immense task. The situation is well-suited to the social learning perspective; the issues are rich with *how* questions and a focus on building new capacities within the implementing agencies is needed.

In both the Philippines and Indonesia the Ford Foundation has been supporting the implementing agencies' processes of change. Efforts in the Philippines began on a small scale in 1976. Gradually the social learning process has transformed the way the National Irrigation Administration (NIA) assists communal irrigation systems. Now participatory

In pilot projects in the Philippines and Indonesia, a form of research called process documentation has been developed which provides a detailed record of the pilot projects' field level activities. These reports, provided monthly, have allowed agency staff and others to understand what is happening in the field and to determine its implications for micropolicy reform in the agency.[14] In this context the researchers' role is to gather data aimed at enriching the feedback loop from the field to decision makers and other advisors who assist with improving the agency's approach. Regular monthly reports allow the data to flow into the agency, feeding into a reform process as opportunities arise.

In carrying out process documentation a researcher needs to look in two directions: while attending to what is happening in the village a researcher must also be alert to the factors which affect the implementing agency's actions. For researchers to help with the micropolicy reform process, they must understand how the current procedures work and how these procedures can guide them in selecting field level issues to document. Researchers may need to be attuned to questions such as: How does the budgeting process work -- what funds come from what sources and with what constraints? What are the personnel's job descriptions? How do they view their roles? What are the terms of their evaluations and the basis for their promotions? What about the legal issues of asset transfer, water rights, responsibility for materials? An understanding of the issues contained in such questions may help explain certain problems that are encountered in the field. The documentation of those issues can then lead to appropriate micropolicy reforms.

These three research needs are not the only ones appropriate to a social learning perspective, but they are illustrative and reveal some methodologies responsive to these needs. All are focused on issues relevant to some aspect of agency intervention. Often the original idea for the research springs from trying to grapple with some particular problem in the action program. In this context, the implications flow directly from the research, and implementors are not left wondering: "What does all this have to do with me?"

RESEARCHERS' ROLES IN A SOCIAL LEARNING PROCESS

Researchers involved in a social learning process find that not only are the types of research they carry out different from conventional research, but also the roles they play are different. Two important differences are: their relationship with the implementing agency, and the variety of functions that they are called upon to carry out.

Relationship with the Implementing Agency

While researchers working from a policy analysis perspective usually meet with implementors at the beginning and end of a research project, researchers working from a social learning perspective interact much more frequently with agency personnel. Decision making is seen as an ongoing process, requiring that research results flow in on a a regular basis.

case study of the water management practices of an indigenous communal with particularly sophisticated approaches to water rotation became part of the NIA's water management training for other communals (Angeles et al. 1983). In that training, farmers were provided examples of different approaches to water management practices used by other communal irrigation associations as a basis for determining their own association's approach to water management.[12]

In Indonesia case studies have helped reveal farmer traditions of water allocation which have contributed to understanding the appropriate design of water division structures in rehabilitation projects (Sutawan et al. 1984 and Rachman et al. 1986). They have revealed issues about the division of operation and maintenance responsibility between farmers and the government, and of coordination among systems along a river. These case studies then led to action projects currently underway which try to operationalize the studies' implications (Sutawan et al. 1986).

Developing the Agency's Differential Response Capacity

An important key to effective implementation of a program that relates to people in diverse environments is the ability to respond appropriately to each situation. Each farmer-managed irrigation system is unique and requires carefully tailored interventions. Fortunately, the key dimensions on which the systems vary are not unique. With sufficient experience it is possible to specify guidelines for routinely assessing the key characteristics of a given system as a basis for planning appropriate interventions.

In both the Philippines and Indonesia social scientists working together with engineers have helped develop instruments for making such assessments.[13] The approach involves using a structured set of guidelines (not a questionnaire) to observe the existing physical situation (canals, structures, crops) and to interview key informants about topics such as the history of irrigation in the area, use of the water source by other users, desires regarding government assistance, the existence of different (possibly conflicting) irrigation-related groups in the area, the existence and functions of irrigation-related organizations and leaders in the area, and cropping patterns both existing and desired. The output is a site-specific description geared to the decision making needs of an agency that plans to assist that system. In this context the researchers' primary role is to develop an instrument and a process by which the agency itself can gather and use this type of data on a routine basis for each of the sites in which it intervenes.

Documenting Agency Intervention for Micropolicy Reform

Whether an agency is developing a completely new program or reforming an existing one, an important set of issues involves the exact nature of the intervention needed and the agency support systems required to carry out that intervention. Pilot projects are often carried out to try to determine the former, but attention to the latter is often inadequate with the result that later efforts to replicate the pilot project fail.

In several situations, working groups have been formed of researchers and implementors to provide a clear structure for such interactions. The group meets regularly to discuss findings emerging from the research and their potential relevance to the action agency's program. For example, in the Philippines, researchers from several different organizations met with officials from the NIA at least once a month over a period of six years to help bring about the transformation of the NIA's approach to communal irrigation assistance.[16] Thus by the time a final report is written, its contents are already known by the key implementors and sometimes many of the recommendations have already been built into the agency's program.

To help encourage a strong working relationship between the researchers and the agency, the Ford Foundation has channeled funding for this type of research primarily through the action agency, which then contracts for specific research work. This approach to funding university-based researchers has the disadvantage of being bureaucratically cumbersome, but it has several important advantages. It has helped agency personnel feel a strong sense of owning the research -- in other words, being involved in shaping its form, monitoring its progress, and using its results. And it has helped the researchers become more responsive to the needs of the agency.[17]

Response to Emerging Needs

In a social learning process, a researcher's role broadens as the researcher interacts with the agency and tries to respond creatively to the emerging needs. When such a process works well, the sharp role distinctions between researcher, trainer, and consultant inevitably fade.

For example in West Sumatra, after the Andalas University team had developed a good methodology for inventorying a river system (see Ambler 1985a and b), the natural next step was to train government personnel to do this themselves so that a much larger number of river systems could be inventoried. This activity shifted the university team's role from researcher to trainer. Once the inventory data are collected, the research team plans to help the implementing agency with analysis, shifting the team's role to that of consultant.

Similarly, social scientists from the Institute of Philippine Culture not only developed the approach to doing socio-technical profiles of small-scale irrigation systems, but also trained agency personnel to collect such data routinely. In addition, they took on a consulting role by taking part in workshops to analyze the profiles, and by helping develop the agency personnel's capacity to determine the profile's action implications (see de los Reyes, n.d.).

In a social learning process researchers must be willing to let go of rigid definitions of the researchers' role and search for the varied ways in which they can use their talents to enhance the capacity of the agency. This is not to say that researchers should take on line responsibility in the organization. In a social learning process line responsibilities should remain at all times with the action agency. The goal is to enhance the agency's ability to

implement a program which cannot be achieved by taking over the task. But the researchers do need to be flexible and creative in thinking through the implications of their research findings for the action agency and helping develop the new capacities as needed.

For some researchers taking on such new roles seems difficult as such tasks to build direct capacity seem to threaten their sense of objectivity. Sometimes it is difficult institutionally as the researchers' organization may define its task narrowly, or may assign training or consulting to a different division. A research team involved in a social learning process may find their more conventional colleagues wondering why they are always involved in workshops and meetings at the agency. Or they may find themselves criticized for using nonquantitative methods and for focusing excessively on details.

But for those involved, the social learning approach is often highly motivating. The agency people find that they know more about what is going on in their program than ever before. The researchers find that their research results are listened to and applied. And both gain the satisfaction of creating a program more responsive to the people's needs.

NOTES

[1]Friedmann uses the term *policy analysis* to refer to a broad tradition of thinking about planned change. I use the term as he does, in contrast to the use made by the recently developed policy analysis schools in public administration which fit the broad tradition but define their approach more specifically.

[2]Friedmann (forthcoming) cites Kurt Lewin, Warren Bennis, Chris Argeris, Paul Lawrence, and Jay W. Lorsch among others as representing the social learning tradition.

[3]Steinbrunner (1974) elaborates on this in his discussion of the cybernetic versus analytic perspectives.

[4]There are numerous research reports that have examined the village level effects of a rural development program and then recommended that the implementing agency exercise greater flexibility to be better able to meet the needs of the people. In my experience, however, the implementors are often painfully aware of the need for flexibility but unable to figure out how to achieve it within the constraints of their agency. In these cases the *how* question represents the major challenge, and research which does not address this question is often of little practical value.

[5]An Asian Development Bank funded irrigation project in Bali, Indonesia, illustrates how participation cannot simply be mandated. The loan that provides funds for improving the structures of the famed farmer-managed *subak* irrigation systems specifies that the farmers are to be consulted about all work to be done. However, the reality was often quite different. An Udayana University team has documented how, in some cases, concrete structures built with the farmers' own money and labor were destroyed and replaced by structures viewed by farmers as inferior and less functional. Although farmers protested -- and many agency personnel sympathized with their protests -- the agency procedures were simply not geared to respond to farmer concerns (see Sutawan et al., 1984).

[6]A variety of different case studies have revealed such an effect. For examples see Usman and Rachman (1984), Zein et al. (1986), Siy (1986).

[7]This take-over of management responsibility by government occurs in Indonesia for a variety of reasons. One of them is a general rule that the government manages main canals, while the farmers manage tertiary canals. Because this rule is made without reference to the size of the system, once government assistance is provided to

systems of any size, the main canal generally becomes the responsibility of the government. For a fuller discussion of this and related issues, see Korten (1986).

[8]For a discussion of the process of transformation in the National Irrigation Administration, see Bagadion and Korten (1985). A more complete discussion of this process will be available soon (see Siy and Korten, in preparation).

[9]The participatory irrigation projects in Indonesia have been documented by a number of researchers. Some of the key documents include: Robinson (1985), Masa (1985), Morfit and Poffenberger (1985), and Institute for Socio-Economic Research, Training and Information (1985). These papers all document results of attempts to reform what Coward (this volume) refers to as the "direct" method of assisting small scale irrigation systems. It should be noted that Indonesia has also used "indirect" methods of assistance to farmer-managed systems which are more participatory, although the scale of the rehabilitation carried out in these indirect investment projects is much more limited. For a study documenting the indirect approach, see Hafid and Hayami (1974).

[10]A manual used by the NIA for training community organizers incorporates many of the findings from the de los Reyes study (see Sylvia Jopillo, 1983).

[11]A detailed description of the financial systems of one particular communal is found in Veneracion (1983a). A more general discussion of financial systems in communals is found in Veneracion (1983b). Findings from this study were incorporated in the NIA financial management manual (see Margallo, 1983).

[12]For a fuller description of the "workshop" approach to water management training for farmers on communal irrigation systems, see Communal Irrigation Committee (1983).

[13]For a description of the data gathering instrument used in the Philippines, its development and use, see de los Reyes (1984). In Indonesia this same approach has been applied to small-scale irrigation in North Sumatra and South Sumatra (see NIA Consult, 1985, and Rachman et al., 1985).

[14]For an analysis of nature of process documentation and its uses see: de los Reyes (n.d.). A description of the field-level view of process documentation by a researcher who carried out process documentation for three years is found in Volante (n.d.). For summary reports on process documentation on three different irrigation systems see: Frances et. al (1983), Veneracion (1985), Frances et. al. (1984). In Indonesia, process documentation has been carried out on the Madiun pilot project since 1983 by Satya Wacana University, Salatiga, Indonesia.

[15]De los Reyes (n.d.) provides examples relating field level problems to administrative procedures.

[16]Institutions in the NIA's Communal Irrigation Committee which met regularly over six years included The Institute of Philippines Culture, the Asian Institute of Management, the International Rice Research Institute, and the Ford Foundation, in addition to the NIA itself. For an analysis of the activities of the Communal Irrigation Committee, see Bagadion and Korten (1985).

[17]The Ford Foundation, in some cases, also made complementary grants directly to the universities involved for activities aimed at strengthening the institution's research capacity in the area of concern. But the research intended to be directly responsive to the action agency's needs was generally funded through the action agency.

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