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Title: MUCIA Program of Advanced Study in Institution Development and Technical Assistance Methodology (PASITAM)

Grantee: The Midwest Universities Consortium for International Activities, Inc.

Director: William J. Siffin

A. Statistical Summary

Period of the Grant: 28 May 1971 to 27 May 1976

Amount of the Grant: \$1,000,000.

Expenditures for Report Year: \$137,724 Accumulated: \$231,962

Anticipated for Next Year: \$549,150

B. Narrative Summary

During the period covered by this report the administration of the grant was reorganized, the strategy for pursuing grant objectives was modified, and a number of projects were developed.

Relatively successful efforts were made to (a) strengthen linkages with AID; (b) to develop a sound, workable program strategy; and (c) to continue to build the MUCIA resource base and the participation of MUCIA personnel.

Objectives of this grant have been clarified and somewhat modified, to reflect developments in AID programming and MUCIA Assumptions about desirable accomplishments. We aim to address subjects of importance to AID's technical assistance effort in ways that go beyond the production of "research findings." We have moved away from simple generalizations about "institution-building", toward a narrower, more focal attention to factors involved in effective technical assistance action strategies. During the year, a basic agenda of issues and problems has been set out, although not all of it will be implemented in the remaining period of this grant.

We have also designed a strategy for disseminating, or putting into use, the products of this grant. Basically, those products are, in the 211(d) context, seen as "capabilities". But capabilities cannot exist in an entirely latent form. So, recognizing that our primary aim under this grant is not to produce "things", we have laid a groundwork for efforts to display and apply the capabilities that we are creating.

In relation to the entire grant period, the past year has largely been one of infrastructure development. In the year ahead we shall continue to shape a set of program activities. (A number of such activities -- i.e. projects -- have already begun.) The fruits of next year's program will be forthcoming during the final phase of the grant activity, 1975 and 1976, when emphasis will be upon dissemination and use.

C. Detailed Report

1. General Background and Purpose of the Grant

The purpose of this grant is, in the language of the proposal, "to establish a program to strengthen the expertise of the Midwest Universities Consortium for International Activities, Inc. in institution-building and technological assistance methodology."

The grant envisions the development of a coordinated program within the MUCIA structure. The aim of that program is to build competence to serve the designated developmental purposes, and to make that competence available to the Agency for International Development and other appropriate users.

Research is one of the means by which the grant objectives are to be served, but this is not a research program or project as such. The results of studies are to be transmitted into training capability, consultative and advisory capability, and other utilitarian products.

This grant program is an outgrowth of several related developments. The most basic of these is the experience of the Agency for International Development in the field of technical assistance, and certain lessons of that experience. One of these concerns the importance of "institutions" of certain types as essential mechanisms for the pursuit of developmental aims. AID's own studies of its experience, notably of the effort to build institutions to serve agriculture in various parts of the world, indicated the importance of the institution-building problem. Other Agency studies have revealed the difficulty and potential limitations of institution-building approaches.

On a related front, during the decade of the 1960's a group of universities engaged in an attempt to develop knowledge both systematic and practical about the institution-building as an aspect of technical assistance. The Agency for International Development contracted with this group for several case studies of its own projects.

Beginning about 1969 the Agency also sponsored and conducted a series of international conferences or workshops, to explore and assess the utility of certain ideas about institution-building. Representatives of institutions in various developing countries as well as in the United States participated in these conferences.*

The events that gave rise to this grant included the establishment of AID's Technical Assistance Bureau with the mission of improving the quality of

*A description and assessment of these conferences is found in: Susan Leone, "Institution-Building Conferences, Review and Relationship to Knowledge Dissemination and Utilization Theory." Research Utilization Report to Dept of Communications, Michigan State University, September, 1973. 66 pp. Available from PASITAM/DAC, International Development Research Center, Bloomington, Indiana 47401.

technical assistance efforts. Within the Bureau there developed, in 1970-71, an opinion that a systematic effort to develop improved knowledge about institution-building and related matters of technical assistance methodology was in order. The Bureau solicited advice and suggestions. The eventual response was a proposal from the Midwest Universities Consortium for International Activities, a proposal that became the basis for the grant described in the application of April 14, 1971. (Proposal for Support by the Agency for International Development; MUCIA Program of Advanced Study in Institution Development and Technical Assistance Methodology).

Assignment of the grant to the MUCIA was based upon the substantial and ranging involvement of the Consortium and its members in technical assistance and institution-building operations in various parts of the developing world.

II. Objectives of the Grant

The fundamental aim of this grant is to build a certain kind of capability within MUCIA -- a capability to help improve the conduct of technical assistance, and to help build institutions that can serve as worthwhile instruments of development. Equally basic is the aim of making that capability available to AID and other suitable users.

The primary means by which to develop this ability include the development, identification, refinement, and adaptation of practical knowledge. Basically, that knowledge is concerned with the planning, design, operation, and evaluation of deliberately organized "systems of action" to serve developmental goals.

The foundation of any effective system design is a well-defined problem. Thus, one objective of this grant is to build an improved capacity to "define" or delineate technical assistance problems that are susceptible to institution-building solutions. To be useful, this sort of analysis must lead forward action, or at least improved capacity for action. Therefore the aims of the grant also include the production of relatively detailed "guidance material" that can be used by those responsible for managing and evaluating on-going programs and projects.

In practice, the broad objectives of this undertaking must be given focus and boundaries by selective concentration upon a limited number of top-priority topics. We therefore seek to focus upon the delineation of problems and the design of action strategies within certain program fields that are of particular importance to AID -- as agriculture, health and allied concerns, technology transfer, and education. We also seek to address certain key problems of methodology generally -- such as problems of effective organizational design.

The dissemination of the results of knowledge-building work on these subjects occurs through various types of training, consultative and advisory assistance and publications services. "Training" is perceived as encompassing certain forms of technical and professional education.

As this project has evolved, its objectives have taken on increasing focus. Thus, a few of the statements found in the proposal dated April 14, 1971, no longer describe prime grant objectives. For example, on page two of the Proposal Document, principle objectives are stated to include "adapting the experimental method to the analysis of technical assistance projects, defining the patterns of relationships and interactions between technical assistance advisors and their counterparts, and comparing the effectiveness of various approaches to the selection and training of technical assistance personnel."

In practice, since April, 1971, some of these matters have been addressed through other AID-sponsored projects, and it would be inappropriate for work under this grant to ignore or attempt to duplicate such activities.

Thus, the Program Methodology Division of the Technical Assistance Bureau has initiated analyses intended to help improve the selection of technical assistance personnel, along with studies of relations between technical assistance advisors and their counterparts. Also, the Division is currently involved in investigations of experimental or quasi-experimental approaches to technical assistance.

We are aware of these developments because of the open communications and relatively close working relationships that have been established and maintained between the Division and MUCIA's grant administration during the past year. We anticipate that the dissemination capability being built under this grant will serve as one vehicle for getting products of these AID efforts to users outside the Agency. But we believe that, at this point, the Program Methodology Division concurs with us in the judgment that improved personnel selection and advisor-counterpart relationships are not among the prime objectives or concerns of this grant. Thus, certain detailed provisions of the original statement of grant objectives are no longer accurate.

Parenthetically, we do not wish to imply that personnel selection and advisor-counterpart working relations are unimportant. Obviously, the quality of personnel can be crucial. At the same time, it is manifestly impossible for this single grant effort to deal with every aspect of technical assistance. We have therefore sought to focus more upon underlying methodological factors at the expense of attention to the particular kinds of operating techniques, important as the latter are.

The reference in the original statement of project objectives to "adapting the experimental method to the analysis of technical assistance projects" is not obsolete as a description of an aim to be pursued under this grant. Yet some clarification of the implications of this statement is perhaps in order.

In its broadest implication, "experimental method" means a conscious, deliberate method of activity that leads to improved or increased knowledge about causal relationships. In more conventional parlance, "experimental method" means the design of an activity in which all but one variable (or set of variables) is controlled, as a basis for determining the effects of the "uncontrolled" or experimental variable in the situation. Given the power of the experimental method in the natural sciences, there is great interest

In applying the principles of this approach to the study of complex social phenomena. Currently much of this interest centers upon "quasi-experiments" and "quasi-experimental approaches." One line of effort seeks to lay out the methodology of such approaches, while another related kind of effort seeks to apply the methodology in concrete situations.

The Program Methodology Division has initiated a promising effort to examine, assess and possibly adapt elements of quasi-experimental approaches to technical assistance needs. We have no interest in duplicating this work. In fact, we doubt if we could mobilize expertise superior to that now serving the Division. Thus, one of our current objectives is to monitor and learn from the work of this project, keeping in mind the possibility that there may be opportunities under this grant to use and develop some of the results that emerge from the Division's project.

Therefore, so long as the project objective referring to "adapting the experimental method" is not seen as an exclusive responsibility to be met through this grant, we believe it can properly be retained as a statement of one of our aims. The other references, to personnel selection and advisor-counterpart relationships, are no longer pertinent as primary aims, for the reasons stated above. To sum them: (a) AID's on-going efforts regarding these subjects need no duplication; and (b) these subjects are not really central to the grant itself.

As Joel Bernstein indicated at the June, 1973 meeting of our advisory committee, at which we spent several days considering the strategic factors that should guide our efforts, the technical assistance needs of the present and future include three kinds of institutions: strategizing institutions, to shape and refine the basic agendas of action in various fields of developmental efforts (i.e., to identify and define the key problems); design and development institutions, to respond to strategic needs through R & D type activity in which developing countries must also participate; and dissemination/application promoting institutions.

The basic orientation of efforts under this grant is to provide practical, concrete guidance-knowledge that can help meet these types of evolving institutional needs. In doing so, it seeks to contribute to the methodology of technical assistance, not so much at the level of immediate operational procedures, where academic expertise is seldom at its best anyhow, but rather at the underlying levels of problem analysis and system design, where abstract knowledge can sometimes contribute to the wise choice of actual goals, the auspicious arrangement of authority and resources, and the adroit selection of tools and techniques.

Four major means of dissemination are intended for products of this grant. To put this in slightly different terms: It is anticipated that the capabilities developed under the grant will be put to work in at least four sets of ways. One is through the flow of documents and other materials among a selected set of users, including donor organizations and institutions in LDCs. By the year's end, a coordinator for the PASITAM documentation and analysis center had been selected and a plan of work outlined.

The documentation and analysis center is intended to serve the training capability developed under the grant. Extensive explorations were undertaken of the possibility of creating certain kinds of experimental training programs, during the year. As a result of these surveys, we decided (a) to avoid at this time the development of any elaborate training operation, and (b) to concentrate first upon the further development of materials that could be used in serving the proper clients (not just the available participants).

Along with documentation and training, a third dissemination vehicle is consultation and advice. A modest amount of advisory service was provided during the past year, to AID personnel on an informal basis, and to MUCIA in connection with an IBRD-funded project for the development of the agricultural university in Thailand. At this point, however, no major accomplishments can be claimed. The ability to achieve them will depend to a considerable degree upon the knowledge-building activities now underway and projected.

The fourth means of dissemination takes the form of typical products of academic efforts -- studies and reports on particular facets or our working agenda.

III. Accomplishments

Major accomplishments during the year included:

- a. New arrangements for directing and administering the grant, for mobilizing MUCIA university resources, and for maintaining a continuing working relationship with AID, and contacts with other donor agencies.
- b. Redesign of the strategy for implementing the grant agreement, to focus upon a limited number of strategic target areas.
- c. Planning and initiation of efforts in several of these target areas.
- d. Examination of a number of on-going and prospective field projects that might be relevant to work under this grant.
- e. Development of a basis for a "training strategy" as one element of the grant program.
- f. Start-up work on the "documentation center" element of the grant project, with design of a documentation and analysis center that will be linked with projected training activities and studies underwritten by the grant, and that will also directly collect, assemble, abstract, and disseminate relevant materials.
- g. Dissemination of several hundred copies of Institution-Building: A Source Book, to individuals and institutions in developing countries, and to FAO personnel in Rome and in the field.

Administration and Program. During the year the administration of the grant was assigned to the International Development Research Center at Indiana University. (The current director was officially appointed as of December 1, 1972.) A new set of working guidelines was devised and approved by the Advisory Committee.* This was circulated widely within the MUCIA schools, and served as the basis for discussions with interested faculty and administrative personnel at each of the five schools during the 1972-1973 academic year.

One important objective of developments in program administration has been the establishment of closer working relationships with AID. To this end, the head of AID's Program Methodology Division now participates in the meetings of the PASITAM Advisory Committee, and a substantial continuing interchange of relevant information has been developed. Aims are to minimize confusion and misunderstanding, and undesirable duplication of effort. More important, this continuing working association enables us to link our own program development strategy to AID's priority interests in the field of technical assistance.

Within this orientation, decisions were made during the year to initiate modest projects in the field of rural development, in health delivery, and in the theory of institutional development. Pre-project planning was proceeding in other areas, including the transfer of technology through applied industrial research institutes, the use of the public enterprise form of organization as a vehicle for certain kinds of development purposes, and the interplay of economic and institutional factors in the application of new technology in agriculture. Arrangements were completed for a state-of-the-art analysis of organization theory as a source of guidance in the design of effective action systems for technical assistance efforts.

Under study was a proposed project that would harness contemporary computer technology to the analysis of evolving organizational goals, including a practical application to the study of the OAS tax program over a 12 year period. The program is of interest as a possibly informative example of the workings of a relatively autonomous "network" type activity guided by a multi-lateral organization working in collaboration with host country institutions.

Preliminary investigations of other lines of activity were underway at the end of the year. These included the possibility of improved network design, with particular reference to networks as tools of agricultural technology development and transmission. A prospective case study in the development and dissemination of high lysene corn was under consideration as a possible source of knowledge about factors involved in linking research with utilization.

* See Appendix A: "PASITAM; Aims and Approaches," which summarizes the assumptions underlying the program, sketches the general action agenda, and lays out guidelines for projects to be undertaken under the grant project. PASITAM, incidentally, stands for Program of Advanced Studies in Institution-Building and Technical Assistance Methodology.

It is, in a sense, premature and presumptuous to refer to the above-mentioned activities as "accomplishments" -- if accomplishments mean determinate results. Yet these statements reflect the accomplishment of a substantial amount of program development. Resources have been identified and commitments have been made that will contribute to grant objectives.

Dissemination. This grant is predicated upon the elemental idea that certain kinds of capability will be developed and that the results will be disseminated.

Accomplishments to this point are not very significant. The dissemination strategy has four related elements: the work of the documentation and analysis center, development and application of a training capability, development and application of advisory and consultative capability, and the production of significant research studies and analyses. Understandably, most dissemination accomplishments are matters for the future.

The Blaise Institution-Building Source Book has been widely disseminated. Jointly, AID's Program Methodology Division and PASITAM have distributed almost 1,000 copies, more than half of them outside AID, to other donor organizations including 50 key individuals in FAO, and to individuals and institutions in LDCs.

A modest amount of consultation and advisory assistance has been delivered, in response to occasional requests from within AID, and in one instance to MUCIA itself, in connection with the development of a proposal for a planning project funded by IBRD, and concerned with the development of Thailand's agricultural university.

By the year's end, however, the design of a dissemination strategy was established. Two individuals had been identified to develop materials that would be inputs into the documentation and analysis center, and one was at work. Two consultants had been engaged to develop certain materials for the center during the coming year. A director of the center had been recruited and slated to begin work in October, 1973. A sizeable backlog of materials had been acquired.

Narrative Account of the Year's Activities. With the transfer of the direction of the program from Minnesota to Indiana in the fall of 1972, an immediate need was to reconstitute an advisory committee and to establish communications between the new director and the MUCIA campuses. The MUCIA Board appointed the following committee:

University of Illinois:	William N. Thompson, Chairman Frederick C. Fliegel
Indiana University:	Sara Berry Frank W. Hoole (Alternate) Chris Jung
Michigan State University:	Jay W. Artis Timothy Hennessey

Advisory Committee(Cont.)

University of Minnesota: Martin E. Abel
Richard N. Blue

University of Wisconsin: George Gant
Adlowe L. Larson
Edward P. Mikol (Alternate)

MUCIA: Ralph H. Smuckler (Representative)
George Axinn (Director)

At its first meeting the Advisory Committee resolved that a representative of AID be invited to its sessions, and Dr. James Green has served as AID liaison.

In June, 1973, the MUCIA Board renewed the existing Advisory Committee appointments, with the exception of those of Timothy Hennessey, who will be on leave from Michigan State University during the 1973-74 year, and Adlowe Larson, who has taken an overseas assignment. Robert Jackman, Department of Political Science, Michigan State University, was appointed to replace Hennessey, and Edward Mikol, formerly an alternate from Wisconsin, was made a regular representative from that institution.

The Director, in collaboration with the Advisory Committee, prepared a program statement which could be distributed widely on each campus soliciting interest in the PASITAM program. After several drafts, "PASITAM: Aims and Approaches" (Appendix A) was printed in 500 copies and distributed on each campus early in 1973, in anticipation of campus visits by the PASITAM Director and Assistant Director.

These visits enabled the new directorate of the program to meet with interested faculty to explore potential contributions from each campus. This first round of visits was necessarily orientative in purpose, although some of these discussions resulted in project proposals and participation in the program planning that followed the trips.

At the outset of the first year, the new director employed a full-time research associate to work on the documentation and analysis and program activities. In the budget for the forthcoming year, this person has been switched to work on science and technology transfer and a full-time coordinator has been recruited to run the Documentation and Analysis Center.

One concern of the program is the development of training capability. Much discussion and effort was given to this aspect, both in contacts with AID and other potential users of training and in consultation within the MUCIA universities regarding the nature and staffing of a training effort. A two-day conference was organized at Michigan State University to identify potential training clientele and appropriate content. The conference did not produce decisive results. Subsequent discussion with potential users suggested the wisdom of postponing the mounting of a week-long training program. In the

meantime, an individual was hired to survey past training programs or conferences focused on institution-building. While no training efforts were undertaken during the first year under this directorate, contacts were made which may result in such activity during the next year of operations. The Documentation and Analysis Center will soon have a limited capability for providing certain kinds of tailor-made training materials.

A few months after assuming the direction of the PASITAM program, the Director spent a month of overseas travel to Indonesia, Thailand and Nepal to attend MUCIA meetings and to visit sites of on-going or prospective technical assistance projects.

During the first week of June, 1973, the advisory committee met with a group of "external" experts, including:

Kenneth Thompson, Vice President, Rockefeller Foundation
Francis X. Sutton, Deputy Vice President, Ford Foundation
Joel Bernstein, Assistant Administrator, AID
Milton Esman, Director, Center For International Studies at Cornell University
Melvin Blase, Center For International Programs and Studies, University of Missouri
Howard Beers, Center For Developmental Change, University of Kentucky
N. S. Ramaswamy, Director, National Institute For Training in Industrial Engineering, Bombay, India
Dov Ronen, African Studies, Hebrew University, Israel
Martin Landau, Political Science, University of California
Vernon Ruttan, Director, Agricultural Development Council
James Utterback, School of Business, Indiana University

The Director prepared an agenda paper for the conference (Appendix B); the aim of which was to advance an improved programming strategy.

Three grants totalling \$65,000 were made during the first year of the new directorate for projects to be implemented during the next year.

Vincent Ostrom of Indiana University and Timothy Hennessey of Michigan State University received \$28,540 for a seminar on the theoretical foundations of institutional analysis and design. This research seminar meets weekly at Indiana, having begun in August, 1973. The object is to examine assumptions underlying institution-building theory and to analyze empirical cases with the view of refining institution-building theory. Papers will be contributed by scholars at other MUCIA universities and by several outside consultants. The project extends from June, 1973, to August, 1974.

A grant of \$16,877 was made to Richard Blue (Minnesota) and Allan Schmid (Michigan State University) to work with Gary Wynia (Minnesota) and Brian Coyer (Michigan State University) on the analysis of the planning process in rural development projects. Intensive review of documents at the AID library during the summer of 1973 will be supplemented by interviews during the next year. The grant period is June, 1973, to June, 1974. The project has already produced a valuable inventory of documents available from AID.

Following a planning conference in Spring, 1973, attended by representatives from each of the MUCIA universities and two consultants from John Hopkins University, and subsequent proposal revision, a grant of \$19,000 was made to Dr. Edwin Wallace, Director, International Health Affairs, (Wisconsin), beginning July, 1973. His task is to determine the feasibility and usefulness of a possible major study of rural health delivery systems from an institution-building perspective. His work will be supplemented by documentation analysis to be performed at Michigan State University.

At the initiative of the Director, steps were taken toward the possible development of a program concerning science institutions for, and technology transfer to, developing countries. A person trained in science and history of science was hired to undertake documentation work and coordination of the program development. Following an intensive review of the literature, work has been focused upon the problems of institutionalization of industrial research and technology transfer organizations. At the year's end, a survey of on-going work at other U.S. centers of expertise was about to start. This will lead to our own programming decisions. The research associate presently coordinating this activity will be retained during the next year and a member of the Indiana business faculty may join in project development early in 1974.

During 1971-72 some consideration was given to the institutionalization of public enterprise and its role in the development process. Interest and discussions regarding proposals in this area continued in the past year, and one proposal is now under review for possible funding, with a second expected in the near future.

Finally, as a stimulus to further program development in the areas in which projects are now in progress, a revision and elaboration of the PASITAM program statement is now underway.

IV. Impact of Grant-Supported Activities in Developing Institutional Capabilities

The "development of institutional capabilities" can be viewed in a number of different ways. Simplest and most basic is the sheer acquisition of resources (e.g. professional personnel) that enlarge the capacities existing within an institutional framework. Little of this type of institutional capability building is contemplated under this grant. There are more than 20,000 professional staff members within the MUCIA schools; the task of developing institutional capabilities is not one of adding to this number.

A second approach to institutional capability development consists of "mobilizing" or "harnessing" intellectual resources in the service of the problems that concern us; or in other words, causing existing staff to adjust or modify their own agendas in ways that will enlarge the pertinent institutional capabilities. During the past year at least two substantive steps were taken that are expected to have impacts of this sort. At Indiana University, Professor Vincent Ostrom and Professor Timothy Hennessey of Michigan State University will conduct a year-long intensive research seminar on the theoretical foundations of institutional development. In this effort, which we expect will produce some useful knowledge, they will involve a number of advanced graduate students as well as several faculty members from other MUCIA schools. One effect of this undertaking will be a continuing concern with institutional development strategies, and the maintenance of a continuing ability to provide advisory and analytical services, by Professors Ostrom and Hennessey, and perhaps other of their associated colleagues.

At the University of Wisconsin a decision during the year under consideration to establish a modest project in the health-delivery field has made a significant contribution to the ability of the University of Wisconsin Medical School to continue to allocate professional resources to the field of international medical extension. During the year ahead these resources will be devoted to work within the framework of this grant. This work will, in turn, build capabilities for contributions to the planning design, operation, and evaluation of rural health-delivery systems in poor countries. This capability will be available for varied uses in the field of technical assistance.

Institutional capabilities can be developed in a third fashion: by bringing people together to work on a common problem and thereby producing a total capability greater than a simple sum of the parts. Thus, for example, in 1972-73 we began to develop small "work groups" focusing on particular topics or problems, in a cross-disciplinary, cross-institutional fashion. In the above-mentioned case of health-delivery we have put together a small task-force consisting of medical professionals plus a young social scientist responsible for "feeding" this group information based upon a careful and professional assessment of appropriate literature. Other social science types are expected to be involved in the year ahead. By this type of arrangement we have begun (only begun) to build an institutional capability composed of new combinations of existing resources.

This is one basic feature of the strategy pursued under this grant. We operate on the assumption that a major need is not the addition of resources, but the creative combination of existing resources, to better harness established knowledge and skills to the needs of technical assistance.

An additional example of this approach is briefly displayed in Appendix B. During the 1972-73 year in our preliminary exploration of needs and opportunities in the field of technology transfer, we began to work with a young professor in the Indiana University School of Business, Professor James Utterback. Utterback, whose position is in the Department of Operations Management, has done field studies in Central America and Mexico of the successes and failures of applied industrial research institutes, identifying certain key organizational factors that seem to explain these outcomes. We hope to build institutional capability within MUCIA during the coming year, in part by linking him and his expertise with certain other scholars working on other aspects of the institutionalization of effective technology transfer. Meanwhile, during the past year we have found in some of the work of Professor Vernon Ruttan (at that time of University of Minnesota) certain parallels and complementarities to Utterback's work. Together, Utterback and Ruttan enlarge the number of factors that can be used in considering the design of effective technology transfer arrangements, for Ruttan brings economic considerations into the calculus. Ruttan's work focused primarily upon new varieties in agriculture. It is also likely that Utterback's work bears upon the effectiveness of technology transfer arrangements in agriculture.

Admittedly, this illustration is as much anticipatory as it is a matter of established impact. But it does exemplify an element of the strategy that we have established and expect to pursue. That strategy, in essence, involves the development of enlarged institutional capabilities by recombining existing elements of competence in new ways to address significant problems.

V. Utilization of Institutional Resources in Development

Modest contributions of two general kinds have, during the past year, been made which fit this category. Mention has already been made of relatively continuing informal interaction with the Agency for International Development. Among other things, this has included discussions of the program of the Division of Program Methodology of TAB. It has included collaboration with that division in the distribution of the above-mentioned Blase publication. The program has also cooperated with DPM in reviewing draft material prepared for the Division in connection with production of an orientation manual for technical assistance advisors. Elsewhere in AID, institutional resources have been used to help in the planning and evaluation of a proposed project to develop indicators of institutionalization that can be used in technical assistance project evaluation. This project has been established under contract with Practical Concepts Inc. We have assigned some of our institutional resources to the shaping and conduct of this project during the 1973-74 year. (The PCI project is limited to the health area, and at least three of our own people will serve as consultants in order that PCI work and our own can be co-related.)

On another front, institutional resources of this project have been used, in a very small way, in helping plan an IBRD-funded study of the future development of the agricultural higher education in Thailand. Project resources were also used in Nepal (and in a briefing session at AID/Washington) to help explore needs and feasibilities for Nepalese agricultural education and research development.

VI. Other Resources for Grant Related Activities

It is not possible to discuss this subject in terms of funds allocated. To this point there have been no pairing or matching of funds in connection with grant activities (save for the earlier collaboration with AID in the preparation and publication of the Blase Sourcebook.)

Yet there has been a considerable use of other resources for grant related activities, and they deserve brief mention. First, the on-going capabilities of the International Development Research Center at Indiana have made a worthy contribution to the management and development of this program. The Center itself, in existence for a decade, has an established identity, and a substantial background of experience in activities of the kind intended under this grant.

MUCIA itself has been a valuable source of other resources. The MUCIA Councils in Education, Science and Technology, Health, and Communications have, at no direct expense to this grant, provided a valuable source of stimulation and interchange in connection with program planning during the past year. The above-mentioned health project was initiated in the course of deliberations of MUCIA's Health Council. Other possible project activities have been explored (so far, without result) in connection with the MUCIA Education Council.

The MUCIA agricultural project in Indonesia has also served, during the past year, as a valuable means of orientation and familiarization for the director of this grant. MUCIA activities in Thailand and Nepal have afforded opportunities for enlarging our appreciation of field circumstances and the opportunities they may present for the future.

Thus, in general, the existing MUCIA structure represents a significant source of support for the general program to which this grant contributes. It provides the institutional framework within which the grant operates, as well as the foundations for a future that presumably will extend beyond the duration of the present grant.

VII. Next Year's Plan of Work and Anticipated Expenditures

At its meeting of 25 September, 1973, the PASITAM advisory committee began an annual review of plans and program strategy for the current year. Earlier in the month, the budget for project administration and program development was submitted to the MUCIA Board for approval at its end-of-the-month meeting.*

In broad outline, the 1973-74 plan of work includes the following:

1. Completing the transition of the documentation and analysis center from "start-up" to on-going operations, including establishment of the first phase of a dissemination interchange network involving institutions in LDCs that engage in training, education, research, and related activities.
2. Development of the content of an experimental training seminar for a group of advanced participant trainees, probably in the field of agriculture, and -- providing necessary collaborative arrangements are successfully completed -- actual conduct of a training program of modest duration.
3. Development of a "training environment," consisting of a combination of materials, available experts, and facilities, capable of providing highly tailored training services, ranging from briefings through conferences (and conference/workshop participation) and short seminars, to officials, academics, and others with particular interests in aspects of institution-building and limited amounts of time. The training environment will include facilities at PASITAM headquarters, available to individuals or small groups desirous of spending as little as a day or two on briefings, examination and discussion of reports, and similar activities. The "environment" will, however, be at least partially portable: Material and experts will be transportable to other sites.
4. In connection with items (2) and (3), the development of a series of "training modules" dealing with facets of institution-building and technical assistance methodology, drawing from a variety of sources not limited to on-going projects.
5. Continuation of on-going projects concerning health delivery, rural development, and institutional development theory.
6. Continuing design and assessment efforts in several topical areas where specific activities are now under consideration. In an unknown number of cases this will lead to the establishment of projects. These fields or topical areas include:
 - a. Factors affecting the applicability and effectiveness of the public enterprise form of organization.

*Individual studies and related types of projects, for which responsibility is delegated to an individual scholar or group of scholars, are funded directly by allocations which the MUCIA Board makes. The general operating budget, which does include funds for program development, does not contain money for projects per se.

b. Methodology for the systematic analysis of organizational goal development, in development program fields.

c. Applications of organization theory to the design of effective action systems for development

d. Factors affecting the application and use of research-produced technology, with initial focus upon the case of high lycene corn.

e. Factors affecting the success of organizational arrangements for technology transfer, with initial attention to the (1) design of research/research utilization networks, and (2) to the design of effective applied technological research institutes.

f. Factors involved in the identification of public sector infrastructure requirements to serve and promote agricultural development (an outgrowth of the so-called "Systems of Services to Serve Agriculture" project proposal).

g. Organization design factors that are related to economic planning and analysis, with probable attention to (1) organizational aspects of sector analyses and sector strategies, and (2) organizational considerations in project analysis.

In addition, other preliminary explorations are under consideration that could lead to studies and analyses in the fields of health/family planning/nutrition, and of agriculture. In the spring of 1974 we expect to initiate a prefeasibility study of the design of evaluation strategies for use in educational development programs. And it is possible that the Fall, 1973, round of conferences at the MUCIA schools will lead to additional explorations. We also expect that some adjustment and refinement of the above-list of topics will occur as a result of these conferences.

The conferences themselves are important elements in a program development strategy projected along these lines: During the first half of the current year, refine and specify in detail several lines of appropriate activity that will clearly serve grant objectives. Establish small working groups as appropriate to each topical subject in which there is interest, commitment, and competence. Charge each such group to produce a tangible and defensible project proposal, anticipating the approval of a project by the MUCIA Board during the spring of 1974, as a basis for concentrated work during the 15 following months.

During the 1974-75 year, concentrate upon project-type work (along with established headquarters/documentation and dissemination training activities). Seek to introduce collaborative participation in project efforts, and establish a basis for involving, toward the end of 1974-75 and during 1975-76, LDC participation in assessing, adapting, and applying appropriate products. Also as project efforts proceed, link them with donor organizations, both to obtain guidance and also to encourage acceptance.

One other important element of the 1973-74 work plan includes a substantial conference, probably in June, 1974, at which institution-building capabilities (and needs) in one or two program fields, as agriculture or health delivery, will be considered.

Frankly, any detailed statement about the funding of this plan of work at this point will be misleading or erroneous, or both. The funding plan for program operations and development is set forth in the budget for 1973-74. But it is impossible to indicate anything concrete about project funding. The general intent is to achieve, by the end of the current year, the commitment of substantially all of the funds that will be spent from this grant for project-type activity. In total, that amount is approximately \$400,000; of which \$69,787 had been allocated by September 30, 1973.

TABLE I

Line Item 211(d) Expenditures by Principal Objectives

15 September 1972 - 30 September 1973

	Administration and Planning	Document Center	Research	Training	Total
Salaries and Benefits					
Indiana (Opr. 72/73)	\$ 35,082	\$ 11,470	\$ -0-	\$ 2,210	\$ 48,762
Michigan State (T. Hennessey 73/74)			9,540		9,540
Indiana (V. Ostrom 73/74)			19,000		19,000
Michigan State (A. Schmid 73/74)			5,370		5,370
Minnesota (R. Blue 73/74)			16,877		16,877
Wisconsin (E. Wallace 73/74)			19,000		19,000
TOTAL	\$ 35,082	\$ 11,470	\$ 69,787	\$ 2,210	\$118,549
Graduate Students					
Indiana (Opr. 72/73)	-0-	820	-0-	-0-	820
Consultants					
Indiana (Opr. 72/73)	3,314	-0-	-0-	150	3,464
Travel					
Indiana (Opr. 72/73)	9,994	-0-	2,767	293	13,054
Equipment and Comp.	-0-	-0-	-0-	-0-	-0-
Materials, Supplies, Publications					
Indiana (Opr. 72/73)	1,276	561	-0-	-0-	1,837
GRAND TOTAL	\$ 49,666	\$ 12,851	\$ 72,554	\$ 2,653	\$137,724

TABLE II

Distribution of 211(d) Grant Funds and Contributions from Other Sources of Funding

Review Period: 15 September 1972 to 30 September 1973

Grant Related Activities	Period under Review	211(d) Expenditures			Non 211(d) Funding Amount (1972/1973)
		Cumulative Total*	Projected Next Year (Year 3)	Projected for Years 4 and 5	
Administration & Program Planning	\$ 49,666	\$119,815	\$ 83,200	\$130,000	\$ 44,116
Documentation Center	12,851	30,949	22,050	30,000	8,424
Research Indiana (Opr.)	2,767	2,767	37,400	40,000	55,725
Sub-grants	69,787	69,787	133,333	266,667	
Total	<u>72,554</u>	<u>72,554</u>	<u>170,733</u>	<u>306,667</u>	
Training	2,653	6,733	6,500	20,799	1,644
TOTAL	\$137,724	\$230,051	\$282,483	\$447,466	\$109,909

* Adjustments made to previous cumulative total as sub-project final actual expenditures are ascertained.

TABLE III

**Expenditure Report
(Actual and Projected)**

Under Institutional Grant AID/csd-2958

Review Period 15 September 1972 to 30 September 1973

	Estimated Expenditures to Date		Projected Expenditures		Total
	Period Under Review (15-9-72/30-9-73)	Cumulative Total (28-5-71/30-9-73)	Year Three (9-73/9-74)	Year Four and Five (9-74/5-76)	
1. Salaries & Benefits	\$ 91,743	\$151,307	\$153,573	\$275,246	\$580,126
2. Graduate Student Stipends	12,016	12,016	19,000	28,000	59,016
3. Consultants	9,864	10,014	30,800	41,600	82,414
4. Travel	20,014	40,824	53,660	97,320	191,804
5. Equipment	-0-	1,657	2,500	2,000	6,157
6. Materials, Supplies Publications	4,087	14,234	22,950	43,300	80,483
TOTAL	\$137,724	\$230,051	\$282,483	\$487,466	\$1,000,000

APPENDIX A

PASITAM: AIMS and APPROACHES

UNDERLYING ASSUMPTIONS

"Organization-building" is one of the key problems of development. The organization-building problem is as complex as it is commonplace. It typically involves the design and establishment of an action-system that is highly unconventional in its environment, but one that must become "valued"--accepted, supported, and effectively used--in that environment.

Such organization-building does not fall neatly into the province of experts in management and administration. The task is often viewed as one of applying a technology, or a set of technologies, to substantive problems within a society--a task that involves more than technological expertise.

This kind of organization-building is often described as *institution-building* to emphasize two of its primary features: establishing action-systems that operate in accordance

with new kinds of norms; to produce significant constructive modifications in their particular environments.

To address this type of problem MUCIA has established a Program of Advanced Studies in Institution-Building and Technical Assistance Methodology. MUCIA and its members participate in a wide range of international technical cooperation activities. Many of these involve the establishment or transformation of organizations as instruments for attacking development problems. Therefore, a basic aim of this program is to build within the Consortium an institutionalized capacity to improve the organizational aspects of developmental efforts--within MUCIA and outside it.

The Consortium brings to this task a rich range of resources: expertise in many fields of science and technology; an array of competencies that bear upon the design, operation, and evaluation of organized systems of action; and a large continuing experience in international technical cooperation activities.

This program exploits those resources to:

- (a) develop, assess and organize institution-building knowledge and expertise within MUCIA, and
- (b) establish practical arrangements for providing that knowledge to prospective users.

The program is guided by several basic assumptions:

1. *The objective is utilitarian.* It presumes a collaboration between scholars and persons actively involved in development efforts. The knowledge-building agenda of the project addresses the needs, concerns, and expectations of the latter.

This is not primarily a research program in the conventional sense. Research of certain kinds is an important instrument in this undertaking; but the objective does not much call for original investigation into uncharted fields. The initial emphasis is upon the identification, analysis, synthesis, and adaptation of already existing knowledge. The "knowledge-problem" is largely one of defining that need, as a basis for identifying useful knowledge and considering the ways and means of applying it.

To harness established knowledge to practical needs, the two must be related. Much of our effort must focus upon the analysis of field conditions, and upon the interaction of interventions and the environments in which they are attempted. Such analyses--hopefully--can lead to utilitarian abstractions.

2. *The approach is collaborative.* Practitioners and scholars must interact. The collaboration is not limited to MUCIA personnel. Much of the relevant knowledge and experience, and certainly most of the responsibility for developmental outcomes, lies in the places where developmental attempts are made. MUCIA's aim in this program is to serve certain development needs, and to help enlarge some of the potentials for constructive social change. Thus it seeks collaboration with overseas scholars, practitioners, and their institutions. The program will succeed to the extent that it becomes a catalyst, stimulator, and disseminator of useful skills and knowledge. MUCIA's own competence can only be developed in cooperation with the people who really "own" the problems that concern us. And that competence must be shared with, and tested by, those owners.

3. *The method is operational, or action-oriented.* Skills as well as knowledge are the intended products. The value of the program cannot be judged by the volume of studies completed and reports produced.

It will never be possible to achieve a precise, determinate assessment of our accomplishments: The results will be blended into a variety of complex undertakings. Hopefully, those undertakings will be better than what might have occurred without us. The design and operation of developmental action-systems will always to a considerable degree remain a matter of art. Our objective is to help minimize avoidable error, and to impose somewhat larger limits upon fortuity and caprice.

Such ends are served by study--provided that the proper practical questions can be addressed, and the answers placed in the hands of those who decide

and act. Therefore this program emphasizes training, consultation, and other forms of interaction with actual institution-builders.

THE INITIAL AGENDA

The program initially concentrates upon a limited number of knowledge-building and skill-and-knowledge-disseminating activities. These efforts are intended to be mutually reinforcing. The crucial question is simply: What do we need to know? At this point we propose to address three broad, interrelated questions:

1. What is known about the effects of certain kinds of organizational properties or arrangements, when they are established in specified kinds of settings, with the aim of pursuing particular kinds of goals? The agenda item that addresses this complex question might be called: "Organizational Design and Operation to Serve Institution-Building Aims."
2. What knowledge is there about characteristics of the environments of developmental efforts that can, or should, guide institution-building strategies? What methods can be developed and used for analyzing task environments? This could be labelled: "Dynamic Characteristics of Institution-Building Contexts."
3. What lessons can be learned from practical, development-oriented institution-building efforts--lessons that bear upon methods of analyzing task environments and upon the ways of establishing and

operating action-systems with developmental aims? This is labelled: "Institution-Building Consequences of Development Program and Project Efforts."

Concerning Organizational Design and Operation. Planning and establishing a system of action involves consideration of three interrelated sets of factors and their anticipated effect upon a set of goals. The factors are: (1) The *task environment*, the place or places where the action is to occur, and the salient characteristics of the place. ("Salient" means: likely to have an effect upon what can and should be done.) (2) The *technology*, or technologies, available as possible interventions in the situation. And (3) the *organizational format*, the combination of structure, process, authority, resources, and other things that add up to a specified action-system.

A great deal is known about these aspects of organization. A considerable amount of that knowledge undoubtedly applies to various kinds of developmental efforts. It is practical knowledge about ways in which organizations do and don't work, the kinds of effects that various organizational arrangements have under specified conditions, etc.

Assumptions about organizational arrangements are invariably built into program plans, project analyses, and efforts to install technologies--often more implicitly than explicitly. The field of "project analysis," for example, is much concerned with organizing efforts to pursue particular developmental goals. But, oriented by an economic approach, "project analysis" is prone to deal inadequately with these organizational considerations. Data about organizational requisites, potentialities, and limitations do not comfortably fit an economic format of analysis. Yet the outcomes of projects

are probably determined by organizational factors as much as anything else.

One concrete aim under this part of the program agenda is to strengthen and enlarge established techniques of project analysis, by incorporating considerations about project implementation--which implies organization:

Other tangible activities contemplated include:

1. The careful, selective review of major elements of established knowledge about organizational design. The essential requirement for doing this effectively must be a comprehensive, explicit set of guidelines for the work, in the form of Criteria of Relevance. Otherwise the sheer volume of materials will overwhelm us, and their salience will not be established. One prospective product of such efforts would be a series of papers focusing upon organizational factors in certain kinds of developmental efforts.
2. Comparative analysis of concrete experience is another germane approach. A pertinent project area for analysis is Health Delivery Systems, particularly because of the substantial amount of effort and interest that now exist in this field. An appropriately broad view would envision "health delivery" as extending to the selection and establishment of medical technologies on the basis of task environment characteristics. Another pertinent field for such study might well be agriculture. The broader question of organization of rural development programs also merits attention.

3. Interesting and significant questions exist within the area labelled "Public Enterprises." Public sector organizations of less developed countries usually include public enterprises, intended to serve complex mixes of social and economic goals, established in preference to private enterprise and as alternatives to conventional bureaucracy. Given the sheer quantity of such organization, and the significance imputed to this organizational form for economic development purposes, the analysis of factors affecting the design and consequences of public enterprises is merited.
4. Other empirically-oriented comparative studies of questions concerning organizational design and operation should be considered.

Concerning Dynamic Characteristics of Institution-Building Contexts. A lot of things besides the direct efforts of change agents affect the outcomes of institution-building efforts. And those efforts are always subject to the overlapping tests of salience and situational feasibility. No one would set out to establish drive-in theaters in Antarctica; yet at least a few institution-building efforts have been almost as absurd. One of the crucial questions for institution-building is that of the salience of an effort to its setting.

Part of the answer to the question of salience depends upon characteristics of the situation, as they bear upon the prospects of institutionalization. It is usually easier to ride and shape a perceivable trend than to try to go against it. And it is easier to establish an institution compatible with existing socio-cultural properties than one involving clear conflicts with important properties of the established system. Guides to the assessment of

environmental factors can enhance the effectiveness of decisions about institution-building efforts.

Tangible activities under this agenda item might include:

1. Again, the careful, selective review of existing knowledge, with guidance in the form of a set of Criteria of Relevance.
2. A comparative review of experiences in one or more program fields, or "sectors," in a quest for tentative and limited generalizations about the impact of environmental factors upon certain kinds of institution-building efforts (including the applications of particular kinds of technology).
3. This agenda item is particularly suitable for case analyses--particularly the comparative analyses of cases that appear to have some common features. Such analyses should be undertaken with two objectives in mind: To identify salient task environment features, given certain kinds of developmental intents and methods; and to develop practical methods for performing task environment analysis in connection with program and project planning.
4. The analysis of certain relations between aspects of "science and technology" and particular types of task environments. Put in utterly primitive and prefatory terms, the assumptions are: Given the appropriate stipulations or specifications of what is meant by "science," "technology," or "science and technology" it is possible to ask, at various levels of abstraction:

What are their institutional requisites, and what are their apparent institutional properties? In this way, and probably in other ways, it is possible to examine aspects of the relationships between science/technology and institution-building. Given the amount of interest in science and technology as means of development, knowledge about such things as the institutional requirements of various manifestations of science and technology seems important. So does knowledge about the extent to which and ways by which science and technology are--or are not--relatively self-institutionalizing under given conditions.

Concerning Institution-Building Consequences of Development Program and Project Efforts. Obviously this is not a discrete category of analysis. It is a particular perspective of approach to concerns identified in the other agenda items. The aim is to draw lessons from ongoing experience, and to "test" knowledge from other sources.

Experience-oriented efforts might take any of a number of different forms, including:

1. The on-site monitoring of a particular institution-building project, or--preferably--a group of comparable projects, to seek insights about critical factor and to examine and perhaps advance the utility of premises developed elsewhere in the program. Such efforts offer distinctive opportunities for collaboration by nationals of the country or countries in which projects are located. It would be desirable to have a relatively common technological component to a set of projects

treated comparatively. From this view, health delivery projects might be highly suitable. Water resource development projects would also be suited to this approach, and there are other possibilities. Experience-oriented studies might also focus upon activities in such fields as education and agriculture, given the volume of knowledge and effort one finds here.

2. A somewhat different approach would focus upon efforts to institutionalize new norms within a given society, or some component of it, without the establishment of a specialized organization as the primary carrier or "enactor" of such norms. Examples can be found in the field of family planning, in efforts to bring about nutritional changes, and in such fields as public health and agriculture. Perhaps on the other reaches of this category would be found efforts to institutionalize entrepreneurial behavior.
3. The "experience" that is germane here includes efforts to carry out sector analyses and sector planning, and to organize both these activities and the implementation of the proposals they generate. An object of study would be to ascertain the extent to which institution-building considerations are, or might be, incorporated in these developmental activities.
4. Germane field analysis might examine efforts to modernize or transform one element within a larger organizational struc-

ture--such as a department or school within a university, or within a unit of government.

IMPLEMENTING THE AGENDA

Implementing this agenda involves several related lines of activity. They include:

Continuing to refine and develop our own program strategy, in light of our own task environment and our ability to serve it.

The establishment of a Documentation and Analysis Center.

The establishment of a set of knowledge-building projects.

The development of dissemination arrangements.

The Advisory Committee plays a key role in shaping, assessing, and helping develop program strategy. Its contributions include the identification of needs and opportunities for action, passing judgment on proposed projects, and in various ways keeping the program properly aligned with its aims and its setting. In addition to its own meetings, the Advisory Committee will participate in meetings with the so-called External Committee* of the program, to consider and assess important issues and opportunities affecting the program as it develops.

The Documentation and Analysis Center serves as a repository for program materials, and as the instrument for

*The External Committee is a "floating" group of consultants and advisors, including academic experts, practitioners, and representatives of LDC institutions.

helping determine the state of the art as this relates to our concerns.

Products of various projects flow into the D & A Center, as do materials germane to our agenda. The Center undertakes, on-site or otherwise, analyses and syntheses of existing materials. It monitors the products of ongoing scholarship and experience as these are reflected in publications and reports. It serves as a studies center that can support scholarship, and thus is considerably more than an archive or reference room. Its materials and its work support the dissemination efforts of the program in important ways. Some of the analysis that serves the needs of the D & A Center is fostered in part through support and assistance for masters' theses and doctoral dissertations.

A major part of the overall program consists of knowledge-building projects undertaken within the framework of the agenda sketched above.

The dissemination effort of the program includes training, consultation, workshops, and applications of assumed expertise to various projects conducted by donor agencies, and by development agencies in individual countries and regions. A first step is a projected 10-day experimental training program, for the team leaders of institution-building technical assistance projects, scheduled for September, 1973. Consideration is also being given to the establishment of one or more courses and/or seminars, probably within one or another professional school within the MUCIA complex, to lay out an institution-building approach to the design and operation of technologically-centered action-systems for development. Publications are another means of dissemination.

PROJECT GUIDELINES

Projects are an important feature of the MUCIA Program of Advanced Studies in Institution-Building and Technical Assistance Methodology. The project device is used to develop knowledge about pertinent problems and questions, to undertake experimental activities, to develop materials for dissemination, and to serve other program aims.

The MUCIA schools are the primary source of proposals. Projects may be proposed by individual faculty members, informal faculty groups, MUCIA Councils, the Program's Advisory Committee, or others.

Project proposals are submitted to the program director, evaluated by the Advisory Committee, and approved for funding by the MUCIA board. Formal proposals are usually the products of informal descriptions and discussions of contemplated work. Within the limits of its budget the Program defrays the cost of small-scale meetings for the purpose of exploring and/or developing project proposals.

Projects need not be limited to knowledge-building activities; at present they include one projected experimental training program for the leaders of technical assistance teams, and other "applied" projects will be entertained.

Basic philosophical questions about development are outside our project boundaries. Our interest in theories and models is utilitarian and instrumental. We ask three general questions about any project proposal: Does it promise an operationally-useful product? How consequential is the product likely to be, and to whom? Will it help build

Institutionalized competence within MUCIA?

The Program's Advisory Committee has adopted these guidelines for projects:

1. **Scale.** We do not entertain large-scale projects, but will support feasibility studies and seed-money ventures that anticipate possible large projects.
2. **Time.** We prefer projects that anticipate a product within six to eighteen-twenty months of getting started.
3. **MUCIA involvement.** We prefer projects that draw resources and facilities from more than one of the MUCIA schools (i.e., that do so not as a concession to our preferences, but because it is intrinsically advantageous to the project).
4. **Academic involvement.** Support for graduate students, and for ongoing academic interests of faculty, are important instrumental aims.
5. **LDC involvement.** Whenever possible, we prefer collaborative participation in projects by LDC institutions or members of their staffs.
6. **Incrementalism.** We favor projects related to established knowledge or to ongoing enterprises--e.g., adding a dimension to a technical assistance project through monitoring, building on past efforts or investigations by collecting materials on a set of particular ventures and analyzing for themes and lessons, or undertaking a "state of the art"

Investigation. In general, we minimize emphasis upon *de novo* research.

7. **Nature of results.** We desire contributions to the Program's Documentation and Analysis Center, and applications of findings in programming, administration, consultation, training, and education.

We ask the following questions about knowledge-building project-proposals:

1. Does the project promise to produce knowledge that can influence practice? Who are the potential users? Do they include less developed countries?
2. Is the product likely to be strategically significant?
3. How is the proposed project related to (a) the current state of knowledge in the field it addresses, and (b) other ongoing studies and activities?
4. If the project is concerned with "model building" or "theory building," will the models or theories be useful to our aims and interests?
5. If the project involves empirical description and analysis, then: Are data available? Does the study promise some useful generalizations? Will the data obtained or generated have any potential additional utility? Is the project action plan plausible?
6. How does the project relate to other MUCIA interests and activities?

7. What sort or sorts of dissemination arrangements are included?

D. Woods Thomas, et al., eds. *Institution Building*, Schenkman, 1972.

Malvin Blase. *Institution Building Sourcebook*. MUCIA-Pasitam, 1973.

Thomas and Fender, eds. *Proceedings: Conference on IB and Technical Assistance*. AID, 1969.

For further reading on IB, see:

Joseph Eaton, ed. *Institution Building and Development*. Sage Publications, 1972.

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APPENDIX B

INSTITUTION-BUILDING: COMMENTS CONCERNING MUCIA PROGRAM STRATEGY

Preface

This paper is not a definitive statement. It contains no conclusion. It seeks only to provide a perspective, in terms of which we can think and talk about institution-building, and thus to stimulate some judgments and decisions about the main elements of our strategy for the months and years ahead.

The paper implies that certain lines of investigation may be valuable. It indicates that certain kinds of assumptions should be reflected in our view of aims and obligations. Hopefully, it offers some judgments that can be reflected in decisions about our program, even when individual items on that program are not labelled "organization design," "task environment analysis," or anything of the sort--but rather are concerned with such possible things as health delivery systems; the institutionalization of management strategies for development, public enterprises, the design and operation of intermediaries for technology transfer, or what have you.

During the course of our conference/retreat, we shall discuss the institution-building perspectives of experts from foundations and the Agency for International Development. We will look rather closely into Ruttan's argument and Utterback's findings (with papers available ahead of time). We will talk with foreign and American experts in efforts at institution-building, in fields ranging from agricultural higher education to management and industrial engineering.

Hopefully, while doing this we will be thinking about the conclusions we want to reach for ourselves--about the ways we want to go, and about some of the concrete action items that should have a high priority on our agenda.

Thus the value of this paper lies not in what it says, but in any contribution it makes, along with the rest of our efforts in June, to you, and to all of us.

The State of the Art

About ten years have passed since Milton Esman's article, "Institution Building in National Development," was published in the International Development Review.¹ That statement set forth elements of a perspective that, with some change and addition, provided the basis for the study and discussion of institution-building in the decade that followed.

During the 1960s an Interuniversity Research Program in Institution-Building (IRPIB) was created. About forty studies were mounted, the results of which are summed in Joseph W. Eaton, ed., Institution Building and Development: From Concepts to Application,² and in Melvin G. Blase, Institution Building: A Source Book, published by MUCIA in conjunction with the U.S. Agency for International Development, in 1973. Conferences and seminars were held in the United States and abroad, one of which led to the publication of Institution Building: A Model for Applied Social Change,³ D. Woods Thomas et al, eds. And the Agency for International Development made a grant, under section 211 (d) of the Foreign Assistance Act, to the Midwest Universities' Consortium for International Activities (MUCIA) to further develop institution-building capabilities for use in technical assistance efforts and for related efforts.

From the beginning, "institution-building" has been concerned with the promotion of development through the effective organization and delivery of technology. It posits the organization problem as one of

¹December, 1962.

²Beverly Hills: Sage, 1972.

³Cambridge: Schenkman, 1972.

(a) devising effective organizations that (b) will bring about desirable normative changes in their environments.⁴ One significant application of the institution-building perspective during the 1960s was the CIC/AID study of a group of technical assistance efforts aimed at Building Institutions to Serve Agriculture, to cite the title of the summary report that resulted.⁵ One product of this venture was another, somewhat different perspective on the institution-building process, known as the Rigney-McDermott model.⁶ The aim of this statement was to add a temporal dimension to the IB framework, by laying out a sequence of major steps and events seen as characteristic of an ideal was institution-building technical assistance project. The perspective inspired by experience in technical assistance-based efforts to develop and grant-type universities overseas.

The Rigney-McDermott statement illustrates and in a sense epitomizes one approach that institution-building efforts have taken--attempts to distill lessons from practical experience for the benefit of persons faced with similar tasks.

Other institution-building studies have sought to "test" the original model by using it in individual case studies, and to apply it in training practitioners.⁷ An attempt to apply the Esman perspective to program

⁴The perspective is described by Esman in: Eaton, Ch. 1; and in Thomas et al., Ch. 5. It is also summed in Blase, Ch. 1. Comments on its characteristics, by Siffin, will also be found in each of these sources.

⁵I.L. Baldwin, project director. Published at Lafayette, Ind.: Committee on Institutional Cooperation, 1968, under contract with the Agency for International Development.

⁶Re. which see: Thomas, chapters 9, 10.

⁷For a characterization of such efforts see Siffin: in Eaton, at pp. 53-57.

operation and review was also undertaken by Thomas W. Thorsen, an AID official.⁸ He developed an institution-building profile and used it to evaluate progress over several years in the development of a particular organization. One effort at generalizing analyses was also made, by William Pooler and Richard Duncan. The aim: to see if the Esman-institution-building perspective could be used to evaluate the effectiveness of organization-building technical assistance efforts and thereby to produce criteria for effective project design and implementation. This study involved a comparative analysis of more than 40 technical assistance projects, of which 30 had existed for at least eight years. The results are reported in Eaton.⁹

Among the conclusions of the Pooler-Duncan study were these findings: The number of organizational variables addressed in the strategy spelled out for a technical assistance project correlated with the adjudged success of the project--the more variables covered by the action program the greater the likelihood of success. In other words, a project with built-in attention to leadership, program, organization, resources, and internal structure was more likely to succeed than one addressing fewer of these factors. Of these five factors, Pooler and Duncan found that leadership, internal structure and resources seemed to correlate most highly with success, within the terms of their analysis.

Project success correlated also with the extent to which the host country was willing to grant authority to the organization; and with the extent of efforts to establish complementary activities, i.e., outreach arrangements stemming from the organization-building project. For example, project success correlated highly with efforts of the host country to promote or encourage development of a clientele for the results of the project.

⁸Eaton: Ch. 8.

⁹William S. Pooler and Richard L. Duncan, "Technical Assistance and Institution Building: An Empirical Test," pp. 183-225.

The success of projects also varied with the degree to which the host country controlled actual or potential competing activities. Rather obviously, the consistency of host country support also affected project success.

Finally, there was a relation between project success and the degree to which the project was "similar" to on-going activities in the host country. Sixty-four percent of all projects that were dissimilar to on-going activities in their content, function, and philosophy of operation, and also at variance from the societal value system, failed. (For an n of 33 projects.) The Pooler-Duncan study is suggestive rather than definitive. This type of research always poses difficult questions about the comparability of the cases covered, and about the larger applicability of findings. Yet this was one of the most distinctive and broadly analytical research efforts carried out in the first decade of institution-building studies. It sought to generalize about the effects of different approaches upon the outcomes of organization-building technical assistance efforts.

Other studies and assessments were also made during the decade, including Edward Rice's comprehensive retrospective evaluation of efforts to develop extension services in Latin American countries, studies of such ventures as the Comilla project, Vicos, the program of the Joint Commission on Rural Rehabilitation on Taiwan, and many other case studies noted by Blase. Kenneth Thompson, in his Technical Assistance: A View from the Private Sector, described and reflected upon Rockefeller Foundation experience in institution-building. And there were other reports, dealing with cooperatives, land tenure institutions, community development, etc.¹⁰

After at least a decade of inquiry, argument, and elucidation where do we stand? What is the state of the institution-building art, and what are the implications for the future?

¹⁰ Notre Dame, Indiana: University of Notre Dame Press, 1972.

For one thing, a sizeable number of practical questions have been formulated to guide and inspire would-be institution-building.¹¹ In their most pristine form they ask: What innovations might be suitable and why? How should an effort be organized? What leadership arrangements are appropriate? Where will the resources come from? What are the key linkages? Etc. There is testimony from such sources as the Asian Agricultural College and University Seminar of 1970 that questions (and general statements) about such IB ideas as linkages are useful to the managers and other officials exposed to them.

Question development has probably been pushed to its fullest development in the Thorsen evaluation profiles of a particular organization. There are two profiles, respectively concerned with institutional characteristics, and administrative-managerial characteristics, amounting to 74 specific questions, each to be answered in the form of a rating on a five-point scale, ranging from excellent to unsatisfactory. The Thorsen approach involves the disaggregating of general judgments about the adequacy and promise of an organization into a large series of detailed judgments. It is assumed that the factors embedded in Thorsen's questions are the ones that really matter--the factors whose characteristics determine substantive outcomes.

For people who are truly ignorant of organizational matters, such questions about institution-building considerations can be quite useful. Informed impressionistic profiles of the condition of an organization can provide some guidance for a management strategy. They may also help a group of people shape a common perspective upon a situation of shared concern. In short, these tools are not to be scorned.

Neither should they be overvalued. If these indeed are the right questions, the real value lies in their answers. As things stand, the IB questions and checklists are largely predicated upon the assumption that knowing practitioners will find answers suitable to their particular

¹¹For an illustrative list see Eaton, pp. 34-35, the Thorsen profiles at pp. 172, 174, and 176; and the illustrative questions posed by Snuckler, pp. 234-235.

situations, from their own expertise or from sources that do not to a large extent include IB literature. It is fair to conclude that the initial question-generating phase of institution-building studies has run a sufficient course.

Of course, some answers have been provided as a result of institution-building undertakings. They have tended to focus upon the technical assistance aspect of institution-building efforts. Major examples are the studies and judgments of McDermott, Rigney, and their colleagues in the CIC/AID project. These offer answers to questions about the ways in which technical assistance can build indigenous strength and capability. They include assertions about the importance of building self-confidence among host-country staff; of indoctrinating suitable standards and attitudes (e.g., in favor of the land grant college idea, in support of bureaucratic neutrality and efficiency norms, etc.); of viewing a technical assistance process as running through a series of phases. These include: start-up, where things are quite flexible and personal relations are primary; a second phase that concentrates upon internal aspects of organization-building; a third phase focusing upon the building of support in the host-country political environment; and a final phase wherein the organization becomes valued in its own social context.

At first glance such statements may seem obvious or trivial. But this is not necessarily so. In their time-phasing sketch McDermott and Rigney say a number of noteworthy things, and assert that their prescriptions apply generally to such ventures as efforts to develop agricultural colleges through technical assistance. First they note that the actual content and thrust of a project is likely to be shaped and changed as the effort proceeds--and not really beforehand. How it shapes will be much affected by personal factors. If these are auspicious, then personalized arrangements will lay a real basis for organizational development. Then an established entity can begin to lay claim to support within its socio-political environment. The Rigney-McDermott view can be related to the penetrating strategic prescriptions of Lindblom and Hirschman about the shaping of action-strategies for development under conditions of considerable

indeterminacy.¹²

One problem of such statements, however, is that they are at best quasi-recipes.

Recipes themselves are throughly valuable things: they tell you precisely how to do something that you want to do. But in the case of quasi-recipes the values of key variables aren't actually specified, nor are the parameters precise and explicit. One cannot know if three hours per day of substantive interaction with a host country colleague over a four month period is equal, metaphorically, to thirty minutes of salt pork's immersion in water heated to 212 degrees at sea level.

For some types of activity, quasi-recipes are as much as we can hope to achieve, and the institution-building studies and analyses that have them are well summed in Melvin G. Blase's Institution Building: A Source Book.¹³

In 225 pages, Blase has reported the finding of 134 different IB studies. By a somewhat heroic stretching of his boundaries he manages to include 11 of what he refers to as "Cross-sectional Analyses of Institutions." Of these, three are primarily concerned with technical assistance approaches and techniques. Only two are comparative analyses of sets of projects leading to findings about some of the factors that generally appeared to affect institutional outcomes. None the less, Blase's material could fruitfully be mined for relatively systematic, limited, practical generalizations about aspects of the conduct of institution-building efforts. Contradictions and inconsistencies in various findings themselves raise some interesting questions.

¹²"Economic Development, Research and Development, Policy Making: Some Converging Views," Behavioral Science, April, 1962, pp. 211-222.

¹³NUCIA/AIU, 1973.

The word "limited" must be applied to the findings documented in Blase for several reasons. Many of the prescriptions and recommendations derive from individual case studies. Also, it is hard to interpret some of the statements, let alone act on them. Viz: "Institutionality will result if the leadership, doctrine, and program of an innovative organization realistically take account of (that is, adjust to, balance and reorganize) the significant elements in a related environment so these are marshalled in support of the organization and its innovations. "Doctrine must be sufficiently specific to obtain authority to operate. Specificity in excess of this minimum, however, may place undue restrictions on program development." "Host institution doctrine is meaningless until there is a body of knowledge and information accumulated that will have importance and relevance for the potential clientele groups in the environment."

Yet it would be possible to construct out of the Blase volume at least a prefatory guidance manual for would-be institution-builders, and for planners and evaluators of proposed institution-building projects. The manual would never be a sure guarantor of success, and it would be incomplete in a number of ways. It could, however, at least identify and array some of the lessons of experience that have been gained at no small cost in time and talent. Humble in tone and Machiavellian in tinge, such a manual could be a source of sensitization for certain kinds of operatives. But it would still be subject to a limitation that runs through the existing literature--the inherent limitation of all "how to do it" treatments.

To some small extent the existing body of institution-building material does address the question: What to do? But only in a limited negative fashion--by raising issues that might in some cases lead to conclusions that the contemplated action is impossible, or thoroughly unlikely to succeed. More salient questions for those who would plan and implement social change--questions about strategies and targets--are not handled here.

Even the "how to" aspect of present knowledge is marked by significant limitations. One of these is the a priori nature of much of it. Thus, the extensive formulation of 32 stages within four phases in the ideal evolution of a successful institution-building project, perceptive and suggestive as it is, calls for a tightly-knit sequence of unfolding activities that would be worthy of a detective thriller: It posits more than it derives, and thus offers more of a scenario than a format. The sketch does indeed illuminate the complexity and difficulty of an institution-building venture in technical assistance. As education the illustration is valuable; as prescription it leaves more to be desired than is ever likely to be attained. So too with other existing materials. They leave uncovered some large realms of unknown territory, although they have helped produce an awareness of these voids.

Over the past decade, perhaps three million dollars have been spent on studies and investigations explicitly of institution-building. Whether that is a lot or a little depends in part upon your view. In any case, it is testimony to a concern shared by quite a few people. Whether the results of those expenditures justify the outlay is also a matter of opinion. No grand and powerful new discoveries of strategically potent knowledge seem to have emerged. In fact, one somewhat surprising impression of the review of a decade's work is the very small amount of "social science" input that has been made, and the equally small amount of "social science" output that has been achieved. Understandably, institution-building has been, and remains, a concern of practitioners and prescribers of practice. For various reasons, they have not found much wonder working power in sociology, anthropology, and the like. Nor have the economists, qua economists, been of great help.

The decade's work can serve as the fit foundation for a further round of analytic effort--a round that probes more deeply and concludes

more determinately about organizational strategies of social change. This will require some adjustment in the balance of involvement in institution-building investigations. General concerns with such matters as "leadership" and "organization" will have to be disaggregated, in order to achieve statements about how particular kinds of leadership and organization are likely to work, in particular circumstances, in the service of more or less specified ends. The role(s) of technology will need to be spelled out in ways that apply to issues of concrete cause and effect. Tangible strategies for analyzing particular task environments, or types of task environments, will have to be devised.

To the extent that these second-decade needs are met, the concerns that have stimulated institution-building inquiry will be served. In the broadest sense those concerns are with "the organized capability to perform the important economic, social, or political functions in a society.... The influence of institutions on the societies they serve can either catalyze or retard economic and social progress.... Institutions along with government policies are the major variables determining what people do in developing countries. They are prime determinants of the course of political, social, and economic progress and offer the greatest potential for influencing the direction of development."¹⁴

From this perspective, institution-building aims and interests are not limited by the immediate scope of technical assistance undertakings. And the essential need at this point is to shape and sharpen the agenda that will dominate our own thoughts and efforts in the months and years ahead.

Targets for a Knowledge-Building Strategy

1. Guidance for Goal-Setting. In the existing IB literature the institution-building problem is frequently treated as a situation

¹⁴J. Bernstein, cited in Blase, p. 253.

facing the manager, entrepreneur, or advisor whose general goals are given, and whose challenge is to achieve them. The Rigney-McDermott perspective is an example, although it does note that goal-setting is not something entirely settled before the action begins, but rather an activity that continues, within boundaries, as the work proceeds. The prime emphasis, however, is upon flexible implementation of a generally specified objective under novel and complex conditions of action.

There is much to be said in favor of guidance for people who must operate in typical technical assistance settings. Sometimes, however, their biggest problems are the result of failure to address adequately another problem--one of great importance and even greater complexity--the problem of deciding what ought to be done. In fact, if the wrong things are done reasonably well, the effects may be even worse than failure, and the principles and preference that gave rise to, or at least justified, a line of action may be perverted.

It remains true that, as Lindblom, Hirschman, McDermott, and others have noted, that in complicated endeavors whose outcomes are not entirely predictable, goal-setting is not a one-time a priori thing. Yet projects, programs, and the like are responses to some purposive orientations, and the rationale of project design, program planning, and evaluation are largely predicated upon the idea that some sort of goal can be stipulated at the outset. If "bad" goals are to be avoided, and if institution-building's aims continue to be the effective use of organization to achieve desired social change, then goal-setting cannot be excluded from IB's strategic concerns.

Some people argue against the very idea of a rational goal-setting calculus, but this argument is irrelevant to our interest. Guided social change efforts are invariably suboptimizations. They are instrumental to larger purposes within or among societies. They are, in other words, means as well as ends, and there is nothing illogical about trying to evaluate the suitability of means.

In the broadest terms, goal-setting analysis involves two related issues--feasibility and suitability. Efforts that seem doomed to failure probably ought not be mounted. Nor should efforts that do not promise positive answers to the question: Will the undertaking, if successful, make a worthy contribution to economic, social, or political objectives, or some combination thereof?

A useful starting point for an analysis of feasibility and suitability is this assumption: that the outcome of an institution-building effort is determined by the interaction of four kinds of factors: goals, technology, organizational format, and task environment.

For example, both the suitability and/the feasibility of a given goal or goal-set are affected by characteristics of the environment upon which the goal may be imposed. Feasibility is not merely dependent (though people sometimes act as if it were) upon a seemingly suitable technology; it depends also upon capacity to organize or enact the technology, and upon both the likelihood of doing so in a particular task environment. Again, the requirements of any particular technology will determine some of the characteristics of an organization. At the same time, the organizational potentialities in the task environment influence the probability that the technology can be installed and made effective. And so goes the complex interplay of these different types of interdependent factors--of which goals are one.

Because real goals are part of a set of interdependent variables, it is logically possible to partially calculate the feasibility and suitability of prospective goals, on the basis of information and judgments about the other factors. An obvious example is the kind of determination made when agricultural scientists decide whether a particular technology will work in a given place. On the basis of this sort of analysis they recommend a particular crop rotation, a particular fertilizer use, and so forth. They set a goal (admittedly a rather obvious one), when they recommend: Do this in order to accomplish

that, for this will work in the given circumstances.

When an organization for the delivery of such expertise is already established; when the properties of the task environment are easily known; when there is tested technology, then this logically complex calculus of change or development is in practice not very formidable. Many of the relevant factors can--quite properly--be taken for granted. Trouble arises when they can't be, and the fact is ignored. These are the circumstances under which the wrong technology is established, maladroit organizational arrangements are established, intrinsically sound practices fail because they aren't environmentally acceptable--and, for one or another such reason goals turn out to be inappropriate and unattainable.

In summary, the argument here is that goals are one of the crucial concerns of institution-building analysis, and that they must be treated as one element of a set of interacting factors. One product of this approach is the promise of answers to a question that was only acknowledged during the first decade of IB studies: What are the right institutions?

Vernon Ruttan offers a practical demonstration of this analytical approach--one that shows how a combination of general norms and task environment characteristics can be combined in an analysis that, in certain circumstances, can contribute to an improved calculus of institution-building goal-setting.

He starts with the axiom that institution-building should be regarded as a response to the emergence of new technical opportunities, rather than as a source. ¹⁵

¹⁵Vernon H. Ruttan, "Technology Transfer, Institutional Transfer, and Induced Technical and Institutional Change in Agricultural Development, May 3, 1973. See also his review of Institution Building: A Model for Applied Social Change, in the International Development Review, 1, 1973, pp. 16-18.

In this view, technology and institution-building are interdependent. Technology can be transferred in more ways than one; but one important form is the transfer or establishment of "local capacity for invention and innovation of a continuous stream of locally adopted technology."¹⁵

One important institutional form that has been used to promote such transfer of capacity has been intermediate institutions, exemplified in agriculture by CYMMIT, IRRI, etc.¹⁶

As mechanisms combining the mastery of technology with a particular organizational format, these intermediaries are manifestly promising. But there still remains the question of what technology or technologies to transfer to various possible places. (I.e., what goal or goals to adopt.)

Ruttan offers illustrations of ways in which task environment characteristics, combined with certain general economic criteria, can lead toward auspicious answers to this question.

Citing Griliches' study of hybrid corn diffusion, Ruttan notes that "differences among regions in the rate...and level...of acceptance are [in Griliches' analysis] both functions of the profitability of a shift from open-pollinated to hybrid corn."¹⁷ "...relative factor prices affect not only the choice of existing technology but the direction of technical effort and hence the direction of factor bias

¹⁵"Technology Transfer....," p. 5.

¹⁶For other observations about intermediate institutions see Landau, "Linkage, Coding, and Indeterminacy," in Eaton.

¹⁷Ruttan, ibid., p. 12.

in the new production functions that become available to producers over time and among areas."¹⁸

Where this line of reasoning applies--i.e., in fields where economic criteria are liable to affect production functions--the Ruttan perspective offers important premises for institution-building strategy. Grant that technology should aim at the exploitation of unique environmental resources in areas of actual or potential comparative advantage. Potentialities of this sort are subject to an economic calculus that can guide the choice of goals.

There is also the caveat: "Studies in LDC's have demonstrated that institutionally determined biases in relative factor prices have induced patterns of technical change that have been inconsistent with relative resource endowments."¹⁹ Certain kinds of institution-building can have adverse economic consequences.

Ruttan also notes that it was "an institutional lag in the development of research capacity" that delayed the transfer of high yielding rice technology to the tropics.²⁰ Where economic circumstances were auspicious--including such infrastructural factors as land tenure, credit, access to fertilizer, and an acceptable distribution of the rewards of productivity--removing a technological constraint through institutional development gave a powerful impetus to productivity growth. In this case, the effect was not so much a normative change in the environment as the elimination of an impediment to the working of established norms well-established within the rural sector.

¹⁸Ibid., p. 14.

¹⁹Ibid., p. 14.

²⁰Ibid., p. 20.

From Ruttan's view, one need is for effective strategies of what he calls "capacity transfer." To do this meaningfully in the field of economic activity, it is necessary to specify the socio-economic conditions under which capacity transfer will stimulate the exploitation of economic opportunities. He sees the "possibility of developing models of organizational behavior induced by either technical innovation or institutional innovation." And he notes that one important general problem of transferring technology through institutional means is that of allocating the gains and costs that result from the transfer. Concerning this problem he finds the JCRR experience on Taiwan suggestive.²¹

The Utterback study of applied research institutes in Latin America supports Ruttan's assertion that institutional evolution tends to be a response to existing economic and technical opportunities, rather than a source.

"In sum, projects initiated by recognition of a need, directed toward a specific or narrow group of clients, and involving an area in which institute personnel had direct personal experience...would be expected to have a greater frequency of technical success and use. Conversely, projects initiated in response to available technology, directed toward a general need or group of clients, and involving an area in which primary knowledge of the relevant technology is drawn from sources other than face-to-face contact would be expected to have a lower frequency of technical success and use."²²

Utterback investigated 20 projects in fields ranging from construction to nutrition and agriculture. Twelve produced applications or were about to, at the time of his study. Nine of these projects had

²¹ Ibid., p. 29.

²² Utterback, p. 15.

grown out of previously specified needs. On the other hand, of eight projects whose results were not in use, seven had been stimulated by the knowledge of a technological means and the aim of promoting its application.

There is a suggestive parallel in the Utterback and the Ruttan perspectives. Both offer guidance for the goal-setting aspect of development strategies that involve technological transfer through institutional means, and their positions reinforce one another. From Ruttan's view, institutional characteristics and economic criteria must be taken into account in formulating effective and appropriate technology transfers, and illustrative evidence in agriculture appears to bear out the argument. From Utterback's view of what has and hasn't worked in 20 efforts to apply technology, the existence of prior need--e.g., receptivity and utilization capability--is enormously important. In effect, the "needs" seem to fit the sorts of institutional and economic factors that Ruttan refers to.

Both Ruttan and Utterback offer contributions to meeting one crucial requirement of effective technology transfer through institutional means--the requirement that task environments must be described, analyzed, and assessed in terms of the feasibility that an intervention will have the intended effect.

To view institution-building as the design and enactment of a system of action--i.e., to posit that goals, technology, organizational format, and task environment are the interdependent elements of the system--does not abandon other institution-building perspectives. "Linkages" remain as important as ever. To the extent that the task environment of a particular institution-building effort can be described and assessed, the basis for a linkage strategy can be established. The time-dimension of IB concerns, addressed by Rigney-McDermott though barely acknowledged in the earlier IB perspective, is not ignored in a view of IB as the development of a system over time. Actually,

the system perspective has no power, no magic of its own. It merely indicates, in a gross and general way, what things have to be taken into account if one is serious about efforts to foster particular developmental changes through organizational-and-technological means. One of those things is goals. And goals cannot be effectively treated in isolation. To the extent that we can develop methods of analysis and design of the sort suggested and illustrated above, we can help produce a better basis for the goal-setting aspects of IB efforts, and in so doing, get at the kinds of problems on which IB efforts have sometimes foundered before they were ever really launched.²³

2. Strategies and Tactics of Organizational Design.

A strategy for determining institution-building goals does not automatically tell how best to implement them. Planning, designing, and enacting arrangements to transfer technology through institutional mechanisms can be served by better knowledge of organization design.

(a) Organizational Networks and the Function of "Intermediaries."

In a technology transfer arrangement, one of the crucial problems is "bridging" between technology sources and target areas where applications are sought. The contribution of "intermediaries"--organizations located somewhere between technology sources and technology targets--has been noted. The practical success of certain international inter-

²³Incidentally, and parenthetically, Ruttan's concern with goals is not limited to the aims of particular social change ventures. In the concluding section of his paper he raises an interesting (harrowing?) issue concerning the very goals of social science, when he asks: Might the returns to investment in social science be subject to measurement? Might the test of such measurement be "...the new income streams made available to society as a result of institutional changes resulting from new knowledge produced in the social sciences and professions"? (p. 32.) If this question cannot be entirely ignored, it can fortunately be deferred. But its general import for us ought not go unnoticed: relevance and utility are the criteria that should both inspire and justify our efforts.

mediary organizations in agriculture, technology per se, management and elsewhere has spurred emulation. A number of interesting and important questions about such intermediaries might be studied with profit. There are "extrinsic" questions, about environmental factors that help determine the relevance of intermediaries, and the limits theory. There are also "intrinsic" questions, about the organization of intermediaries and the design of formal linkages.

For instance, Utterback's above-cited study addresses a crucial question: the actual dynamics of an intermediary organization as it goes about the business of trying to foster technology transfer. Examining 20 projects involving attempts to apply established technologies, Utterback noted that "a few individuals in informally defined roles are able to serve as intermediaries [here using this term in a different sense than in the preceding paragraph] in the transfer of technology. These 'gatekeepers' seem to be able to translate between the coding scheme of the environment and that of their own organization...."²⁴

A distinctive characteristic of these individuals was the fact that they had worked abroad. They had the ability "both to establish contacts abroad and to communicate with foreign experts at the institute."²⁵ One implication--as obvious as it is elemental--is that intermediary institutions for technology transfer must include arrangements for providing substantial work experience to prospective members of "customer" staffs. This will facilitate bridging or linking into particular target areas for technology. Interestingly enough, it seems that education abroad is not a substitute for work abroad, in this particular context of concern.

If further evidence supports the Utterback finding, then one additional item of concrete knowledge can be used in helping design

intermediary organizations to serve effective technology transfer.

(b) "Internal Structure," "Organizational Format," or the Functional Effects of Particular Types of Organizational Arrangements.

At least one school of architecture has tried to make an axiom of the aphorism that "form follows function." If grievous aesthetic sins have been justified by this slogan, there is still something in the idea. In practice, organizational arrangements for trying to transfer as well as to "do" technologies are often unevaluated copies of established models. The organizational slogan, "form follows function, given context," meaningless in itself, can open a number of strategically important, utilitarian inquiries. First-decade IB studies have already noted some of the issues, although not in a definitive, systematic manner.

A need at this point is to lay out an orderly agenda of inquiry, for the possible lines of investigation are numerous. They range from socio-psychological questions concerning inducement and reward arrangements in organizations (some of them touched on by Derge et al in the CIC/AID project) to issues concerning the uses of such entities as "public enterprise" forms of organization to do things. There are also complex questions about the organization of management and information, and the structuring of authority. And there are questions about arrangements for continuing inter-institutional associations. These are particularly important where the object of technology transfer is to build capacity--the ability to invent and adapt.

The present need is for guidelines--for an agenda--that will lay out the key topics on which we need concrete information about the organizational aspects of institution-building. Perhaps this subject might be assigned to a specific task group--one that could and would

²⁶The experience of the National Institute for Training in Industrial Engineering at Bombay is one germane source of it, as N.S. Ramaswamy, one of the participants in our meeting and the head of NITIE, can perhaps attest.

address the issue within the general framework of our IB orientation. In other words, it would have to specify the important organizational issues in terms of an awareness of the interplay of technology, task environment, goals, and organization.

(c) "Innovative organization." Over the years there has been spasmodic discussion of the question of "innovation versus institutionalization." It is often assumed that these two things are inconsonant, thus posing the paradox: "How can we design organizations that will continue to innovate?"

This really is the wrong question--wrong because it is misleading. It implies that the crux of the problem of innovation is getting the right kind of organization. While this is indeed an important consideration, it is not necessarily the crucial one.

A better form of the question is: Under what conditions will an organization be likely to have an innovative impact upon its environment? In part, the answer depends upon organizational properties. You can't make a silk purse out of a sow's ear, and you can't expect innovation from routinized, stultified, ignorant and insulated organizations. But not even the most dynamic and creative organizations can have innovative impacts upon environments unless the conditions are right. Given such conditions, organization with technologically-based innovative capability may be, as Ruttan has noted in the case of rice production in tropical areas, the vital constraint.

Thus innovative potentials are affected by organizational factors. But task environment characteristics must also be assessed.

Given the Ruttan view of institution-building for technology transfer as responsive rather than essentially initiatory, and the evidence offered by Utterback, "need" is a factor of profound importance to innovation. In some "development" situations the fundamental problem

is to ascertain the needs--especially the needs that are also opportunities. "Need-seeking" sometimes degenerates into sheer dinglyngery, as the evidence from some past community development programs suggests. At other times it degenerates into something else--into the specification of a "need" in terms of the presumed response capability of a particular technology. Thus do livestock specialists, cotton specialists, dam building specialists, and other specialists often determine "needs." They define the problem in terms of the kind of "solution" at their command. If this is entirely understandable, it is also sometimes disastrous.

Establishing needs that are also opportunities requires an assessment of the response potential that is inherent in the situation. The propensity for worthwhile and continuing innovation depends upon the existence, discovery, and exploitation of such potential. Worthwhile innovation often involves the elimination of the salient constraints. This can be a continuing process, as the removal of one constraint leads to another. For example, once a technological constraint to increased rice production is removed--through the right new varieties--then irrigation facilities may become a primary limitation on the next round of production increases, etc.

This line of argument has a number of implications for institution-building as an instrument of technology transfer for development. In some types of situations the strategic need is for analysis that can locate the substantive needs/opportunities that actually do exist. In others, meaningful needs are so latent that rather careful preliminary analysis must precede any efforts at realistic, auspicious problem-defining. Thus, "technology spraying" can be just as bad as institution peddling.

The rather obvious implication is a very real need for policy-program-project analysis capability not bounded by or focused upon technology per se or institution-building per se. Even if the generic aim of institutional transfer were technology transfer, the aim could

not be sufficiently served by information about the intrinsic properties of particular technologies, and the attributes of organizations-viewed-as-institutions.

To strike for continuing innovation in truly primitive domains, one crucial need is for mechanisms that can define unfolding sets of ranging problems. This, of course, is the presumed object and intent of planning agencies. All too often, however, they are themselves (a) poorly designed in organizational terms, (b) narrowly bounded by their own analytical technologies; and (c) poorly linked with the relevant task environments. In many cases, they are further constrained by the sheer lack of important information.

From the view of a concern with organization and innovation, at least two questions seem germane: How can planning mechanisms, as intended mechanisms of innovation, better be organized? Alternatively, are there certain kinds of needs/opportunities for policy analysis arrangements, other than relatively conventional planning agencies, to foster effective problem-defining in settings where development is a proper aim?

Task Environment Analysis.

The original institution-building perspective dealt with its environment in terms of the idea of linkages--enabling, functional, normative, and diffused. General statements about linkages stimulated specific thinking about organization-environment relations, and encouraged people to perceive an organization's dependencies, complementarities, and impact targets, and the interrelations among them. The perspective generated good questions, and left individuals to find their own answers.

Over the years, experience with such questions has produced some useful, transferrable pragmatic information about various kinds of

linkages that matter in various kinds of situations. They have not produced much in the way of operational methods for analyzing task environments. There remains a gap between the generalities of the IB perspective and the particularities of concrete action.

The gap will never be completely closed. By nature developmental situations are in some ways novel or unpredictable. There will always be unknowns, and they will always include parts of the answer to the question: "What is out there that really matters, that determines the feasibility and utility of a possible intervention?"

Ideally, we should have a formal analytical methodology for answering this sort of question--a methodology whose rules and methods will surely apply to any situation of interest, or at least to any situation in a given class. Then, by knowing the properties of the situation, and the characteristics of a given intervention, we could predict the results of intervening.

Alas! Relations between the particular and the general always involve trade-offs. When particular situations vary, then the more we generalize about them, the more we wash out the variances. Assuming that some of these variances may matter a great deal, we have to be careful about trying to use the same method to analyze all of the situations.

But to some useful extent, methodology for task environment analysis can be developed further than it has. The systems perspective itself is one beginning, one not entirely free from danger. To examine something as a "system" is to posit the existence of certain actual or potential properties and relationships among them. Even if this is an admittedly sound assumption, the difficulties that can inhere in it are suggested by the fact that a chess game can be viewed as a system....

The aim of task environment analysis is to identify the salient properties of a situation in order to predict the probable effects of

an intervention. In saying what matters about a situation we also, in effect, say what doesn't matter, for the analysis must always eliminate and simplify. Thus economic analysis analyzes in terms of economic properties, in accordance with economic criteria of relevance and economic premises about cause-effect expectations. Engineering analyses proceeds in terms of physical properties and relations. Unfortunately, social and behavioral analyses tend to proceed by guess, by God, and by precedent.

One way to move beyond this circumstance is to deal with particular types of task environments, and to deal with each of them in terms of certain bounding or limiting assumptions about goals, organization, and technology. For example, somewhat as Thorsen has drawn up lists of questions about assumedly relevant characteristics of organizations, checklists of assumedly relevant characteristics of rural environments can be prepared, on the basis of experience and judgment. The content of a checklist will vary according to the contemplated aims. The derived information can be related to knowledge about relations between perceived characteristics and the feasibility of a possible action. The conclusions can help sustain "Go/No Go" decisions. And the analysis can serve as a baseline for evaluating results over time.

This relatively primitive, limited approach to analysis only formalizes and extends an activity that project designers and program planners perform in any case. Where project analysis is explicit, systematic, and economic in mode, then such checklisting can add a dimension.

There are other possible methods of task environment analysis pertinent to our concerns. They range from the field reconnaissance of "wise men" to elaborate computerized simulations. One of our own needs is to address the general question--or, more precisely, manageable aspects of the question: How can task environments better be analyzed as a basis for effective technology transfer through institutional means?