A SYSTEMS ANALYSIS OF THREE BROADCASTING PROJECTS IN DEVELOPING COUNTRIES

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ABSTRACT

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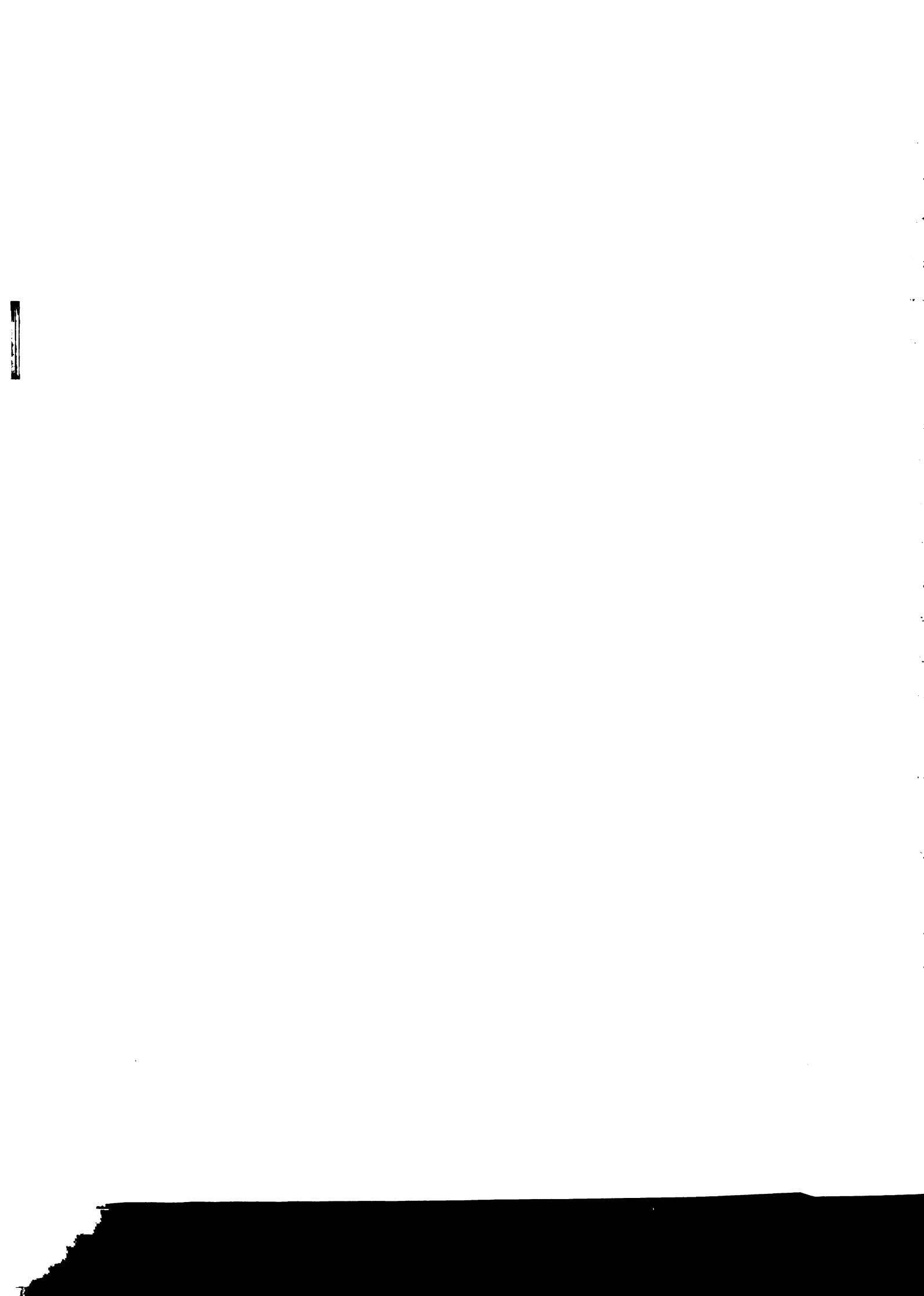
By

Francis Vincent Hillebrand, S.J.

Radio and television broadcasting continue to play an important role in the modernization of developing countries. The scarcity of human, technical, and financial resources in such countries, however, makes it imperative to understand the causes of failure or diminished effectiveness of broadcasting projects of the past in order to obviate similar failures in the future.

This thesis uses principally secondary sources to describe three different broadcasting projects as a basis for an investigation of the difficulties and reverses encountered by the projects. The first project investigated is "Radio Sutatenza" established in the late 1940s in Colombia by a Church organization named Acción Cultural Popular. This effort in radio broadcasting is noteworthy for its rapid and broad expansion throughout rural Colombia in the 1950s, the complementarity of its communication components, viz., broadcasting, publishing, and interpersonal contact, as well as the general problem posed by its objectives: the change of thought patterns and attitudes toward development apart from changes in Colombia's socio-economic structure.



The second project investigated is the Radio Rural Forums of India which were first seriously attempted in a pilot project jointly sponsored by the Government of India and UNESCO in the mid-1950s, and subsequently expanded on a nation-wide scale in the 1960s. The history of the Indian radio forums presents the general problem of designing an effective pilot project in broadcasting and the mutations required of the design when expanded on a large scale, as well as the specific problem of implementing a nation-wide project through an established bureaucratic structure with its particular organizational and motivational characteristics.

The third project analyzed in this thesis is that of the instructional television project established by United States personnel in Eastern Samoa in the mid-1960s. This particular project has interest for planners of broadcasting projects not only because of the investigation of the Samoan environment which preceded it and the thoroughness of its planning, but also because of the effects which the political and socio-cultural environment eventually had upon the project.

The investigation of these three projects is carried out by means of an eight-stage model of systematic planning which is developed from some of the more descriptive, less mathematical literature of systems analysis. The justification of the use of the method of systems analysis is first given a foundation by a discussion of the historical, philosophical, and empirical origins of systems analysis, and then elaborated through the development of an eight-category model of systematic analysis derived from the eight stages logically required of systematic planning.

Each of the three projects is then investigated by means of the eight-category model in order to clarify in a systematic fashion the eight ideal stages of planning present or implicit in the project-descriptions contained in the literature of the secondary sources. The difficulties and reverses undergone by each project are then correlated with the insufficient use or omission by project planners of one or other of the eight stages of systematic planning.

The final chapter compares the three projects relative to a set of factors selected from the eight-stage model of systematic analysis and planning in order to suggest a basis for the sound planning of broadcasting projects in the future.

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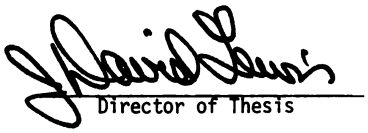

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INTRODUCTION

The best laid schemes o' mice an' men
Gang aft a-gley.

--Robert Burns,
"To a Mouse"

Both mice and men, it seems, plan their affairs, whether they are burrowing in fields or broadcasting to their fellows. And broadcasters in the field of education have found themselves at times just as dismayed as the mouse whose burrow was laid open by Robert Burns' plow: unforeseen factors, combinations of events and people, can overturn well-laid plans and make them "gang aft a-gley."

The present author, in submitting work during the course of graduate studies in the Department of Television and Radio, had occasion to study various educational radio and television projects in developing countries and the difficulties these projects encountered. The analysis of those difficulties that were solved and those that remained to haunt the projects suggested that a closer examination of a few projects might reveal more exactly the reasons for a given project's failure or lessened effectiveness.

This thesis will be a presentation of three educational broadcasting projects, two using radio and one using television, based on data available in the current literature. The procedure will include a

description of the planning history of a given project, a clarification of the structural relationships within the project, and an identification of the problems encountered by the project with an attempt to determine the causes of these difficulties.

In order to describe the planning history of each project and clarify the structural relationships, a method generally following "systems analysis" will be employed. However, the use of "systems analysis" is fundamental to the thesis, and since every method of analysis carries its own assumptions, the use of "systems analysis" may seem to imply the imposition of a method having one set of assumptions upon data having a different set. Hence the following argument is set forth by way of a justification of the method to be used.

Justification of Method

The need for a method of analysis stems from the lack of such a method in the reports of educational broadcasting projects as contained in the literature. The reportage generally uses loose historical description and fails to clarify the structure of the project and its environment in the degree necessary to relate potential weaknesses in structural design to difficulties eventually encountered in the project.

A more methodical way of proceeding would therefore seem required which would address itself more exactly to the basic question and problems addressed implicitly by someone planning an educational broadcasting project.

The present argument is that a framework based on systems analysis can properly be employed in analyzing the data of educational broadcasting projects:

(1) if the explicit demand for rationality in creative human endeavors (which is the core assumption of systems analysis) is also the core assumption in the planning of a creative human endeavor such as educational broadcasting project;

(2) if planners who design a project are implicitly designing a "system" which is the explicit object of investigation of the discipline termed "systems analysis";

(3) if the categories used in "systems analysis" are identical to the categories implicitly used by planners to design an educational broadcasting project;

(4) if the technique of "analysis" is fundamentally nothing more presumptive than the explication of the structure implicit in the design of a project and the implicit factors which condition the project's operation.

First Premise

The first premise in the justification of the method is that systems analysis' demand for rationality in planning is a demand implicitly felt by planners of educational broadcasting projects. The argument is that such projects are creative human endeavors which begin with the planner sensing a need in an environment, conceiving an objective to fill that need, and then designing a means to effect the objective. Human rationality is the implicit heuristic structure which enables the

planner to match objectives to needs and means to objectives. The amount of effort invested in creating educational broadcasting projects attests to the planner's seriousness of rational purpose. The successful matching of objectives to needs and means to objectives attests to the planner's successful use of his own heuristic structure of rationality.

Systems analysis uses this same heuristic structure of rationality implicit in the rational planning of human projects. Systems analysis attempts to meet the demands of this rationality by demanding answers to as complete a set of questions as possible regarding all factors conditioning the accurate assessment of needs, the exact matching of objectives to needs, and the effective provision of the means necessary to implement the objectives.

Second Premise

The second premise in the justification of the method is that project planners implicitly design what systems analysis understands as a "system." The stages of planning and the stages of the implementation of a project are, from beginning to end, not disparate but systematically interrelated. Project planners attempt to identify a need and proceed to formulate an objective in some measure consistent with the need. The objective, in turn, becomes a problem requiring a corresponding solution--a solution which planners eventually discover and determine to implement. The implementation of the objective is the "project" which planners design as an integration of men and machines systematically so interacting that the "project" will effectively produce the results formulated in the objective.

Since the project attempts to interrelate men and machines consistently and predictively, the "project" itself is a "system." Because the planners attempt to seize upon a need not irrelevant but truly related to an environment of needs, they thereby acknowledge the systematic relationship of need to environment. When planners proceed to formulate an objective not irrelevant to, but consistent with, the identified need, they acknowledge the systematic relationship between needs and objectives. Finally, when planners attempt to integrate men and machines into a "project" in such a way that it will produce results systematically identical with the formulated objective, they again acknowledge the systematic relationship which should obtain between objectives and the project.

Thus, the whole of a "project," from planning to implementation, is ideally bound together by systematic relationships and can be legitimately investigated as a "system." By its analytic techniques, systems analysis simply summons project planners to recognize that by setting men and machines in consistent, predictive relationships, they are creating a "system," and that the planners' rational purposefulness both creates this "system" and demands that consistent, predictive relationships obtain between the project's results and its objectives and between the objectives and the needs of the environment.

Third Premise

The third premise in the justification of method is that the categories which will be used in the analysis of the projects are categories implicit in the planning of the projects. These implicit categories are

discernible as more or less explicit stages of planning and design, and part of the function of analysis will be to identify explicitly these stages of planning in the literature reporting the projects.

The categories of analysis form a logical sequence: questions posed within one category should be answered before the questions of the following category can be posed. The sequence of analytic categories itself stems from the logical sequence of stages in the planning of a project.

An educational broadcasting project follows the logical pattern of creative human endeavor: formulating an objective and designing a means to effect the objective. Just as results are determined by the means, so also the means is determined by the objective; and the objective is determined by the need which the objective fulfills. Thus the need logically precedes the formulation of the objective; the objective logically precedes the design and construction of the means; and the means logically precedes the resultant effects.

Planners implicitly employ these four operational stages when they assess a need, conceive an objective, design a means, and measure results. Although the literature reporting a given project may show that these operational stages were carried out with differing degrees of thoroughness, the stages themselves are usually reasonably evident. For instance, the assessment of need might be mixed in with the formulation of objectives. The statement of objectives and the determination of results might be mixed in with the description of the means. Both the objectives and the results might be reported with far less thoroughness than would be

consistent with the description of the means. Yet, generally all four operational stages can be detected in the literature.

The four operational stages in the planning of a project, therefore, can be listed as follows:

1. Assessment of need.
2. Formulation of objectives.
3. Implementation of a means.
4. Determination of results.

Since the "categories of analysis" are basically questions put to the data of the literature, the four categories deriving from these four operational stages can be formulated as follows:

1. How thoroughly did planners assess the environmental need?
2. How clearly did planners formulate the project's objectives?
3. How effectively did planners design and implement the strategy?
4. How completely and exactly did planners determine the results?

The inner logic of the sequence of operational stages and analytic categories is demonstrated by reversing their order. Results presuppose a strategy; strategy presupposes a purpose expressed in objectives; objectives presuppose a need to be met.

The four categories cited above form the basic framework of analysis. The complete framework, however, will include further categories precisely because an ideal model of project planning and design requires further operational stages to support and refine the four basic operational stages. It is the merit of systems analysis to have clarified and refined a complete model of systematic planning and design, and the

description of this model will occur below with the formal description of the systematic method to be used in the analysis of the three projects.

Fourth Premise

The fourth premise in the justification of method is that the operation of analysis will be nothing more presumptive than the explication of the operational stages and underlying rationale implicit in the planning and design of the educational broadcasting projects. Analysis will include both a clarification and a demand. The reports of the projects will be examined in order to clarify the operational stages of planning and design in each project. Further, the reports will be examined to make explicit the extent to which planners of projects adhered to the inner logic and rationale of sound planning and design outlined in the four categories of analysis. Finally, an attempt will be made to trace a project's difficulties and reverses back to defects in the planning and design of the project.

Conclusion

The three projects which this thesis will study are: (1) "Radio Sutatenza" begun under private sponsorship in 1947 in Colombia to raise the literacy and general cultural level of the peasants; (2) the Radio Rural Forums of India, begun in the late 1940's to inform and educate Indian villagers; and (3) the educational television project of American (Eastern) Samoa where television was used to supply the core of the entire curriculum of the elementary and high school educational system.

CHAPTER I

PROJECTS AND THEIR DIFFICULTIES

INTRODUCTION

The reports of projects as they appear in the available literature emphasize far more the positive than the negative. For the most part, what is reported is how the project originated, what objectives the planners set, how the project was implemented and what were the positive results of the project insofar as these were determined.

However, the reports vary widely in detailing the negative results of a project. The reason for this often inadequate description of negative results would seem to be as much the reluctance to let a critical public hear the admission of disaster, as the simple fact that the exact degree of failure of a project is simply inadequately known and therefore insufficiently detailed in the reportage.

Difficulties, delays, problems, and outright failures are sometimes mentioned only in passing--passing, that is, on to further descriptions of what is positively being done, and not what was failing to be done. Problems are sometimes cited only in order to demonstrate how they were overcome, but occasionally, failures are mentioned quite frankly in sober reflective analyses regarding what appeared to have gone wrong. Finally, some difficulties are only implicit in the literature and must be tenuously inferred from the silence surrounding them.

In order to establish a starting point of the thesis, concise descriptions of each project will follow with indications of sample difficulties which the projects encountered.

1. "RADIO SUTATENZA" OF COLOMBIA

The Colombian village of Sutatenza lies in the mountainous Tenza valley at an altitude of 1500 meters. The valley had a population of 100,000 in the 1950's, 90% of whom lived on small holdings outside villages and 80% of whom were completely illiterate. (Williams, 1950: 38)

Further, only half the eligible population of children entered primary school, and this represented only one-third of eligible rural children. (Ozaeta, 1960: 557)

A young priest, Joaquin Salcedo, was assigned to the parish of Sutatenza in 1947 where only 165 parishoners out of 9000 were concentrated. After attempting 16mm film showings and a rural theatre, he resorted to his boyhood hobby, amateur radio broadcasting, in an effort to communicate with his parishoners. (Ozaeta, 1960: 558) The idea of "Radio Satatenza" began with a rebuilt 100 watt transmitter and three used battery-powered receivers; it grew with the installation of a 300 watt transmitter in the rectory and 700 General Electric radios distributed throughout the countryside. (Nevins, 1950: 11) By 1959 Radio Sutatenza had five transmitters broadcasting four one-hour segments daily (Ozaeta, 1960: 559) to nearly 20,000 organized reception centers using over 45,000 receivers. (Torres and Corredor, 1961: 15)

By 1951, the organization Acción Cultural Popular (ACPO) had been formed to give a general direction to the cultural movement which through the 1950's concentrated on courses in reading, writing, computation, and religious education broadcast by radio to illiterate adults both in villages, prisons, and the military services. In addition to news, music, entertainment, plays, and sports (Ozaeta, 1960: 559) the offering of courses included subjects such as hygiene, agricultural practices, rural housing (Williams, 1950: 43) and the broadcasting of training courses for rural teachers. (Amaya, 1959: 408).

In parallel with the broadcasting service, Acción Cultural Popular maintained a course of practical training in agriculture and animal husbandry complete with field teams, agricultural booklets, and extension bulletins (Amaya, 1959: 406) to further complement its broadcasting. From Bogotá ACPO began publishing in 1958 an illustrated farm weekly, El Campesino, and the textbooks and materials required for the radiophonic courses. (Nitsch, 1964: 341-342)

By 1959, the organizational range of this remarkable project extended from an administrative center in Bogotá out to thirteen regional offices, while the broadcasting range covered 855 of Colombia's 1257 parishes and parts of Venezuela and Ecuador as well. (Amaya, 1959: 404,407)

THE DIFFICULTIES OF RADIO SUTATENZA

The early difficulties of Radio Sutatenza are not very evident in the literature; they are more implied by changes in procedure mentioned in passing. Originally, a pilot radio school was established with poor results; the lesson learned was that a radio broadcast taught little by

itself. It was at this point that the project introduced an auxiliar immediato, a simple-lettered assistant in each listening center to mediate the radio lesson to an assembled group of listeners. (Ozaeta, 1960: 558)

A special course organized for domestic servants for the urban districts, especially Bogotá, failed for reasons of organizational weakness, and an afforestation campaign encountered a measure of failure owing to planning errors at the local level. (Ozaeta, 1960: 564,562)

Mentioned in passing are the "years of experimentation" and the "different techniques . . . tried by the broadcasters" (Amaya, 1959: 406) some of which presumably failed and led to changes.

The difficulties encountered by ACPO in the 1960s, however, are more exactly reported. Musto's critical evaluation suggests that ACPO's centralization had inhibited both its local relevance and its regional expansion, and that the project's ideology and authoritarian management had maintained objectives which were obsolete for the Colombian countryside of the 1960s. (1971: 77,132) The ideology and operation of ACPO during the 1960s also become clearer thanks to Bernal's study of ACPO.

CONCLUSION

Because the 1950s and the 1960s of this project seem to differ both in the quality of sources reporting the project and the environment the project was designed for, these two decades will be treated as distinct historical phases.

2. THE RADIO RURAL FORUMS OF INDIA

Farm forum broadcasting in India originally began as part of All India Radio's contribution to the Food Production Drive instituted by the Government of India sometime in 1949. All India Radio (AIR) put a thrice-weekly program on the air designed to be followed up by group discussion led by a trained supervisor. (Kumar, 1967: 59) According to a report of the Ministry of Information and Broadcasting cited by Kumar:

> The forum at each village meets once a week and consists of enthusiastic rural listeners under the leadership of an intelligent and educated person. AIR's representative is present at these meetings to help in follow-up discussions and to answer questions. . . . (1967:58,59)

Despite the glowing description, the forums had no effective field organization. The area of Delhi, for example, was listed as having 35 listening centres overseen by a single field worker and a rural program supervisor, a personnel ratio clearly incapable of meeting the description of the radio forums given in the report. (Kumar, 1967: 59)

Eventually, however, India began to establish radio rural forums in earnest. The Director-General of UNESCO, after the Eighth Session of the General Conference of that organization, in 1955, formally offered aid to the Government of India in order to conduct an experimental project in radio rural forums. (Schramm, 1967b: 110)

The planning of this experimental project began under two visiting professors of the Tata Research Institute of Bombay, Drs. Lorenzo and Neurath. (Schramm, 1967b: 113) Experimental and control groups were formed in rural areas of Bombay State in the spring of 1956 to discover

to what extent farmers could learn from broadcasting and discussion to make improvements in their villages and their agricultural practices. (Neurath, 1962: 276)

The half-hour broadcasts ran Sunday and Thursday for ten consecutive weeks, covered agricultural and educational topics, and were heard at the local level by village groups of a pre-determined composition. These groups were visited and interviewed on a regular basis by personnel of the project in order to complement the regular reports of the local convener of the forums. (Schramm, 1967b: 112)

Generally speaking, the experiment met with considerable and measurable success: on the basis of pre- and post-tests, Schramm states that forum members "made a substantial gain in information," and "by almost any measure . . . the Poona trials must be accounted a resounding success." (Schramm, 1967b: 114,117)

Radio rural forums in India, however, had uneven success in the years following the experimental project. By 1959 many of the forums in the experimental project had ceased to exist. Consequently the Government of India in that year gave radio rural forums official status as a national program, and set a target of 25,000 forums to be established during the Third Five Year Plan to begin in 1961. This target was revised to 15,000 during the middle years of that plan and by the end of 1965 only 12,776 forums found their way into official statistics. (Schramm, 1967b: 107)

DIFFICULTIES OF THE RADIO RURAL FORUMS OF INDIA

The absence of an adequate field organization was a major defect in All India Radio's conduct of forums prior to 1955. (Kumar, 1967: 59)

The UNESCO experimental project also had its share of problems. The planners underestimated the time required to train field organizers and this severely curtailed their training. They further counted heavily upon local organizers who, in the press of time, could not be adequately trained. Finally, the project suffered deficiencies in those small but crucial components of forum operation such as radio receiver maintenance and transportation of maintenance crews and field organizers. (Schramm, 1967b: 120)

Problems in the subsequent years of forum operation seem to have been the inadequacy of organizational and supervisory staff and their transportation, insufficient training for every key officer in the operation, and undeveloped feedback channels from forums to local radio stations. These defects resulted in a disparity between programming and audience interests, insufficient maintenance crews to service radio receivers, and a shortage of resources with which villagers could implement their decisions on community development projects. (Schramm, 1967b: 132)

CONCLUSION

Such a detailed identification of difficulties in the literature might suggest that the Radio Rural Forum movement in India had an organization which ferreted out operational problems and solved them. However Kumar suggests that India's Forum movement still suffered from uneven effectiveness:

> The overall listening situation has not much improved. This is quite evident from the fact that in 1965, when it was felt that radio should be effectively utilised to boost agricultural production . . . a new Farm and Home Broadcasting cell had

> to be set up with more or less similar objectives in view [objectives, that is, similar to those of the Rural Forum structure re-organized in 1959]. . . . A close look at the planning, production, and organizational machinery would reveal that for financial and other reasons . . . planning committees, special officers for conducting the follow-up activities, and technical manpower to ensure quality of reception, ceased to exist. (Kumar, 1967: 61)

Uneven effectiveness characterizes more projects than just the Radio Rural Forums of India. This suggests that there might exist a recurring set of consistently overlooked factors which diminish effectiveness of such projects and therefore merit closer inspection.

3. THE INSTRUCTIONAL TELEVISION PROJECT OF AMERICAN SAMOA

American (Eastern) Samoa is an unincorporated Pacific territory of the United States composed of seven islands totalling 76 square miles. The main island is Tutuila and Pago Pago is the capital. Tutuila comprises 70% of the land area and has 85% of American Samoan population. (Schramm, 1967a: 12)

H. Rex Lee became governor of American Samoa in 1961 and was shocked by the condition of the educational system. Supposedly teaching in English, few teachers could go beyond the "sonorous but functionally limited pidgin." (Hall, 1969: 18) Forty decrepit schools housed 5,000 of 11,000 eligible students where not one teacher had valid certification. (Kaser, 1965: 58; Skornia, 1969: 56) Educational methods were characteristically limited to group memorization by several classes meeting in one room noisily reciting their lessons from textbooks from America written for Americans. (Schramm, 1967a: 13)

The Governor's response to the situation was less than casual. The United States Senate Committee on Interior and Insular Affairs had assigned Senators Long of Hawaii and Gruening of Alaska to investigate American Samoa in 1960; their report contained strong suggestions for improving Samoa's education. Governor Lee first obtained a $40,000 grant for a study by the National Association of Educational Broadcasters regarding the feasibility of using television as the core of an educational system and then called in a small group of experts to evaluate this feasibility study. The conclusion was to go ahead with the plan for mainstream instructional television. (Schramm, 1967a: 14,16)

Construction of facilities began in 1963 and by the end of 1965, studios in Pago Pago were telecasting over six channels to 13 of 26 projected new elementary and 2 of 4 projected new high schools to upwards of 5,000 Samoan students. (Schramm, 1967a: 16-17)

A curriculum committee of teachers, principals, and supervisors (the latter mostly United States personnel) devised the content of courses; a studio team researched and produced the television lessons; Samoan teachers in the classrooms provided a suitable viewing context, advised and counseled the students; and resident principals (originally from the United States, and more recently Samoans) oversaw the local level operation. (Schramm, 1967a: 18)

In addition to the elementary and high school curriculum, telecasting provided in-service teacher training of Samoans and adult education classes in the evenings. (Schramm, 1967a: 18,13)

DIFFICULTIES OF THE PROJECT IN AMERICAN SAMOA

Difficulties in this project can be summed up by this small notice in Broadcasting magazine:

> The National Association of Educational Broadcasters has announced it will not renew its eight-year-old contract as educational adviser to the government of American Samoa, charging that the present governor has 'consistently thwarted' NAEB and main officials of the local school system. The present $84,000 contract expired on Feb. 28 [1969]. (1969: 69)

The background of this abrupt withdrawal of the NAEB from Samoa came to light in an interview with one of the personnel of the Samoan project. With a change in governors (the second after Governor Lee) came a change of executive viewpoint and a resulting grant of increased autonomy to the (Samoan) principals of the twenty-some schools in Samoa. The increased autonomy of the local principals shifted the loci of decision-making power and permitted the principals to decide for themselves just how much of the massive amount of telecasting available would enter their classrooms. (Muhlbach interview, November 7, 1971) To the NAEB this spelled the disintegration of the system. Whether and to what extent such a disintegration might have been prevented will be the subject of the analysis of this project.

The remainder of the difficulties within the project were perhaps inevitable in a large and complex project. Schramm cites the shortage of curriculum specialists, the absence of lead time in planning curriculum prior to production, the feedback circuit from the classroom being incapable of producing timely revision in telecasting content, and various technical difficulties. (1967a: 20,32,50) Skornia reports other problems such as insufficient time programmed into the system for reflection and

evaluation by the planners, the diluted follow-up activities by teachers in the classroom, and the pressure to produce placed upon the writer-director-producer teams. (1969: 58)

CONCLUSION

The problem of greatest significance in the American Samoa project is the unforeseen change of direction implied in the abrupt cancellation of the NAEB advisory role in the project. This event will be analyzed to determine if it indicates a weakness in planning design. The lesser difficulties mentioned above will form the remainder of the analytic effort.

THE SIGNIFICANCE OF DIFFICULTIES

Any project can be viewed as a system, however loose or integrated. The meaning of difficulties, reverses, or failures of any type is that somewhere, someone, or something, somehow "missed a trick." If a project's aims are formulated with a serious purpose and if implementation is designed to carry out this purpose, then the rational purposefulness of aiming and implementing should necessarily imply a rational concern for missed targets and faulty implementation.

The rational concern for reverses and diminished effectiveness in these three projects is the rationale underlying the following chapters. Each project will be analyzed to clarify the internal structure and the external environment of the project. Then, in a kind of antithetical movement, the difficulties and breakdowns will be traced back to both the design-structure and the environment in an effort to determine to what extent the planning design is responsible for the diminished effectiveness of the project.

CONCLUSION

The present thesis will begin with a description of the framework of analysis derived from the field of systems analysis. This description will identify the general areas of inquiry, the questions which should be asked and answered in the planning of a project, and will establish both the framework of analysis and its vocabulary.

Following this discussion will be the description and analysis of each of the three educational broadcasting projects. A concluding chapter will then compare the three projects as systems having unique designs with, perhaps, specific weaknesses generating specific problems, in an effort to gain insight into the requirements of sound planning of educational broadcasting projects.

CHAPTER II

SYSTEMS ANALYSIS

INTRODUCTION

The analysis of the three educational broadcasting projects will employ a general method and model derived from current systems analysis. As Buckley states:

> . . . Only the modern systems approach promises to get at the full complexity of the interacting phenomena--to see not only the causes acting on the phenomena under study, the possible consequences of the phenomena, and the possible mutual interactions of some of these factors, but also to see the total emergent processes as a function of possible positive and/or negative feedbacks mediated by the selective decisions or "choices" of the individuals and groups directly or indirectly involved. No less complex an approach can be expected to get at the complexity of the phenomena studies. (1967, p. 80)

In the interests of orientation, the historical, philosophical, and empirical foundations of systems analysis will precede the discussion of the general method and categories comprising the model of analysis.

THE HISTORICAL ORIGINS OF SYSTEMS ANALYSIS

"Systems analysis" is the more current term for what began in Britain just before the Second World War as a discipline called "operations research." The scope of the discipline grew as the war continued. Initially, operations research was concerned with the evaluation of the performance of equipment and weapons. Then it moved to the evaluation of

tactical operations and their improvement, further into the areas of war policy and strategy, and eventually into the efficiency of the organization behind the weapons, equipment, and strategy. (Morse, 1970: 23)

The roots of this new discipline, however, "are as old as science and the management function." (Churchman, 1957: 3) The industrial Revolution represented a change from the one-man manager of minuscule workshops to the branched operation of a specialized, departmentalized complex with all the inherent problems of co-ordination of operations. O. R., as it is abbreviated, can be viewed as the spread of scientific, efficient management into new areas. (Churchman, 1957: 3-4)

The practitioners of systems analysis both design and diagnose systems. They are a school of generalists "who are expected to work efficiently on almost any type of particular system application with only the briefest preliminary indoctrination." (Deutsch, 1969: ix) Because of the wide, interdisciplinary capability of the systems analyst, he is distinguished from the "scientific or engineering specialist who is engaged in one of the comparatively well-defined classical categories." (Deutsch, 1969: ix)

Formerly, in the more traditional practice of systems analysis and scientific management, analysts limited too narrowly the range of behaviors open to the member of an organization. These analysts tended to disregard the total needs of the human person in the organization by over-specializing tasks and attempting to restrict communication flow to the formal chain of authority. Such system design and diagnosis can cause disarray within a system precisely because the members so restricted have far greater capacities and flexibility than the traditional practice of

systems analysis recognized. Thus, the "traditionalists failed to recognize the importance of people elaborating their behavior. . . ." as well as other influences of the nonformal environment and the interdependence of parts within an organization. (Carzo and Yanouzas, 1967: 21)

Modern systems analysis brings the social and psychological disciplines to bear on organizational problems. It now recognizes that although a particular design may be least costly, "the efficiency of the objectives themselves may never be attained because the design does not produce values that elicit co-operative responses from participants. Thus the design may be less than optimal." (Carzo and Yanouzas, 1967, pp. 328-329)

Modern systems analysis continues to grow. The International Federation of Operations Research Societies (IFORS) began in 1957 and by the time of one cited year, 1968, had grown to number twenty-one member societies of 12,000 members with well over a dozen journals devoted primarily to the field of operations research, a reflection of the rising tide of interest in the field. (Morse, 1970: 25)

THE PHILOSOPHICAL FOUNDATIONS OF SYSTEMS ANALYSIS

The philosophical foundations of "systems analysis" or "operations research" is to be found in the immanent and operative structure of intelligent man as he elaborates his thoughts and hopes for the future through his planned behavior. This operative intelligent structure of man is illustrated in the canons of scientific method. Systems analysis is a logical extension of the canons of scientific method beyond the field of intelligent investigation into the field of intelligent construction.

Those canons which from one viewpoint govern scientific inquiry, and from another viewpoint are discernible as immanent and operative in scientific inquiry, are the following six: the canons of empirical data, operations, empirical solution, parsimony, complete solution, and residues. This discussion of the canons of empirical method follows Lonergan, Insight, 1970: 70-102.

THE CANON OF EMPIRICAL DATA

In the field of scientific investigation, this canon reminds scientists that the data being investigated are empirical. The questions being put to data presume empirically verifiable answers and not abstract or empirically unverifiable answers. So also in the field of scientific construction, this first canon reminds the planner of projects that problems to be solved are concrete and empirical; hence the causes of the problem, clues to its solution, and the eventual solution itself should be expected to appear in concrete, empirical data. The canon demands that the intelligent inquirer who is doing intelligent construction define empirically exactly what the problem is and face empirically the results of the attempted solution.

THE CANON OF OPERATIONS

In both the fields of scientific investigation and scientific construction, human understanding and the effort to conceive and effect human projects involve the systematic reiteration of certain operations. These operations move the intelligent planner along a line of advance through a sequence of related problems. Intelligent planning, like intelligent investigation, commits one to the operations of questioning

empirical data, deriving insights, weighing alternative hypotheses or solutions, selecting an alternative within empirical limitations, performing an experiment or implementing a solution, evaluating, and modifying the hypothesis or solution to reflect experimental effects. Fundamentally the canon means that there is a proper series of operations which produce empirical results if thoroughly done; and that the cycle of operations brings one back not to the original problem but to an advanced position from which the series of operations will begin anew. The familiar cycle of pilot-testing, evaluation of results, modification of the solution, and re-testing is based on the canon of operations.

THE CANON OF EMPIRICAL SOLUTION

The canon of empirical data confines the operations of scientific investigation or scientific construction to the field of empirical, non-abstract data. Correlative to this canon is the canon of empirical solution. This latter canon demands that the scientific investigator restrict hypotheses to empirical, non-abstract formulations. In the field of scientific construction this canon demands that whenever an empirical objective is established, the means conceived to effect the objective must also be thoroughly empirical and non-abstract. Economic, cultural, and human considerations may preclude the use of certain empirical means to effect the objective, but the canon demands nonetheless that the means to an empirical end be conceived in empirical terms. This canon underlies the scientific analysis of needs, empirical needs, the conceiving of empirical ways to meet these needs, and the implementation of an empirical solution to produce empirical results.

THE CANON OF PARSIMONY

In the field of scientific investigation this canon demands that hypotheses match data exactly. In the field of scientific construction, the canon requires that a solution match the defined objective exactly. The canon of parsimony thus formulates the real-world parameter of the limitation of resources: in implementing objectives to meet real needs, one should be parsimonious with resources. Thus, in the interest of the exact use of limited resources, this canon summons planners to be precise in defining needs and stating objectives; to be specific and detailed in designing projects; and to be rigorous in evaluating results.

THE CANON OF COMPLETE SOLUTION

In scientific investigation, this canon demands that a hypothesis cover not a part but the whole of the relevant data. Similarly, in scientific construction, solutions should solve not a part but the whole of the problem formulated in the objective.

The canon of complete solution calls both the scientific investigator and the scientific planner to be exhaustive in assessing data, exhaustive in formulating alternative hypotheses or solutions, and exhaustive in evaluating the results of experiments or projects. The canon reminds the planner that because needs have an environment and solutions have a context of limitations, both environment and context must be thoroughly explored before arriving at a complete solution. Thoroughly planned projects, like completely explanatory hypotheses, depend upon the completeness of questions probing the complete set of needs and limitations.

THE CANON OF EMPIRICAL RESIDUE

This canon formulates an ultimate parameter of scientific investigation or construction, and constitutes a precaution against rationalism in the use of scientific method. The canon of empirical residue states that even after a scientific hypothesis has been exactly formulated to answer a complete set of empirical questions put to a complete set of empirical data, there may remain an empirical residue which escapes inclusion in the hypothesis. In the scientific construction of projects, the canon implies that even after an analysis of needs has been expertly performed and a solution developed and expertly implemented, there may be found an empirical residue of needs which the solution should have but failed to cover, and a residue of empirical limitations which should not have, but in fact did, condition the solution.

This canon points out the residue of the unpredictable within human personnel associated with a project, the ultimate inflexibility of means constructed to meet an objective, and the human limitations inherent in exhaustive analysis.

Acknowledging this canon of empirical residue, the realistic practitioner of scientific construction recognizes that there are sequences of events which of themselves are not wholly intelligible and predictable but rather recalcitrant; that there are people not markedly different from the writer and the reader who do things not wholly intelligent and predictable but rather free and random. It is this residue of chance and unpredictability in our world, and the residue of the irrational in the human situation, that will always condition systematic planning.

THE EMPIRICAL FOUNDATIONS OF SYSTEMS ANALYSIS

INTRODUCTION

As noted earlier, the designers of educational broadcasting projects place personnel and material in consistent, predictive relationships. This, it was argued, creates a system or a formal organization which can be defined as a set of personnel-materiel interrelationships created by an explicit, deliberate, and conscious decision-process. Such a system or formal organization is the primary field of investigation by systems analysis.

There is a secondary field of investigation which is the environment of "nonformal" personnel-materiel interrelationships surrounding and conditioning the formal organization. The interrelationships in this field will be termed nonformal because they are created by decision-processes which are implicit rather than explicit, spontaneous rather than deliberate, and unconscious rather than conscious.

Whenever project planners conceive objectives and design a project, they are creating a field of formal relationships. However, in order to determine the need which the objective will fulfill and in order to identify the constraints which will condition the strategy implementing the objective, project planners must also study the field of nonformal relationships.

Both these fields, the formal and the nonformal, are the empirical foundations of systems analysis.

THE PRIMARY FIELD OF SYSTEMS ANALYSIS: RELATIONSHIPS OF THE FORMAL ORGANIZATION

Carzo and Yanouzas contrast the fields of nonformal and formal relationships when they compare social organization with formal organization:

> Social organization evolves by successive approximation, that is, it emerges from a trial and error process. . . .
> . . . . . .
> In contrast to systems that arise through unconscious ordering . . . formal organizations are systems in which men and capital are deliberately related for the accomplishment of some explicit purpose. (1967: 8 and 5)

Educational broadcasting projects are formal organizations, and like all formal organizations their raison d'être is the real-world parameter of limited resources. The need for formal organization becomes clear by the contrast with social or nonformal organization:

> . . . Social organization would be adequate for the accomplishment of objectives if resources were unlimited. . . . If there were enough goods and services to fully satisfy every human desire, it would not matter if the system produced excessive amounts of any commodity or service . . . inefficiently. Resources are scarce, however, and it does matter how they are employed. . . . The primary reason for formal organization, then, is the attainment of objectives through the efficient use of resources. (Carzo and Yanouzas, 1967: 8)

Hence the purpose of creating a formal organization is to modulate efficiently the expenditure of limited resources. System designers create the formal organization by a decision process which Buckley describes as:

> . . . the general selective process occurring in every adaptive system whereby variety [of resources] is selectively organized and utilized for self-regulation and self-direction. (1967: 79)

Through the decision process, the designers of a formal organization set personnel and materiel in consistent, predictive relationships in order

to constrain the consequences which follow from events. Thus:

> In order to facilitate optimum behavior, the formal organization limits the range of behavioral possibilities of its members. Within a narrow range of possibilities available, participants are in a better position to make rational choices than in the case in which the number of possibilities is very large. In addition to information about his own responsibilities and authority, the formal organization provides each member with information about the behavior possibilities of others and his relationships to others. In this way each member is in a better position to anticipate the consequences of his action. (Carzo and Yanouzas, 1967: 326-327)

Hence the primary field of a systematic analysis is a set of relationships established by decision makers. Such an analysis should investigate the entire decision process both in its antecedents and consequences. It should investigate the antecedent assessment of needs, estimate of constraints, and formulation of objectives, as well as the consequent assignment of roles to personnel and functions to materiel, and the establishment of the interrelationships which constitute the formal organization.

THE SECONDARY FIELD OF SYSTEMS ANALYSIS: THE RELATIONSHIPS OF NONFORMAL ENVIRONMENT

Formal organizations are established entirely within an environment of the nonformal relationships of social organization. It is impossible for formal organization to escape its nonformal environment because it is impossible for the formal organization to avoid using human beings as components in its system. This nonformal environment is created by the human need to form spontaneous relationships, a need which no formal organization with its prescriptive behavior can ever supply.

Social, nonformal interrelationships begin whenever men interact in occupational or casual situations. They tend to order their

relationships, that is, they tend

> . . . to talk to each other, exchange favors, play games, have meals together or simply exchange glances. From these contacts they develop sentiments toward each other such as liking, disliking, attraction, or respect. Eventually the frequency and duration of interactions and the sentiments of group members toward each other become patterned, and a social structure develops. . . . Furthermore, the group will develop a value structure, that is, their shared beliefs or ideas about what is important in life, play, or work. (Carzo and Yanouzas, 1967: 5)

Thus, the interaction of men ordering their relationships produces the sentiments and value structure constituting the nonformal, social environment of the formal organization. Whereas the decision process of the formal organization prescribes certain roles, relationships, and groups, to implement its formal objectives, the interaction of its personnel inevitably produces additional roles, relationships, and groups, to implement social, nonformal objectives. (Carzo and Yanouzas, 1967: 141)

These additional roles and relationships created to implement nonformal objectives are not at all independent of those roles and relationships prescribed by the formal organization in pursuit of its technical objectives. The social, nonformal environment interacts with, and conditions the formal organization precisely because the objectives of both the nonformal environment and the formal organization have their actual existence within the human person functioning in the formal organization. Simultaneously with playing a technical role, the person in the formal organization:

> . . . elaborates his behavior, creates other relations, and plays other roles. This elaboration also creates changes in motives, attitudes, interactions, and indeed, in the organization itself. (Carzo and Yanouzas, 1967: 235)

Since the interaction of the nonformal and the formal can produce these

attitudinal changes in the person within the formal organization, it becomes imperative that an analysis of the functioning of any formal organization include the nonformal, social environment as part of the total system under investigation. This imperative stems from the potential of the nonformal organization to cause dysfunctions within the formal organization. Carzo and Yanouzas illustrate the range of influence exercised by the nonformal organization over the formal organization when they state:

> At all levels in the organization, people mold values, beliefs, opinions, and myths into an ideology which influences the behavior of the individual. Sentiments concerning conflict, cooperation, superiority, inferiority, authoritarianism, democracy, equality, and others form the basis for defining the goals of an informal organization. The values which are shared by informal group members may not necessarily be in accord with the logic of the formal part of the organization. . . . For instance, in a formal organization which is autocratically structured, an informal group may formulate and operate for the purpose of bringing about some degree of equality between the autocrats and those who are governed. (1967: 147)

Although nonformal behavior and organization always have the potential for affecting formal behavior and organization, this does not mean that nonformal behavior always does affect the formal organization. Nor does this mean that when it happens to affect the formal organization, it always causes dysfunctions. Nonformal behavior is simply any behavior not prescribed by the formal organization. In the formal organization, such behavior may be irrelevant and nonfunctional: two members of a formal organization may, while working, agree to meet for lunch during the period of time formally alloted by the organization. Nonformal behavior can also be relevant and functional as when, e.g., two members of the organization on the basis of friendship may help each other in the pursuit

of the organization's technical objectives. Finally, such nonformal behavior can be relevant and dysfunctional as when two members, on the basis of their friendship, decide to disrupt the formal organization.

In any case, the systematic analysis of a formal organization such as an educational broadcasting project must attempt to discover to what extent the nonformal environment conditions the functioning and the effectiveness of the formal organization.

THE GENERAL METHOD OF SYSTEMS ANALYSIS

The general method of systems analysis is to be distinguished both from the canons of empirical method which ground the method and from specific techniques developed to implement the method. On the one hand, the general method of systems analysis is a specific methodology developed within the canons of empirical method specifically for the analysis of systems as such. On the other hand, in order to meet the specific exigencies of different types of systems, systems analysts have and will continue to develop analytic techniques within the general methodology of systems analysis. Hence, just as within the canons of empirical method the general method of systems analysis has been developed to meet the specific subset of empirical data called a "system," so also within the general method of systems analysis certain analytic techniques continue to be developed to meet various types of systems within the "system" subset.

Since analytic techniques are abundant, only the general method of systems analysis will be considered here.

THE FIRST OPERATION: GATHERING SYSTEM-DATA

The first component in the general method of systems analysis is the heuristic assumption that the data being analyzed comprise a "system." As Deutsch notes, with this assumption,

> a system analyst makes little distinction between diverse names--such as radar systems, weapon systems, transportation systems, management systems, and even waste disposal systems. (1969: ix)

The operation deriving from this first heuristic premise is to gather data both from the system itself (the formal organizational structure) and from all relevant fields of influence potentially affecting the performance of the system (the data of the formal and nonformal environment surrounding the system under study). Within systems analysis, according to Meister and Rabideau, this first operation of systems analysis is still rather an art, for

> . . . most of the methods available to the human engineer in the industrial practice of human factors, are quite primitive. Although sophisticated, quantitative methods do exist, they are applicable largely to highly controlled situations such as those found in the laboratory. . . . There have been few if any improvements in the basic methods used by human engineers to collect performance data, especially in ecological situations. (1965: 290)

THE SECOND OPERATION: IDENTIFYING COMPONENTS

The second heuristic assumption in the general method is that any system has identifiable components. The operation deriving from this second premise Carzo and Yanouzas describe as:

> . . . breaking down the task, departmentalizing activities, programming decisions, sequencing operations, and channeling authority and communications . . . [which are] contemporary attempts to employ general problem-solving routines. These attempts involve two important features--to divide a task into parts and subdivide if necessary, and to arrange the parts in a hierarchical form. (1967: 534-35)

By identifying and separating the component parts of the total system, the analyst establishes a base for the third operation.

THE THIRD OPERATION: TRACING INTERRELATIONSHIPS

The third heuristic assumption in the general method is that the identified component parts, being parts of a system, are presumed to interact. The operation deriving from this third premise Deutsch describes as:

> . . . stripping the non-essential details from a collection of interacting elements so that the structure of the interrelations is laid bare for study. . . . (1969: 2)

Once the components of the system are identified and arranged according to their interacting relationships, the systems analyst can view the system as a functioning whole and begin the final operation in the method.

THE FOURTH OPERATION: RELATING THE SYSTEM TO ITS ENVIRONMENT

The heuristic premise underlying the fourth operation is that the total system with its interrelated components systematically interacts with an environment which both supports it and is affected by it. The operation deriving from this premise is characterized by Meister and Rabideau as the investigation of the system's functioning relative both to its inputs and outputs and to its objectives. The analyst considers:

> . . . inputs affecting the system and the outputs that result. From the nature of the discontinuities that exist between input and output, the human engineer may deduce the nature of the changes that have taken place within the system. One can also look for the system goal or its mission which organizes the system behavior and see how the input-output relationship implements this goal. The importance of this viewpoint is that it forces the human engineer and, hopefully, the system designer,

> to consider not only primary system elements such as equipment and procedures, but also supporting system elements such as technical data, communications, and logistics. (1965: 28)

Much of current evaluation of system functioning by analysts, however, is still "highly informal, conducted frequently as a subjective, judgmental process." (Meister and Rabideau, 1965: 13)

Many of the sophisticated techniques developed in systems analysis are associated with this evaluation of total system performance. To this end, system analysts attempt to quantify not only the total system performance but also the components and the relationships of the various stages of system planning and design. Meister and Rabideau note, however, that the ideal of placing all the interrelated aspects of system performance in a single, comprehensive mathematical model is still a "hope rather than a reality." (1965: 260-61)

CONCLUSION

Thus, from four heuristic premises derive the four operations of the general method of systems analysis: (1) the gathering of all data relevant to the system; (2) the identification of all component parts; (3) the tracing of the interaction and interrelationships of the components; and (4) the determination of how the system affects, and is affected by, its surrounding environment. These four operations constitute the general method which will be used in the analysis of the three educational broadcasting projects.

THE SPECIFIC CATEGORIES OF ANALYSIS: THE ANALYTIC MODEL

The third premise in the justification of method (cf. p. x ff) cited the four operational stages of planning evident in the literature

reporting the three educational broadcasting projects being investigated. Those stages of (1) assessment of need, (2) formulation of objectives, (3) implementation of means, and (4) determination of results suggested the four basic categories of analysis corresponding to the operational stages.

The development of a complete analytic model capable of handling the data of the three projects, therefore, begins with the four categories of inquiry previously established:

1. How thoroughly did planners assess the environmental need?
2. How clearly did planners formulate the project's objectives?
3. How effectively did planners design and implement the means?
4. How completely and exactly did planners determine the results?

Systems analysis is a scientific discipline using an empirical method to investigate the subset of empirical data termed a "system." The data-field of the "system," however, is an empirical field which exists within our contingent world and its limited resources. In investigating this contingent and limited field, systems analysis derives four additional operational stages and categories of analysis which it suggests as formal requirements of sound planning and design in a contingent and limited world.

Three of these operational stages pertain to the planning of an effective strategy and a fourth pertains to the effective use of results in a contingent and limited world. The argument for the introduction of these operational stages is as follows.

Because resources for a project are limited, the constraints within which a project must operate should be clearly identified by planners lest

they design an unrealistic means. Similarly, for the sake of the efficient use of limited resources, planners should logically consider alternative ways of effecting the objective before definitively selecting the means. Finally, because our contingent world does not guarantee results, results have to be fed back into the project so that planners can modify the means to better effect the objective.

Thus, the four additional operational stages required for sound planning are:

1. Identification of constraints limiting the means.
2. Discovery of alternative means.
3. Selection of the most effective means from alternatives.
4. Modification of the means through the comparison of results with objectives.

Inserting these additional stages into the original list of operational stages provides an eight-stage model of sound planning and design:

1. Assessment of environmental needs.
2. Formulation of objectives.
3. Identification of constraints limiting the means.
4. Discovery of alternative means.
5. Selection of the most effective means from alternatives.
6. Implementation of the means.
7. Determination and feedback of results.
8. Modification of the means through comparison of results with objectives.

These eight operational stages in turn provide an eight-category model of analysis:

1. How thoroughly did planners assess the environmental needs?
2. How clearly did planners formulate the project's objectives?
3. How explicitly did planners identify constraints upon the means?
4. How seriously did planners explore alternative means?
5. What factors conditioned the planners' selection of means?
6. How effectively did planners design and implement the means?
7. How completely and exactly did planners determine and feed back the results?
8. How extensively did planners modify the means through a comparison of results with objectives?

The inner logic of the complete sequence of categories can again be demonstrated by reversing their order. Modification presupposes the feedback of results; results presuppose an implementation; implementation presupposes the selection of a means; selection presupposes alternative choices; alternatives presuppose a constraint upon resources; the sequence of constraints, alternatives, and selection presuppose an objective; and an objective presupposes a need.

Each of these eight categories of analysis will now be elaborated in order to make explicit the lines of inquiry to be pursued in the analysis of the three educational broadcasting projects.

1. ASSESSING THE ENVIRONMENTAL NEED

A project in educational radio or television is designed to meet specific needs of real people. The "need" denotes something missing in

the environment and logically precedes the formulation of project objectives which supply what is missing. The first logical operation of planning and analysis is therefore the scrutiny of the environment for true needs.

Determining the needs of an environment of real people Lehmann describes as:

> . . . a statement of the real problem being faced by the society under consideration--that statement of a problem which initiates consideration of an educational/training system as a potential solution. . . . (1968: 145)

Witt is more specific: determining the environmental need is:

> The study of the needs, goals, capabilities, achievements and experimential backgrounds of the people to be instructed. . . . (1971: 14)

This inquiry into the environment can be seriously undervalued by a planner and the effort required underestimated, yet any project or system is umbilically related to its environment. Not only does a project derive its reason for existence from needs in the environment, it also requires the environment to sustain it. If the environment proves hostile to a project--even one fulfilling a real need--the project will have to abort. Even if the environment does not prove initially hostile to the project, it may still have to abort through poor adaptability to a changing environment. Such a reverse would prove that some area of system-environment interface escaped scrutiny in this phase of system planning.

Hence, there is no substitute for proceeding scientifically and thoroughly, using the canons of empirical method in order to derive and verify those insights which describe the environment's true needs and the true effects which the system will have on the environment.

This phase of project planning is the time to identify possible opposition to the project and to estimate the relative and absolute power of such opposing groups (Pfeiffer, 1968: 148), and to identify the forms of counteraction which might be initiated by the environment. (Churchman, 1957: 114)

During the planning of educational broadcasting projects, cultural factors can militate against an accurate assessment of both of environmental need and environmental opposition. If the project planners are culturally different from the people of the environment, there is a danger that the planners will fail to detect the real needs and all the relevant values which may be threatened by the introduction of the system into the environment. Just as serious is the case when the project planners, although culturally similar, are subculturally different from those people in the environment who interface with the system. This case may occur when, for instance, educated urban planners "impose" a planned project upon rural villagers. The subcultural disparity between the planners and their audience who are culturally similar may cause apathy in the latter group, a most disruptive counteraction.

The investigation of what is defective in the environment leads then to the operation of formulating a specific objective which will attempt to fill a true need.

2. FORMULATION OF THE OBJECTIVES

Terminology

A system or project can be described as having an overall objective which is elaborated and refined into more specific objectives within the

project. In the literature of systems analysis the terminology used for general and particular objectives is not consistent. Authors distinguish general from particular objectives by using contrasting couplets such as "mission vs. objective," "objective vs. goal," or "goal vs. subgoal." The present discussion will use "objective" to mean the general objective--that is, the most comprehensive rationale uniting and explaining the project as a totality--and "subobjective" to denote any more limited objective within the project or system.

Discovering and Editing Objectives

The first consideration in developing or diagnosing a system is to determine the gross list of objectives and to edit them into a hierarchy. Determining the list of objectives involves penetrating to the heart of a set of needs and being able to frame these succinctly. (Pfeiffer, 1968: 4) Since objectives are correlatives of environmental needs, the list of needs should provide the basic data for a list of objectives; and those persons most conversant with environmental needs will be the personnel most capable of supplying data for the formulation of objectives. Moreover, if there exists a hierarchy in the list of needs, the list of objectives will require editing to form a hierarchy of objectives to match the needs.

Editing, however, may involve the elimination of certain subobjectives; and if eliminating is not to mean distorting needs in order to simplify objectives (Churchman, 1957: 116), considerable expertise and the careful use of any quantitative techniques should characterize this phase of project planning.

It may occur, however, that the persons conversant with needs will differ in their estimation of the priorities to be assigned. Techniques for establishing a concensus can then be employed, such as the "Delphi Method" which uses successive rounds of questions designed to elicit progressively more carefully considered opinions within a group. (Pfeiffer, 1968: 152) As the rounds of questions become more detailed, the group is also informed of the increasing amount of concensus growing within the group.

Other techniques are designed to clarify vaguely expressed objectives by using rough quantifying techniques in an effort to compare the "value" or "importance" of qualitative objectives relative to each other. Thus, an objective of seeming high priority will be set as the unit value, and other objectives will be expressed as "importance-percentages" of the unit value which is identified with the objective of apparently highest importance. This process is termed the "weighting" of objectives (Churchman, 1957: 119) which results in an ordered hierarchy of objectives which the system will be designed to implement.

The above procedures will bring to light those minor objectives subsumable under major ones. (Churchman, 1957: 116) They will reveal vague or hidden objectives (Churchman, 1957: 108); and most important of all, they will produce the clarity necessary for the next step which is operationalizing the objectives.

Operationalizing Objectives

This procedure demands that the planner state specific and concrete objectives in detailed, behaviorally identifiable terms. As Lehmann

notes, objectives must be stated in operational terms because "otherwise we will never know whether the system as implemented meets the stated objectives." (1968: 146)

One fundamental reason for stating objectives in behavioral terms derives from the imperative of fitting out a set of objective with a system. System components may be myriad and their successful integration into a much larger complex demands a detailed elaboration of the system objectives. When components are many and the system complex, each component, whether human or machine, requires detailed instructions for interfacing with other components, and operationalizing provides this detail.

A second reason for stating objectives in behavioral detail is the necessity of providing measurable behaviors and standards of performance for determining the system's effectiveness. System reliability depends heavily upon measured performance being fed back to decision centers where it is compared with the objectives as operationalized. If objectives have not been operationalized, it is impossible to determine if the system is functioning at all.

A constant problem in measuring the performance of a system or project is the disparity between stated objectives and measured performance. The more than rare compromise in measuring the performance of a project is to state the project's objectives in general, unoperationalized terms and then to evaluate only a fraction of the system's total performance. The fraction of measured performance may be easily subsumable under the generally stated objectives, but is, in fact, far short of an evaluation of the total system's performance output.

Thus, stating objectives in behavioral, operational terms is a phase of system planning which alone provides the specificity necessary for measuring system performance. Such an effort not only stimulates planners to evaluate performance more regularly but also permits them to contour the project more exactly to environmental needs.

3. IDENTIFICATION OF CONSTRAINTS

Introduction

Once the needs and objectives have been specified, both the planner and the analyst turn to a formal consideration of the options available to implement the objectives. Three operations are integral to this consideration: the identification of constraints, the discovery and development of alternative courses of action, and the weighing and selection of the most effective course.

Constraints and the Environment

> Resources are presumed to be scarce, and this poverty puts a limitation on courses of action open to the project planner. Further, the environment which receives and supports the project-system is itself a congeries of ongoing systems and subsystems which are already more or less interacting. This interaction exists in advance of the projected system and represents a further constraint upon the options available to the planner who must keep in mind that the project is a man-machine system engaged in modifying the environment by adding to, destroying, or maintaining some part of the environment. (Meister and Rabideau, 1965: 24)

Ideally, that expertise which was required to search out true needs in the environment is also demanded in the identification of constraints.

What courses of action can the environment of real people sustain as they undergo the proposed behavioral modification implied in the objectives of the project? Identifying constraints implies an investigation of the environment for factors conditioning the pursuit of objectives and this investigation is ideally carried on by a multi-disciplinary approach involving the historian, the anthropologist, the sociologist, the political scientist, the economist, as well as the educator and the media specialist. Without this expertise the project planner risks the possibility of some unforeseen constraint rising to cripple or even destroy the project.

Lehmann defines constraints as "those real-world limiting conditions which must be satisfied by any acceptable system designed to attain the . . . objectives." (1968: 146) The procedures he recommends are:

a) grouping the constraints into families;

b) establishing the sources of the constraints;

c) ranking the constraints according to mutability;

d) ranking constraints in order of effect on system design.

(1968: 146)

If the four steps in the procedure are carefully examined, it will be evident how each step is dependent on expert knowledge. This procedure is less easily followed in diagnosing existing projects than in designing new ones, but the importance of planners' considering constraints remains constant.

However, diagnosis differs somewhat from design, and the later analysis of projects will consider constraints by including the amount of implicit or explicit expertise used in considering options. For at

the level of detail present in the reported projects, sometimes the only way the consideration of constraints can be detected is to look for the project's use of experts--those conversant with environmental and technical constraints--in developing alternatives.

4. THE DISCOVERY AND DEVELOPMENT OF ALTERNATIVE COURSES OF ACTION

There are numerous reasons for planners deliberately to allow time for alternate means or courses of action to be discovered or developed. A first reason is that a course of action is a creation, and creating takes time. A second reason derives from an assumption concerning the limited and contingent world. The possibility that the first course of action discovered or developed will prove to be the optimal means to implement the objectives must be considered highly improbable. The argument that one need go no further than the first discovered course of action effectively precludes developing any alternatives, and in a contingent and limited world such an argument must be held fallacious. A third reason--and a serious one for its sounding so familiar--is that "without alternatives, the planning staff tends to assume the role of salesman for a particular course of action." (Pfeiffer, 1968, p. 4)

Here is probably the most fundamental reason for formally allowing time for the consideration of alternative courses of action. The formal reduction of biased judgment regarding means to an end can most thoroughly be carried out by individual experts, each suggesting courses of action which, in their judgment, would implement the proposed objectives most effectively. This common organized effort is "perhaps the most important

and creative phase of systems analysis." (Pfeiffer, 1968: 5) Lehmann calls this:

> . . . the step in the process where the much advocated "brainstorm" approach is useful. Since this is not the time to discard or evaluate any solution, and since this is the time to generate all possible solutions so as not to miss the really good one, the development of alternatives should be done in an atmosphere of complete intellectual freedom, with participation from as many different groups of people as possible. . . . (1968: 146)

Lest it be thought unlikely that experts from different fields could agree on a course of action, it is well to remember the "Parable of the Spindle." (E. H. Porter, 1962: 58-66, quoted in Carzo and Yanouzas, 1967: 329-331) The parable is a case history of a short-order restaurant-chain owner who asked an anthropologist, a sociologist, and a psychologist to suggest reasons for his personnel problems and a solution thereto. The sociologist viewed the problem as a status-conflict, the psychologist saw it as one of abrasive face-to-face relationships, and the anthropologist saw the difficulty as differences in value systems among the personnel. Each expert, however, suggested an identical solution: written orders sent by waitresses to the cook via a spindle! The analyses differed but the solution did not.

In scientific investigation, hypothesis stands to law as possibility stands to actuality. In scientific construction, the creative development of alternate courses of action is analogous to forming hypotheses. Analogous to testing is the estimation of relative efficiencies of each course of action, and the final selection of the optimal alternative is analogous to the final judgment-statement of scientific law. It is to these latter two procedures that we now turn.

5. THE SELECTION OF THE MEANS

Here the planner turns, from being creative, to being critical, by selecting one alternative from candidate courses of action. Techniques for estimating the relative merits of candidate solutions in quantitative terms range from the simple to the sophisticated, and in order to illustrate the rationale underlying "effectiveness measures" in selecting an optimal solution, the following discussion is adapted from Churchman. (1957: 115)

The analyst begins by estimating the probable effectiveness of each course of action relative to each objective. For example, the probability of one course of action implementing a first objective might be .8 and regarding a second objective, .4. A second course of action might have the probability of .2 in effecting the first objective and .6 regarding the second objective. The summary effectiveness evaluation is derived by multiplying the probabilities.

Table 2.1

	Objective A	Objective B	Evaluation
$Course_1$ Effectiveness:	.8	.4	.8 x .4 = .32
$Course_2$ Effectiveness:	.2	.6	.2 x 6 = .12

Thus, the first course of action is the more effective means since its summary effectiveness is .32 as compared with .12 of the second course of action.

In the above example, both objectives were considered of equal value. If, however, one objective is more important than a second objective, the objectives themselves must be assigned relative values, and the

effectiveness of each course regarding each objective must be estimated and summarized in order to obtain the effectiveness of each course regarding both objectives. In order to illustrate a later point, instead of putting one objective at unit value, one objective will be valued as .9 and the other as .3. Table 2.2 illustrates this example where two courses of different value are being compared for their effectiveness in implementing two objectives of different value:

Table 2.2

	Objective A (value = .3)	Objective B (value = .9	Summary: Evaluation:
$Course_1$ Effectiveness:	.8 x .3 = .24	.4 x .9 = .36	.24 + .36 = .60
$Course_2$ Effectiveness:	.2 x .3 = .06	.6 x .9 = .54	.06 + .54 = .60

It will be noted that both courses of action after quantification and calculation end in identical evaluations. This should illustrate the limits as well as the power of mathematical techniques: they can greatly aid but never make that final critical decision by the planner. As Lehmann notes:

> Professional operations analysis have developed very sophisticated computerized mathematical models to evaluate various alternatives and select the optimum one. Too often, however, the model is much more accurate than the data which can be assembled for a candidate solution. (1968: 147)

Lehmann suggests that even after sophisticated techniques have been used in an evaluation, the project planner should:

> . . . look at the picture it presents and apply critical thinking to the answer it appears to give. Don't just add up the pluses and minuses and pick the one with the highest score. . . . This is the step in the process where horse sense, experience, and good calm judgment should be introduced. The question to be answered

> is, "Is this really the best approach?". . . A healthy mixture of rigorous analysis (supplying objectivity) and judgment (supplying intangible experience) is necessary to select the best candidate. . . . (1968: 147)

Should a project not use mathematical techniques for selecting a course of action, the planners should still show evidence of the consideration of a plurality of approaches, their relative efficiencies in producing different objectives of differing values, and the final over-all effectiveness of each course in implementing all the objectives. (Churchman, 1968: 119)

Once a course of action is evaluated and selected, it becomes the strategy to be implemented in the pursuit of the stated objectives. The remaining categories of the analytic model concern this system-strategy: the processes of decision and communication which implement the system-strategy, and the processes of feedback and modification which maintain system integrity and reliability.

6. THE IMPLEMENTATION OF THE MEANS: THE SYSTEM-STRATEGY

The Human Foundation of the System-Strategy

The various centers and processes of decision, information, and action which compose a system-strategy should not be considered in isolation from the human foundations which underlie them. These centers and processes are kept functioning only to the extent that the personnel of the system maintain an understanding and willingness to act in concert--that is, to promote group goals.

Hence, fundamental to an understanding of the system-strategy is the recognition that the latter is a sociological and psychological group interacting to promote common goals. As Buckley describes it:

> . . . a sociological group exists to the extent that its actors are pursuing "promotively interdependent goals"; . . . a psychological group exists to the extent that its members perceive themselves as pursuing promotively interdependent goals; . . . a psychological group has cohesiveness as a direct function of the strength of goals perceived to be promotively interdependent and the degree of perceived interdependence. (Buckley, 1967: 187-188)

It is this psychologically immanent perception of "promotively interdependent goals" by the persons within the system that binds the system together.

The interactions of this sociological and psychological group Buckley describes as:

> . . . mediated by a more or less common ensemble of symbols. Involved are selective perception, definition, interaction. Processes of decision-making, reference group orientation, role-taking and role-playing rest on these considerations. . . . Communicative interaction between individuals, together with their self-conceptions and the environmental situation, constitutes a system. . . . (1967: 124)

Buckley further notes that the driving forces motivating the interactions of such a human system have been described in sociology by numerous models: exchange theory, concensus theory, game theory, dramaturgy theory, etc. (1967: 124)

In analyzing educational radio and television projects, therefore, it is important to remember that the centers and processes of the system-strategy exist fundamentally in a sociological and psychological human context.

Nominal Definition

The system-strategy which is the means to implement a project's objectives is a complexity which can be divided into numerous centers and processes of decision, information, and action. To begin the

discussion, a nominal definition of an organization will be drawn from Churchman. A system-strategy has the following components:

1. Management which directs
2. Men who control and operate
3. Machines which convert or serve or implement
4. Materials into products or services made available to
5. Consumers. . . . (1957: 109-110)

Although the terms are drawn from management theory, the basic structure of an educational broadcasting is evident: superstructure personnel co-ordinate infrastructure personnel with technical equipment to produce behavioral changes in an audience.

The Structure of the System Strategy

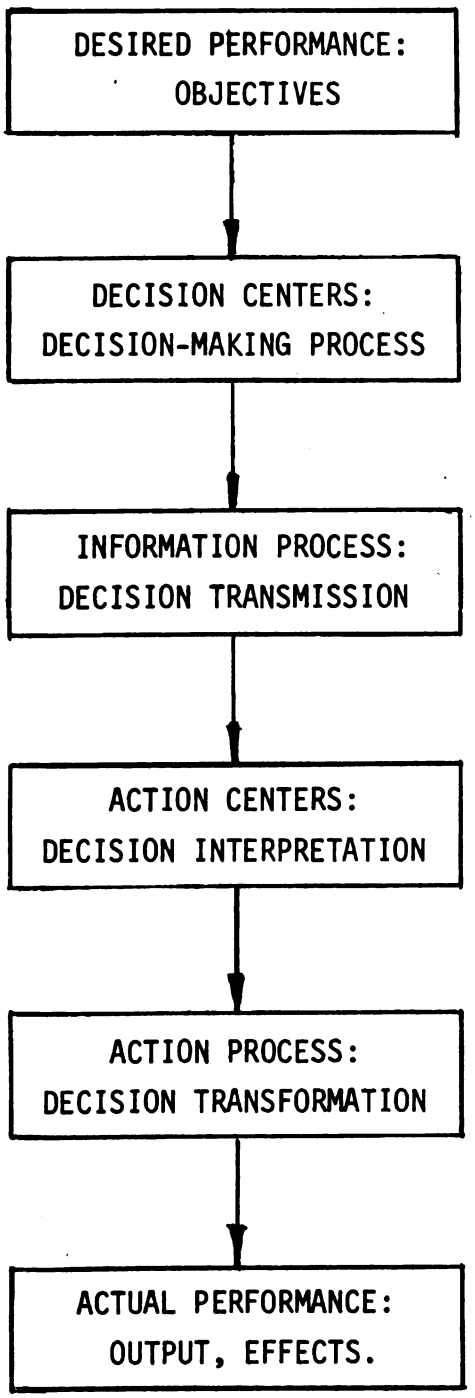
Decision and Action Processes

The structure of the system strategy can be viewed as composed of centers of decision with information flowing from them, and centers of action with production flowing from them. Carzo and Yanouzas describe these two processes:

> A decision process transforms information through search, formulation of alternatives, and selection of a course of action. . . . An action process is defined as the transformation of matter from one state to another or movement from one point to another. (1967: 345)

To institute the decision process, decision centers transmit information (policies, memoranda, handbooks, instructions, etc.) to action centers which transfer or co-ordinate materiel to produce some effect. The basic structure of the decision and action centers and their consequent processes is given in Figure 2.1 which omits the feedback process and is adapted from Carzo and Yanouzas. (1967: 336,380)

Figure 2.1. The structure of the system-strategy.



The Decision Process: Decision Centers

The decision-makers take the objectives as specified and elaborate them into sets of behaviors called tasks. To draw examples from the three projects under study, the tasks may interface a person with a machine: (Samoan students viewing a television receiver); they may interface a person with materials: (the Colombian teaching assistant using specially prepared texts); or they may interface persons with persons: (a village leader overseeing an Indian radio forum).

An initial determination in this phase of systems analysis is the identification of decision-makers in an organization. Who has veto power over a decision? What constitutes final approval of a decision? How can decisions be reversed or weakened? (Churchman, 1957: 108) Here the analyst attempts to discern where decision-makers are located in the various levels of the organization and what inputs are being supplied to various decision centers.

Span of Supervision: The Relation of Decision-Makers to Decision-Receivers

In traditional management theory, decision-makers defined and co-ordinated specialized jobs. The premises underlying this theory were: (1) that specialized jobs were best co-ordinated by one person; (2) hence, there should be a unity of command between decision-makers and decision-receivers; and (3) all job-operators were to be subject exclusively to this single "chain of command." (Carzo and Yanouzas, 1967: 77) Because of the limited abilities of any one person to supervise a large number of personnel, these premises implied a limited "span of

supervision" and produced a "tall" structure of multiple organizational levels to insure the supervision of all members of the organization.

A multitude of levels, however, tends to produce an insulating distance between decision levels and action levels. For this reason there is, in organizational planning, an increasing movement from "tall" to "flat" and what are called "linking pin" organizational designs, the former based on a wide span of supervision, the latter interlocking organizational levels at numerous points. (Carzo and Yanouzas, 1967: 86, 519)

The importance of examining the span of supervision of an organization stems from the problem of mobilizing and motivating people toward the group goals. Carzo and Yanouzas cite Sears and Roebuck as an example of a company which moved from a tall to a flat organizational design. At Sears and Roebuck outlets, instead of five persons reporting to one supervisor, as many as forty store department managers report to the one store manager. In place of perhaps ten levels of organization, there were three: salespeople, department heads, and the manager. Sears and Roebuck found that "when managers of departments were asked to manage, they learned to manage." (1967: 85) Where responsibility for decisions is spread more evenly throughout the organization, the organization seems to motivate itself more effectively.

Hence it is relevant to a systematic analysis of a project to clarify the organizational design with its spans of supervision interlocking decision-makers and decision-receivers. Certain organizational configurations may inhibit the motivation and mobilization of personnel toward the objectives of the project by putting an insulating distance

between planning, production, and audience echelons. This distance contributes to the discrepancy between desired objectives and actual results.

Decision Transmission

Once the spans of supervision connecting decision-makers with decision-receivers have been determined, the channels of decision transmission will be evident, at least official ones. The span of supervision places all personnel of the organization in a chain of command and communication. However, through their nonformal interaction, the personnel of a formal organization establish nonformal communication channels; and the effects of these channels will be explored below when system dysfunctions are considered.

A systematic analysis regarding decision transmission, therefore, inquires about the number and kinds of official channels available for decision transmission, the possibly distorting effects the spans of supervision might have on the effective transmission of decisions, and the possible alternatives to official lines of decision transmission which might be available.

The Action Process: Decision Transformation

In the literature reporting broadcasting projects, the description of the action process (the operation of the project as a whole) usually dominates the reports. The action process transforms the decision process into a functioning project and involves the transformation of matter from one state to another or its movement from one point to another. (Carzo and Yanouzas, 1967: 345) A complete description of the action process

should include the flow of information and of materiel into action centers, the identification of the task-behaviors of the action personnel transforming the materiel into a product or a performance, and the final behavior in the action process, and the acceptance or reception by the consumer. If the action process produces a saleable product, the final behavior will be a decision to buy the product. If the action process produces a televised school lesson, the final behavior will be an increment in learning.

Hence, in order to determine the effectiveness of the action process, the interrelationships and operations of each human and technical component in the system-strategy should be described in that detail sufficient to permit the diagnosis of strengths, weaknesses, and malfunctions.

Dysfunctions in the System-Strategy

In the discussion above of the empirical foundations of systems analysis (pp. 20 ff) the two fields of investigation by systems analysis were distinguished: the primary field of the formal organization and the secondary field of the nonformal environment. This nonformal environment, it will be recalled, is created by (1) the interaction of men forming spontaneous relationships (2) which produces a social-value structure (3) of roles, relationships, and groups (4) not officially prescribed by the formal organization. It was further noted (p. 24) that the nonformal environment does not necessarily, but can, cause dysfunctions in the formal system. The present discussion centers on this dysfunctional nonformal behavior--the potential of the nonformal environment to disrupt the system-strategy of the formal organization.

The importance of discerning potential sources of dysfunctional nonformal behavior in a formal organization arises from the fact that the implementation of a formal organization's objectives depends upon "the ability of one person or group to induce a desired response from another person or group." (Carzo and Yanouzas, 1967: 343) The same authors conclude:

> . . . unless the organization offers inducements that are sufficient in kind and amount to participants, it will be unable to obtain the cooperation necessary for goal attainment. (1967: 344)

Thus, if the decision-making of the system-strategy is to be effective, it must maintain that power of inducement and motivation necessary to initiate and sustain the action process.

Traditional Organizational Theory

Traditional theory of organization concerned itself realistically but narrowly with task and role definitions describing the minimum skill required to implement objectives. The criterion was economic efficiency:

> Dividing work into very simple, repetitive-type jobs . . . was supposed to be more efficient because it makes workers more productive in a material sense. This view is almost devoid of other human values, such as a worker's satisfaction with his job. (Carzo and Yanouzas, 1967: 73)

In addition to describing tasks in minimal terms, traditional organizational theory defined the lines of decision transmission too rigidly:

> According to traditional theory, the direction for the course of events in a formal organization flows downward only through the hierarchy of authority. However, research conducted in actual organizations and in laboratory situations indicates that authority which is based on the official position provides only one potential source of influence. . . . There are many more bases for influence in an organization. (Carzo and Yanouzas, 1967: 182-183)

Defining specialized tasks and establishing clear lines of decision transmission within the formal organization are fundamental to its operation. Traditional theory, however, overlooked certain inevitable effects of formal authority and task specialization, such as:

1. task specialization creates status relationships between the task-operator and the task-co-ordinator;
2. dependency relationships exist between those who need and those who supply information;
3. expertise in a job can create superiority-inferiority relationships;
4. tenure and personal charisma can affect the implementation of decisions descending the lines of formal authority. (Carzo and Yanouzas, 1967: 198ff)

Thus the very operation of describing tasks and establishing lines of decision transmission inevitably creates a matrix of influential relationships which can spawn dysfunctions in the system-strategy.

A Major Source of Dysfunction: Nonformal Power

A system such as an educational broadcasting project may develop dysfunctions which derive simply from the limitations of the contingent world of personnel and materiel from which the system derives its resources. These dysfunctions are controlled by systematic planning which includes the exploration of alternatives prior to final selection and the feedback of results to stimulate the improvement of the system.

A major source of system dysfunction, however, derives from the status and dependency relationships inherent in the formal organization.

These relationships create the conditions for the rise of centers of influence and power which can compete with the formal organization's hierarchy of formal authority. These conditions, in turn, can be exploited by the social, nonformal values and aspirations of personnel within and outside the formal organization.

If the organization's use of formal authority conflicts with the nonformal values of persons related to the project, those persons may resort to the use of the status and dependency relationships to form a base of power to counteract the influence of the organization's formal authority. The unionizing movement within industry is an example of the use of dependency relationships to create a base of power in order to force management to respond to certain nonformal values. In educational broadcasting projects the exercise of power may be more subtle. If the beneficiaries of a broadcasting project feel that the project is being "imposed" on them by a distant and bureaucratic government, they may simply ignore the broadcasts. Since the successful operation of the project depends upon the receptivity of the audience, an alienated audience, by using this relationship of dependence, can exercise that degree of nonformal power needed to cause the system to dysfunction.

The actions taken by nonformal power to counter formal authority may affect information or decision transmission by distorting information necessary for effective decisions. (Carzo and Yanouzas, 1967: 78) They also may affect decision implementation by flawing what is produced. To decrease the distortion of information and decision transmission, the formal organization may introduce redundant channels of communication. (Carzo and Yanouzas, 1967: 344) However, if the organizational design

negates nonformal values, the duplication of communication channels may only double the total distortion. To counteract flawed production, the formal organization may increase its quality control; but again, if the formal organization persists in negating nonformal values, the dependence of the formal organization upon the personnel controlling quality control may only provide a further base of dysfunctional nonformal power.

The design of a system-strategy, therefore, may be economically functional but humanly dysfunctional. As Buckley notes:

> . . . Cartwright and Zander, Deutsch, Margaret Mead, Williams, Blau, Gouldner, and many others arrive at the conclusion that the control, or directive processes of a group or organization, are intimately related to . . . the goals and more proximate values of that group organization, the procedures by which the goals have been arrived at, the spread of participation in their implementation, and the distribution of their benefits. (1967: 191)

Hence the importance of designing a project in such a way that it recognizes and reinforces rather than thwarts the values motivating nonformal behavior. A truly effective system-strategy should:

> . . . satisfy social and psychological needs of participants adequately as well as the material needs of the organization . . . provide organizational arrangements which permit those that are affected to control as much as possible their own work activities; and . . . allow organizational members to participate in the decisions required to implement change. (Carzo and Yanouzas, 1967: 523)

The analysis of an educational broadcasting project, therefore, will attempt to determine to what extent the project's difficulties and diminished effectiveness may have stemmed from a conflict of nonformal power with formal authority over values related to cultural and subcultural differences, status and dependency relationships, the lack of participation in decision and action processes, the uneven distribution of benefits to participants, etc.

7. MONITORING AND FEEDBACK PROCESSES

Introduction: The Reliability Cycle

The system-strategy is a rational attempt to affect an environment. Though rational, the attempt is fallible and the environment contingent. Fallibility and contingency produce unforeseen events in the system-strategy and the environment. As Carzo and Yanouzas note:

> . . . disturbances and deviations from planned behavior are a fact of life of the formal organization. Therefore it is necessary for the design of the formal organization to have features which allow it to monitor its own performance and to make corrections where that performance deviates significantly from expectations. (1967: 362)

The effectiveness of the system-strategy in producing results free from deviation or error is determined during the two final stages of systematic planning and analysis.

The operations of monitoring and feedback comprise the first stage; the second stage includes the operations of evaluation and modification. The four operations compose what is termed the "reliability cycle" of the system-strategy, and can be defined as follows:

1. Monitoring is the sensing of those stimuli considered critical to the effective functioning of the system-strategy.

2. Feedback is the transmission of monitored data through communication channels from monitoring centers to decision centers for critical evaluation.

3. Evaluation compares monitored operational data with the system's operationalized objectives to measure the amount of error or deviation.

4. Modification is the corrective action taken by decision-centers when evaluation indicates that the system's performance exceeds the

limits established by the system's objectives. (cf. Buckley, 1967: 174)

These four operations of the reliability cycle are included in Figure 2.2 which is adapted from Buckley (1967: 174) and Carzo and Yanouzas (1967: 380). Monitoring and feedback are the subject of the present discussion; evaluation and modification will be treated as the final operational category.

The Monitoring Process

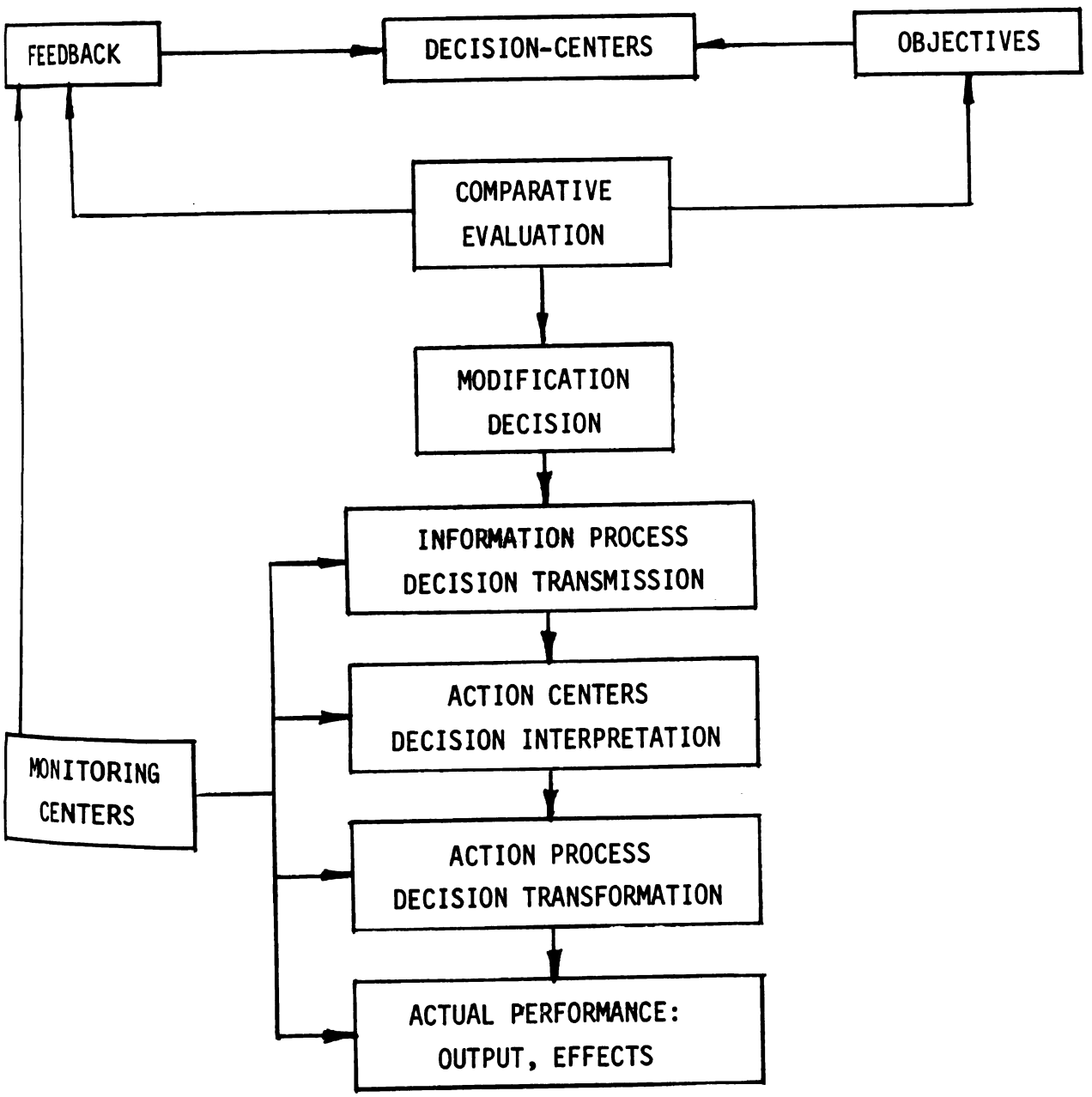
The Need for Monitoring

The need for monitoring the performance of a system-strategy derives generally from the fallibility of the system-design and from the contingency of the surrounding environment. Specifically, however, the need for monitoring rests upon certain basic factors of the formal organization.

1. The information and decision processes of the formal organization can usually specify only the general norms of expectation regarding sequences of events occurring in the system-strategy. General norms cannot provide for abnormal, unforeseen events, nor can they provide that ultimate interpretation and reaction used by the task-operator to deal with such particular events. Monitoring is therefore necessary to discover both the event and the reaction of the system-strategy to the event.

2. Behavior within the formal organization is open to nonformal elaboration beyond formal norms. Moreover, the formal organization positively generates behavior which is in some degree unpredictable: conflicts of interest, ambiguous standards, role discrepancies, and so on.

Figure 2.2. The reliability cycle.



(Buckley, 1967: 130) If the effects of such behavior are to be correlated with the objectives of the system-strategy, these effects require monitoring.

3. Decision-making in the system-strategy implies weighing of alternatives and making choices which optimize results. However, the decision-maker is unable to know with certainty the future consequences of choices in a contingent and limited world. Hence the effects which are not concomitant but consequent upon decisions must be monitored. (Carzo and Yanouzas, 1967: 376).

4. Within the communication channels of the system-strategy, certain factors increase error. Communication "noise" obscures relevant information with irrelevant information. Communication "bias" changes the character of relevant information, and "buffer mechanisms" delay relevant information and cause the system-strategy to adjust itself inaccurately. While the effect of these factors can be reduced by multiplying monitoring centers and feedback channels, the existence of the factors makes monitoring essential. (Carzo and Yanouzas, 1967: 336)

Monitoring Centers

Monitoring centers are part of what Buckley calls the "self-direction" of the system, and there are three general fields of data affecting system performance which should flow into the monitoring centers.

> For effective "self-direction" a sociocultural system must continue to receive a <u>full flow</u> of three kinds of information:
>
> 1. information from the world outside;

2. information from the past with a wide range of recall and recombination; and

3. information about itself and its own parts. (1967: 56)

The "world outside" the system-strategy must be monitored because the system-strategy is both supported by and affects that environment. The past history both of the environment and the system must be monitored if a decision to modify the system-strategy is to be realistic. Finally, the system and its components must be monitored if the system is to be evaluated against its objectives.

Since the system-strategy generates a greater number of events than can be reasonably monitored, the designers of a project must make a selection of those events considered critical to the performance of the system-strategy and establish centers to monitor these events. As Meister and Rabideau observe:

> The basis of observation in evaluating system performance is the discrimination of behavior relevant to the evaluation requirement from behavior which is nonrelevent. . . . The discovery of the effective cue is not a simple matter, however, since the cue is not automatically recognized as a cue; it must be learned. (1965: 201)

There is no simple method of discriminating critical task-behavior from non-critical behavior. Some indicators of task-criticality are the difficulty of a given task in the system-strategy, the effect of a specific task-failure on the project as a whole, the alternatives available in the event of a specific task-failure, etc. However, the identification of critical functions in the system-strategy and the provision of critical function cues to monitoring centers for discriminating critical task-behavior are fundamental to the control of the system and the maintenance of a reliable strategy.

In the diagnosis of a broadcasting project, an analyst would look for the location of monitoring centers in an effort to determine whether the critical functions in the system were in fact being monitored. The exact identification of every critical function in a system may be possible only after the system is in operation when performance-error can suggest previously unidentified critical functions.

The Monitoring Operation

Monitoring implies sensing clues relevant to critical functions. The proper functioning of monitoring centers depends upon the accuracy of the monitoring sensors whether these sensors are machines or personnel. Sensor accuracy can be inhibited by noise, bias, or buffer mechanisms. Communication "noise" mixes irrelevant with relevant information, and this can as well be static in the technical transmission of a radio broadcast as the misleading cues in the cultural expressions of system-performance. Communication "bias" in the monitoring sensor takes relavant cues and misrepresents them to the decision-center. The "bias" can as well be found when an instrument overheats as when:

> . . . a subordinate reports only the "good news" to his superior. He is reluctant to report "bad" news because it might have an unfavorable effect on the boss's opinion of his ability. (Carzo and Yanouzas, 1967: 380)

Finally, "buffer mechanisms" which "delay the effects of a variable until some later point in a process," (Buckley, 1967: 67) cause monitored information to be discontinuous and allow decisions based on such information to over- or undercorrect the system. (Carzo and Yanouzas, 1967: 377)

The monitoring operation and its sensors should therefore be examined for the possibility of noise, bias, buffers, and other factors inhibiting the accuracy of the monitoring center.

Methods of monitoring may be interview, observation, error-analysis, flow analysis, time-motion studies, etc.; but the project planner:

> . . . in making his selection of particular methods . . . must know the kind of information his evaluation should supply and contrast that with the information a particular method will provide. (Meister and Rabideau, 1965: 187)

However, apart from particular methods, perhaps the most important method of monitoring is replication. A system-strategy performs along a time-parameter and therefore monitoring that performance should be a continuous, regular, and repetitive process, for "only the test-re-test method approximates the demands of performance-reliability measurement." (Meister and Rabideau, 1965: 192)

In the analysis of an educational broadcasting project the investigation of the reliability cycle should include the identification of monitoring centers relative to all critical functions of the system's performance, the possible facts inhibiting the sensitivity of the monitoring centers, and the continuity and regularity of the monitoring operation.

The Feedback Process

The monitoring process is often included in discussions of the "feedback process." In the present discussion, the feedback process is confined to feedback channels connecting monitoring centers with decision centers.

Feedback Requirements

The rationale of the feedback process is the necessity of effective control over the system-strategy:

> For effective control . . . it is important to design the system to include all important elements and the vital communication channels so that reliable information is "fed back" to appropriate action centers. This conclusion . . . means that the design must incorporate many elements and feedback loops even though they cross departmental lines and the boundary of the organization. (Carzo and Yanouzas, 1967: 385)

Just as all critical functions in the system-strategy require monitoring, so too all monitoring centers require adequate feedback channels connecting them to decision centers. Moreover, feedback channels, as much as monitoring centers, must be free of inhibiting factors such as noise, bias, and buffer mechanisms; and in feedback channels the reduction of these factors is accomplished, as in monitoring, by the duplication of feedback channels.

Kinds of Feedback

Communications theory distinguishes two kinds of feedback:

> . . . when a variation caused by disturbances is carried through the feedback loop and is perpetuated or amplified, positive feedback is said to exist. When the disturbance carried through the feedback loop is counteracted so that the variation from steady state is diminished or damped, negative feedback exists. (Carzo and Yanouzas, 1967: 369)

An instance of positive feedback would be the case where monitoring centers, by using criteria which only partially match the objectives, feed back a partial picture of system performance which decision centers subsequently employ to modify the total system, thereby increasing the deviation of performance from objectives. An instance of negative feedback would be the case where monitoring centers, using a complete set of

performance criteria, feed back an accurate picture of performance deviation from objectives which decision centers then employ to bring the system back into line with its objectives.

In the discussion of monitoring, it was stated that three fields of data affecting system performance required monitoring. Similarly, the decision centers of a system-strategy must have feedback channels connecting them to (1) the environment surrounding it; (2) the past performance both of the system and its environment; and (3) the system's components and their critical functions. (Cf. Buckley, 1967: 56)

Conclusion

Once monitoring centers in a system-strategy have been located, the analysis of feedback channels in a project will attempt to determine whether each monitoring center has a feedback channel returning to an appropriate decision center; whether the number of feedback channels is sufficient; whether feedback enters the system through some informal channel; whether feedback channels are relatively free of noice, bias, and buffer mechanisms; and whether the feedback channels suffer from variability in efficiency.

8. SYSTEM-STRATEGY MODIFICATION

The final operational category of analysis which completes the reliability cycle of the system-strategy, is the evaluation and modification of the system on the basis of monitored performance which has been fed back to decision centers. The requirement of this phase stems from the need of the system-strategy to maintain a productive set of relationships with the environment:

> . . . To direct itself meaningfully, the system must . . . be able to analyse the effects of its own responses on the environment and to regulate those responses accordingly. This implies the existence of well-developed and continuously functioning feedback mechanisms which in turn depend on the discrimination of relevant and irrelevant stimuli. (Meister and Rabideau, 1965: 27)

The Evaluation Process

The Evaluation Operation

Decision-centers evaluate information arriving through feedback channels from monitoring centers by comparing this performance information with the system's objectives. As Meister and Rabideau describe it:

> . . . The essence of the analysis should therefore be a comparison in terms of each system relationship between explicit criterion values . . . and actual achieved values for these parameters. (1965: 235)

It is in the evaluation process that the necessity is most crucially felt of having expressed the system-strategy's objectives as operationalized criteria and having provided monitoring centers with these explicit criteria. If objectives have not been operationalized and if monitoring centers do not have explicit cues to detect the performance of critical system functions, decision centers will have no way of knowing if the system-strategy is performing effectively or defectively.

Parameters of Evaluation

After comparing performance data with performance criteria, the personnel of the decision centers in a system-strategy should determine the probable causes and/or significance of any discrepancy. This can be done by considering:

1. If the discrepancy is caused by insufficient or insufficiently

clear knowledge of a task-function on the part of the operator;

2. if the discrepancy is caused by inadequate morale or motivation;

3. if the discrepancy is critical or inconsequential;

4. if the discrepancy is caused by a task-function correctly performed but out of proper sequence, performed too late or too early, etc. (Meister and Rabideau, 1965: 254-257)

In the analysis of broadcasting projects, clues to the presence of an evaluation process will be sought by analyzing the bases upon which the project planners modified the system-strategy in the course of a project.

The Modification Process

Modification is the action taken by decision centers to correct the performance of the system-strategy to meet objectives more exactly. This action is expressed in fresh decisions which are then transmitted to action centers for implementation.

Parameters of Modification

Since the system-strategy does not suffer equally from every discrepancy between actual and desired performance, project planners consider:

1. if the discrepancy truly warrants corrective action;

2. where in the system-strategy the discrepancy can most effectively be corrected;

3. if the corrective action should be instituted during the present or a future system cycle;

4. if the discrepancy is presently inconsequential but may lead to a trend which will significantly degrade system performance. (Lehmann, 1968: 148)

Conclusion

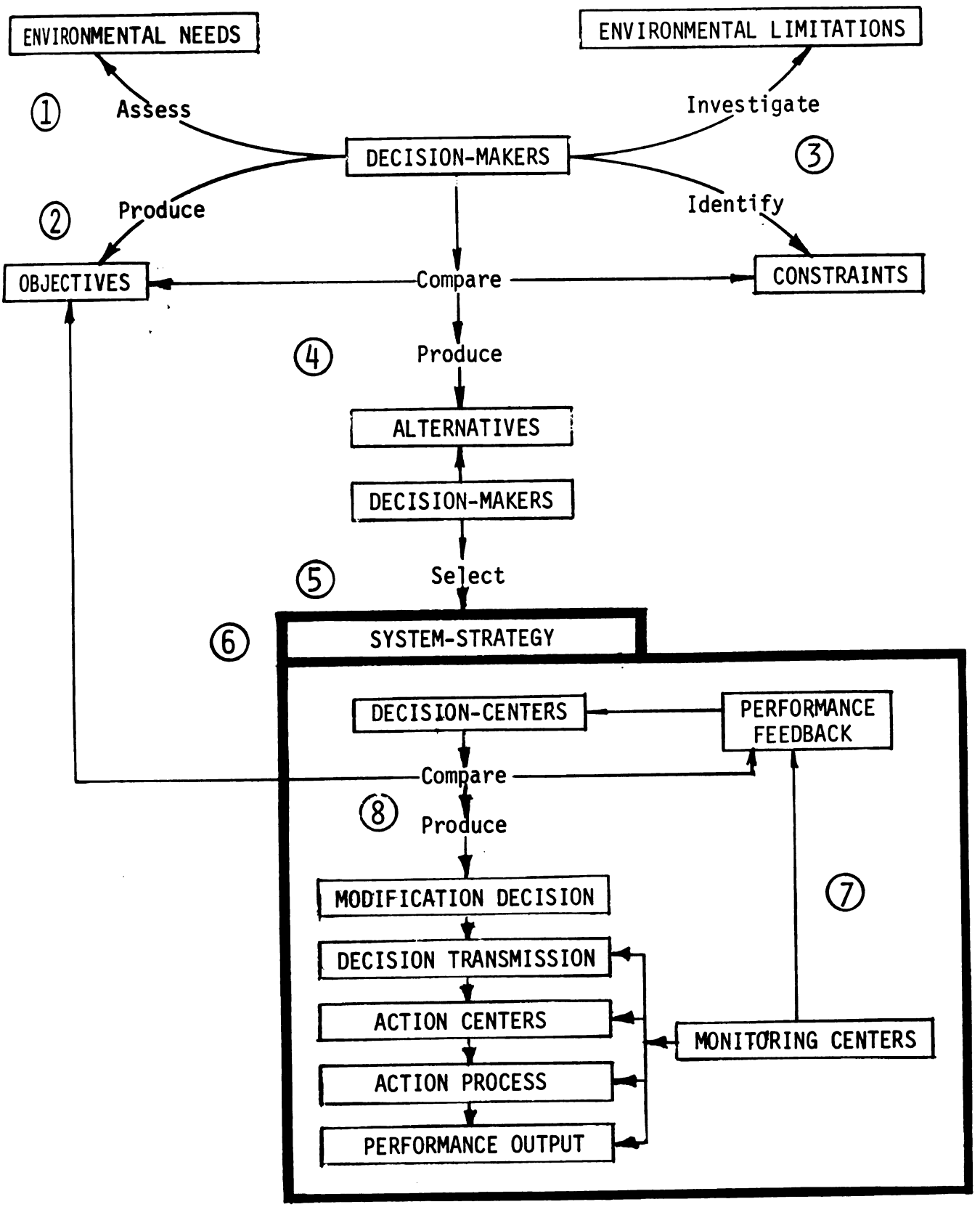
In the analysis of educational broadcasting projects the significance of any modification operation will have to be weighed. Modification of a system-strategy is evidence of a reliability cycle only if feedback channels can be discovered as the source of the modification, for modification of a system-strategy can take place in an informational vacuum. Feedback channels indicate an operative reliability cycle only if they are connected to monitoring centers using methods which discriminate between critical and noncritical system functions. Monitoring centers, in turn, indicate an effective reliability cycle only if the monitoring criteria are the operationalized expressions of the objectives of the system-strategy.

CONCLUSION

The discussion of the eight categories of a systematic analysis forms the basis of investigation of the three educational broadcasting projects. Given the secondary nature of the data of each project, it should be understood that the clarity of the evidence will vary for each operational category in the literature of a project. However, the lengthy discussion above will provide a general base for investigation.

A summary of the eight categories and their relationships is given in Figure 2.3.

Figure 2.3. The eight categories of analysis.



CHAPTER III

"RADIO SUTATENZA" OF COLOMBIA

INTRODUCTION

The history of "Radio Sutatenza" of Colombia can be divided into five phases, three initial minor ones and two subsequent major ones. The first phase was the initial effort to assess a specific part of the Colombian environment, the tentative formulation of an objective, and the hesitant exploration of alternatives by the initiator of the project, Padre Joaquin Salcedo. The second phase saw an increased specification of objectives and the expansion of a technical subsystem. The third phase continued the technical expansion and carried out a small pilot project which revealed the need to modify the system-strategy.

The fourth phase was the implementation of the modified system-strategy and its expansion throughout Colombia during the 1950s. The fifth phase can be considered to have begun approximately with the changes in the Colombian environment of the 1960s which to some extent demanded further modification of the system-strategy during the recent decade.

THE FIRST PHASE

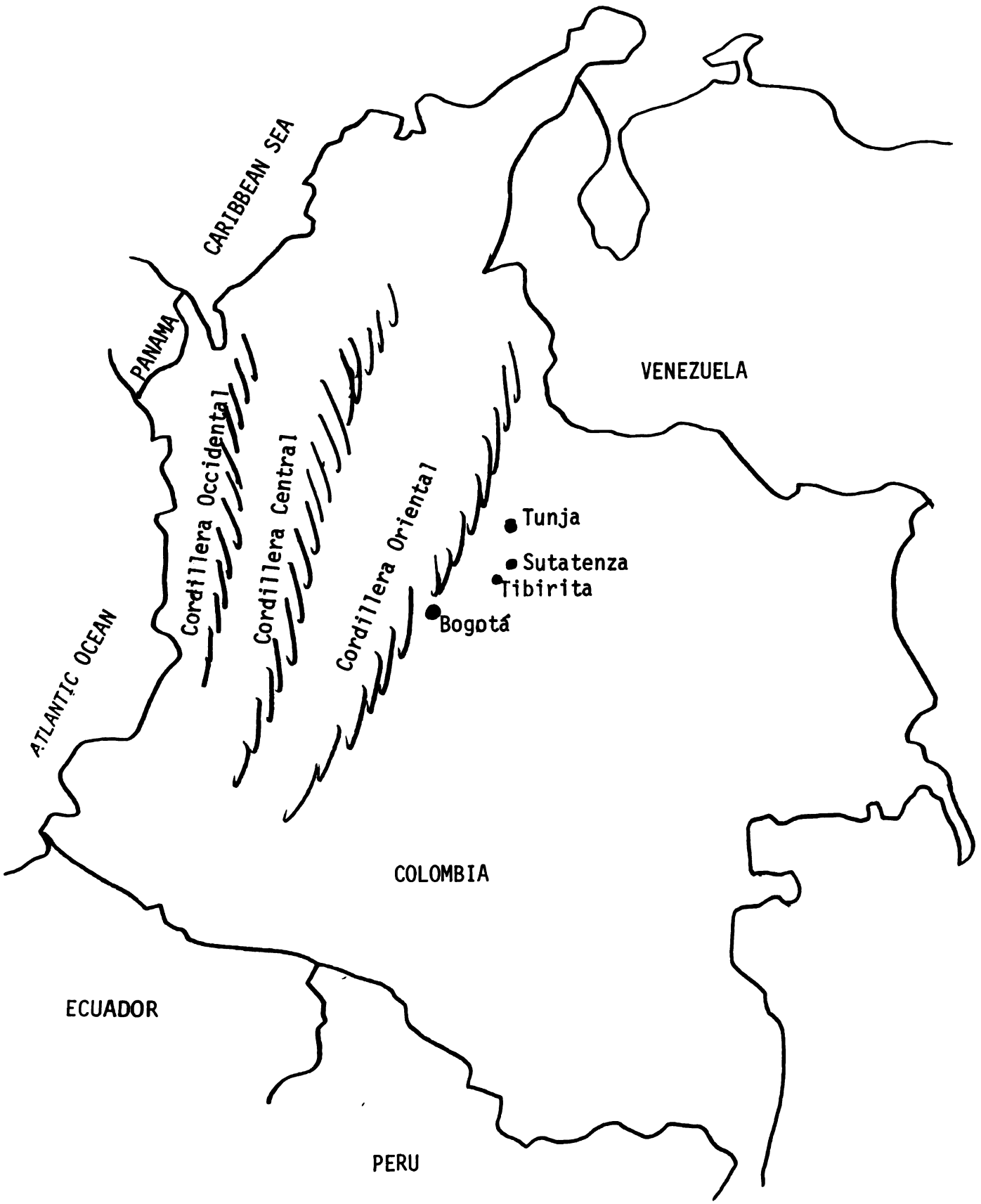
THE ENVIRONMENTAL NEED

"Radio Sutatenza" began as an experiment of Joaquin Salcedo, a Colombian priest assigned in 1947 to a rural parish based in the village of Sutatenza. This village lies at 1,500 metres in the valley of Tenza situated between the central and eastern Andes chains of western Colombia. (Cf. Figure 3.1) Sutatenza is in the administrative department of Boyaca, 130 kms. northeast of Bogotá. (Musto, 1971: 47)

The literature of this project customarily cites demographic and illiteracy statistics to describe the environment in which "Radio Sutatenza" was established in 1947. Williams states that Tenza valley had a population of 100,000 persons, 90% of which was rural, 80% of which was illiterate. (1950: 38) Nevins mentions that even after the sustained government drive against illiteracy dating from 1934 (in which young women were trained and offered a peso for each person they would teach to read and write), half the Colombian population was still illiterate in 1947. (1950: 9) Ozaeta states that only 5% of the school-age population went beyond primary school, 34% had one year of schooling or less, and only one-third of Colombian rural children even entered school. (1960: 557) Musto simply states that the inhabitants of the Tenza valley were for the most part illiterate, living in virtually complete isolation from the outside world, producing only enough for their own subsistence by rudimentary traditional methods. (1971: 47)

Whether these statistics reflect accurately the environment of the first phase of Radio Sutatenza is less questionable than the supportive

Figure 3.1. Colombia: Radio Sutatenza Origins.



fashion in which they are used in the literature. Such statistics usually precede a description of the project's operation with the implication that the project began in response to such a statistical picture. There is no evidence, however, that Salcedo began his experiment with such statistical evidence in mind. He seemed rather to have begun with a commonsense impression of the cultural deprivation of the parish and the communication need of his parishoners: only 165 lived in Sutatenza with the other 9,000 parishoners spread throughout the countryside, four to five hours of travel away. (Ozaeta, 1960: 558) Torres and Corredor confirm Salcedo's lack of formal method when they state:

> Desde los primeros diás [Salcedo] estudió y valoró la situación casi infrahumana de sus dispersos feligreses y con celo apostólico se entregó a la obra de redención del campesinado. (1961: 9)

OBJECTIVES AND ALTERNATIVES

The objectives of the first phase become clear from the alternatives which Salcedo explored. With no clearer objective, apparently, than the improvement of communication and culture within his parish, Salcedo first attempted 16 mm. film showings which led to no understanding and no interest on the part of the campesinos. As a second alternative, he began a community rural theatre which resulted in enthusiasm for building the theatre but no enthusiasm for theatre. (Ozaeta, 1960: 558) In these first explorations an embryonic reliability cycle is somewhat evident: Salcedo monitored his audience for interest and enthusiasm and when the feedback was apathy or disinterest, the strategy was modified.

The third alternative Salcedo tried was radio broadcasting. Salcedo had been one of the first radio amateurs in Colombia (Williams, 1950: 38) and had been using an 80w. shortwave transmitter. (Ozaeta, 1960: 558) From scattered references in the literature, Salcedo appears to have built a 100w. transmitter (Scully, 1954: 26) and some time in 1947 bought three battery receivers in Bogotá and installed them in a nearby village named Irzon. (Ozaeta, 1960: 558) Scully describes both the strategy and the immediate feedback:

> Neighbors gathered around the little radios to wonder at the phenomenon of the young priest speaking to three homes at once. Faces brightened when he addressed them by name, asking about their health, their children, crops, and small daily interests. Joaquin Salcedo chatted casually, but with a purpose. When he paid small compliments--to a man on his strong, healthy cows, to a woman on the neatness of her house--pride began to stir. When he inserted scraps of news, peasants began to turn up at his door, timidly asking to know more about events in far places. This reaction suggested a bigger ideal. . . . (1954: 26)

CONCLUSION

The first phase can be considered complete with the selection of radio broadcasting as the strategy. A systematic description of the first phase is:

1. Salcedo sensed a certain cultural deprivation and communication isolation in the environment of his parishoners.

2. The general objectives of cultural improvement and increased communication began to form.

3. The alternatives of cinema and theatre were explored.

4. Feedback was negative, causing Salcedo not to augment but to revise his strategy.

5. Radio broadcasting was tried as the third alternative.

6. Feedback was positive, encouraging Salcedo to refine and expand his strategy.

THE SECOND PHASE

ENVIRONMENTAL NEED

In the citation from Scully, the response of the villagers "timidly asking to know more about events in far places" is said to have "suggested a bigger ideal" to Salcedo. The "asking to know more about . . . far places" can be considered the more determinate expression of the environmental need which had been vaguely discerned only as a general cultural and communication deprivation during the first phase.

OBJECTIVES

Salcedo's response to a more determinate need was the formulation of more specific objectives. He apparently worked out a plan to broadcast small courses of reading and writing with Sutatenza's enthusiastic schoolmaster, Enrique Parra. (Nevins, 1950: 10)

A second objective was the expansion of the technical subsystem: a more powerful transmitter and more receiving sets.

A third objective was that of financing the system-strategy through the solicitation of private donations.

IMPLEMENTATION

Salcedo began to implement his strategy by describing over the air a radio station he would like to build at the parish rectory.

> On a certain day, he explained, he wanted every farmer to bring in a lamb, or a chicken, or an egg. He was astounded to find that, on the day set, he had a whole flock of lambs, eight

> hundred chickens, and a small mountain of eggs. By arrangement with friends, he transported these edibles to the Bogotá market, 85 miles away, secured enough money to buy a small sending set and a number of tiny receiving sets, and his idea was launched. (Considine, 1962: 61)

For the actual construction, "men appeared the very next day to volunteer their labor. A kiln to make bricks was built and a masonry crew organized." (Scully, 1954: 37)

Within a few weeks, a 300w. transmitter had been built and installed and the broadcasting range had increased to 37 miles. The number of receivers was increased to ten, and Salcedo began his first experiments in broadcasting reading and writing. Scully quotes Salcedo at this point:

> I didn't realize what a potent thing we had begun . . . until a group of men came with a complaint. The classes were held when they were tired from the day's work. Would I change to six in the morning so that their minds would be fresh? (1954: 26)

MONITORING AND FEEDBACK

The reliability cycle of the second phase of Radio Sutatenza is evident both from the fact that Salcedo's audience could present themselves and register their complaints and from the fact that Salcedo continued to receive local financial support. Contributions began to pour in, farmers mortgaged their cattle to help the project with loans, deeds to farms were offered as security for further loans, and there were outright donations of savings by the campesinos. (Nevins, 1950: 10)

Such voluntary financial support can be considered the effectiveness criterion used to monitor the performance of the system-strategy during the second phase, although in later phases the reliability system of Radio Sutatenza would take a more normal form.

THE THIRD PHASE

ENVIRONMENTAL NEED

As Salcedo's experiment increased its broadcasting range and reception, more of his fellow priests were drawn into the project. Such an expansion of the project signaled the need for more organization and planning, the clarification of objectives, the establishment of a viable strategy, and the provision of an improved technical sys-system.

OBJECTIVES AND IMPLEMENTATION

The objective of more organization and planning was met with a meeting of priests held to discuss the organization of Radio Sutatenza broadcasting and its reception in the villages. (Ozaeta, 1960: 558) This meeting was held sometime in late 1947 or early 1948, as nearly as this can be inferred from the literature.

The need for the clarification of objectives was met during this phase by the creation of a plan of action entitled "Escuelas Radiofónicas--Un Plan de Acción Cultural" published in 1948. (Musto, 1971: 48)

The need for establishing a viable strategy was met by inaugurating a pilot project to test the strategy of broadcasting classes in reading and writing. (Ozaeta, 1960: 558) The period of the pilot project probably corresponds to the eight months of experimenting mentioned by Williams. (1950: 38)

The need for providing an improved technical system was met by Salcedo's decision in 1948 to establish one hundred radio schools as an

initial base of operation. For the radio receivers, Salcedo journeyed to the United States where he approached the General Electric Company for one hundred XB 358 battery radio receivers adaptable to a fixed wavelength. (Williams, 1950: 38; Torres and Corredor, 1961: 13)

MONITORING AND FEEDBACK

It was probably during the pilot project experimentation in late 1947 or early 1948 that a variable appeared which was to suggest a basic modification in the system-strategy of Radio Sutatenza. The literature only indicates that:

> . . . it was noticed that a man who could just read and write was able to act as an intermediary between the radio teacher and the students without himself having to teach anything. The first local assistant to put the experiment into practice was an old woman named Conchita. (Ozaeta, 1960: 558)

The monitoring sources of this feedback were probably the parish priests interested in observing the project and who had possibly participated in the organizational meetings of the third phase. The conclusion from the feedback was that the mere broadcasting of lessons in reading and writing by a radio teacher produced poor results and that the system-strategy required modification.

MODIFICATION

The basic modification suggested by the pilot project was that some person positioned between the radio teacher and the student audience was needed to mediate the broadcast. This person was to be named the auxiliar inmediato and was destined to become an integral part of the system-strategy expanded in phases four and five.

CONCLUSION

By the end of the experimentation of phase three, Radio Sutatenza was prepared for expansion. Objectives had been established with the publication "Escuelas Radiofónicas--Un Plan de Acción Cultural"; a pilot strategy had undergone experimentation and modification; the project had found financial support at the local level from those benefiting from the project; and recognized opinion leaders, the parish priests, had begun to be drawn into the project. These opinion leaders not only provided a rudimentary reliability cycle of monitoring and feedback, but also put at the disposal of Radio Sutatenza the communication network of the Church with its diocesan and parish organization--a network along whose communication lines Radio Sutatenza would quickly expand in phase four.

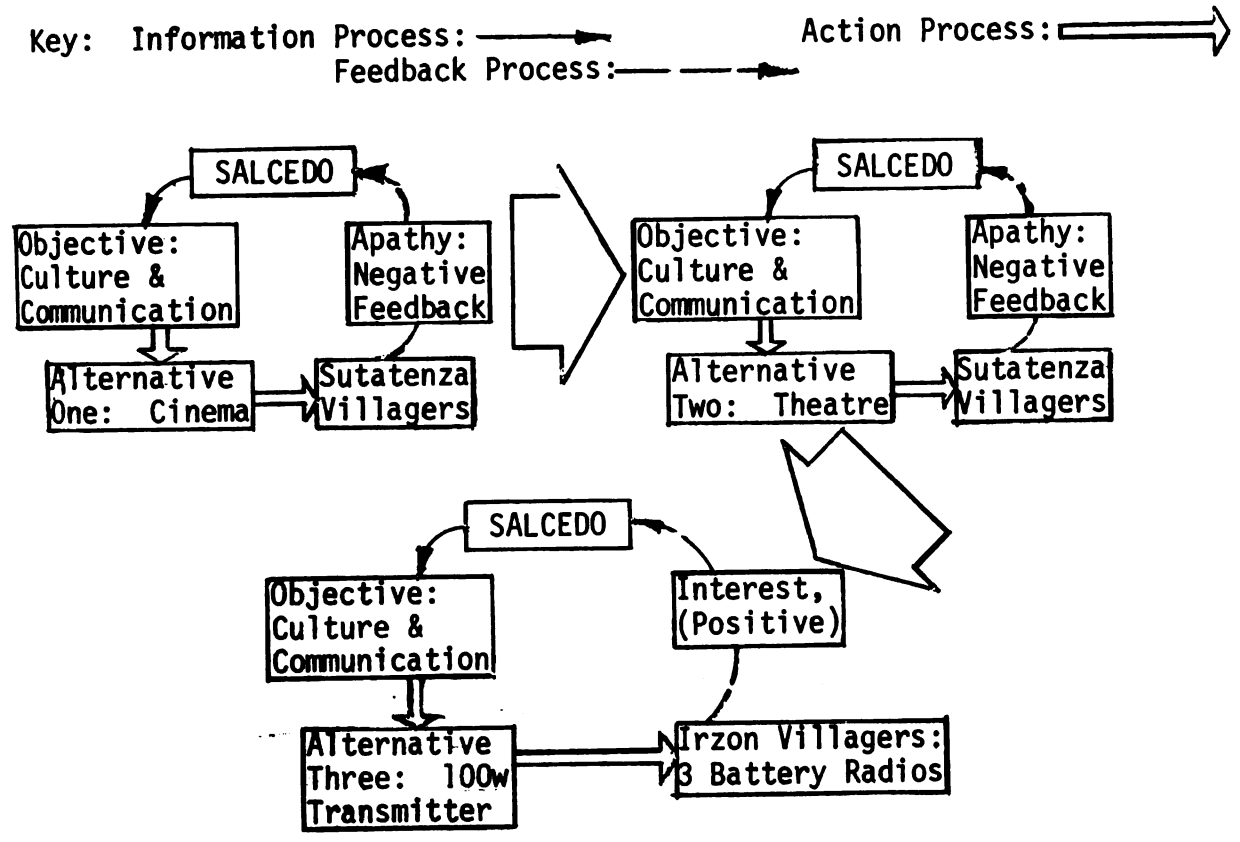
The three minor phases of the initial period of Radio Sutatenza are illustrated in Figures 3.2-3.

THE FOURTH PHASE

INTRODUCTION

The installation of three radio receivers in the village of Irzon in September, 1947 established the first three radio schools and the first phase of Radio Sutatenza. (Torres and Corredor, 1961: 12) Following the second and third phases of experimentation, the fourth phase of expansion began with the establishment of radio schools in the nearby village of Tibirita by its parish priest, P. Sabogal, on August 15, 1948. (Musto, 1971: 155) Sabogal, a friend of Salcedo's, was one of the

Figure 3.2. Phases One and Two of Radio Sutatenza.



Phase Two

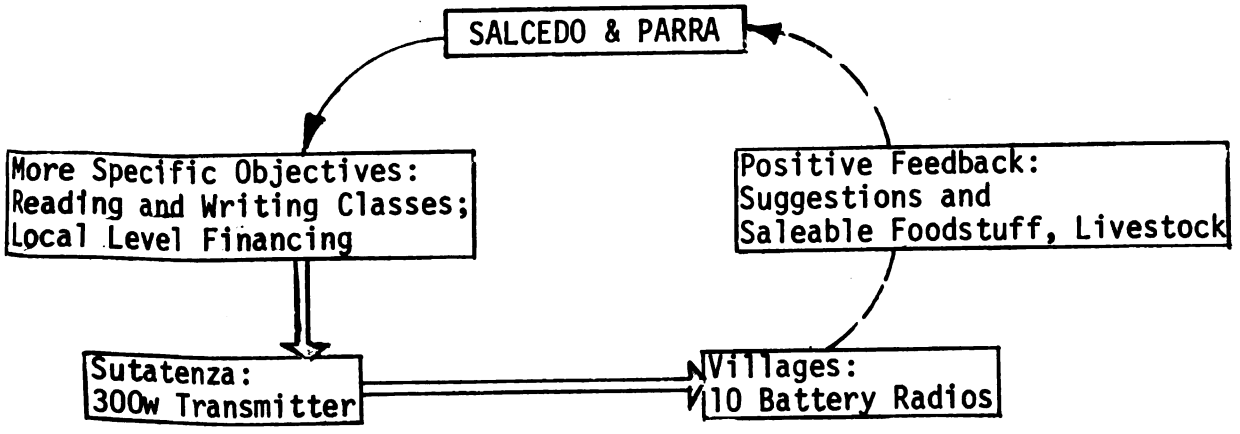
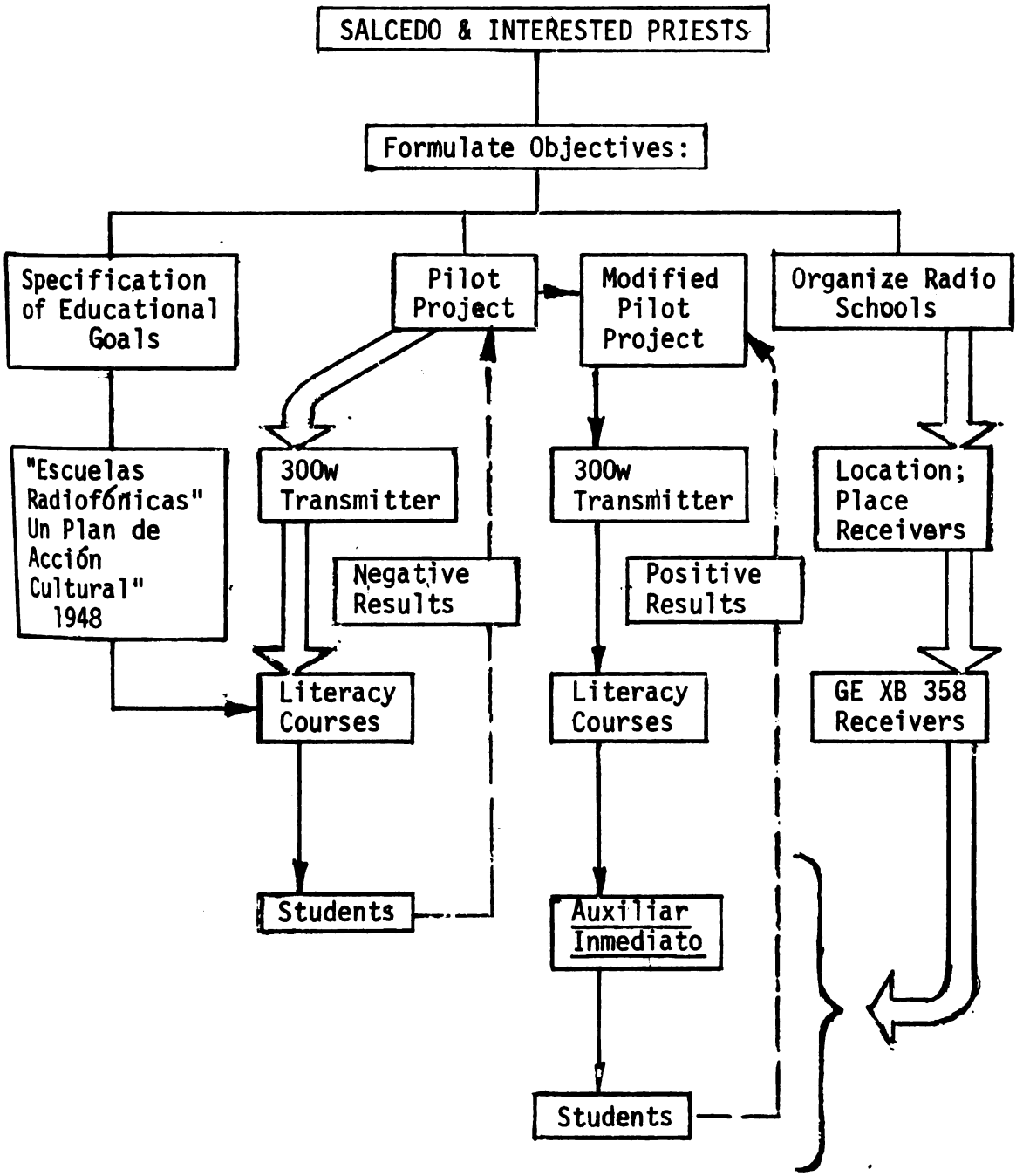


Figure 3.3. Phase Three.



pioneers of the radio schools and is considered by the villagers of Tibirita as the true founder of the movement. (Musto, 1971: 71,83)

The following year, Radio Sutatenza assumed the legal title Acción Cultural Popular and held the first meeting of its Junta Constitutiva. The first statutes of Acción Cultural Popular (ACPO) were approved on October 13, 1949, and on October 18, 1949 ACPO was granted juridical personality by the Ministry of Justice of Colombia. Two years later, on June 29, 1951, ACPO obtained ecclesiastical juridical status, was incorporated as an "obra de la Iglesia Catolica" under the Bishop of Tunja, and on April 11, 1953, was officially founded with the ratification of its statutes. (Musto, 1971: 48)

The fourth phase of Radio Sutatenza comprises the major expansion of the project during the 1950s. A fifth phase embracing the events of the 1960s has been distinguished in the interest of analysis for the following reasons:

1. The literature reporting Radio Sutatenza during the 1950s is less critical than that reporting the activities of the project during the 1960s.

2. The more critical literature reporting the 1960s suggests that the objectives developed to meet the needs of the environment during the 1950s were inadequate objectives for the Colombian environment of the 1960s. Hence it is important to distinguish the Colombian environment of the 1950s from that of the 1960s.

3. The literature covering the 1960s further suggests that while the objectives of expanding the project dominated the 1950s, the objectives of self-preservation of the organization became dominant during

the 1960s.

4. Finally, during the 1960s, ACPO showed increased interest in self-evaluation and an improved reliability cycle as contrasted with the 1950s.

1. THE ENVIRONMENTAL NEED

Introduction

The available secondary sources covering Radio Sutatenza do not provide a very detailed description of the Colombian environment as it was originally assessed by project planners. There is little evidence of a formal, comprehensive, and critical assessment identifying environmental needs. Instead, the identification of environmental needs to all appearances was carried on informally by Salcedo and his colleagues who presumably drew on their commonsense experience of living within the culture of the Colombian campesinado.

The initial three phases of Radio Sutatenza illustrate this. Salcedo's approach to the Colombian environment was not systematic but trial-and-error. His first two attempted alternatives were discarded because of negative feedback, and the third alternative suggested itself not from a critical assessment of the environment but from Salcedo's previous fascination with amateur radio broadcasting. Planning began informally when a group of priests met to pool their experience, decided to carry out a small pilot project, discovered a missing component, and introduced the auxiliar inmediato.

Phase four of the 1950s was essentially an arithmetic expansion of phase three, but there is little indication in the literature of this

period to suggest that Radio Sutatenza ever benefitted from a comprehensive and critical assessment of the Colombian environment as a whole.

The use of secondary sources to describe the Colombian environment, therefore, presents a methodological problem. Since Radio Sutatenza itself did not carry out a critical examination of the environment prior to planning, the secondary sources can at best reiterate a commonsense, uncritical and unsystematic description of the environment. Further, the sources available are generally far more interested in reporting the action process of the project and its stated objectives than in carrying out an independent investigation of the environment, its relation to the objectives, and their relationships to the action process.

When a secondary source is primarily concerned with describing the action process and its objectives, the actual status of the environment becomes secondary. There is then a tendency to assume that the project objectives are valid because the project is already an operational fact, and the description of the environment becomes reduced to those segments of the environment targeted by the project's objectives.

Under such a methodological bias, environmental needs are identified not by independent analysis but by using the objectives of the project as heuristic indicators. Thus a project may seem to be eminently justified because its objectives match certain needs in the environment. This, however, is the antithesis of systematic evaluation, for the critical question is not whether a given project with its objectives effectively meets some specific needs of an environment, but whether, given the totality of environmental needs, the project represents the

maximum use of available resources to meet a maximum number of the needs of the given environment.

Within the limitations of methodologically biased secondary sources, therefore, what follows is an account of the environmental needs claimed by these sources to be the environment of the late 1940s and 1950s in which Radio Sutatenza took root and expanded.

The Geographical Environment

The Andean geography of Colombia had the effect of dispersing the population and producing a widespread physical isolation of *campesinos* from each other. According to the census of 1951, 55.6% of the Colombian population lived in tiny hamlets or isolated dwellings. The parish of Sutatenza itself was by this standard 97.7% dispersed throughout an area of 150 sq. kilometres with an altitude differential of 2000 metres. What roads existed were generally impassable. (Torres and Corredor, 1961: 9,11)

The Economic Environment

When Salcedo arrived in Sutatenza in 1947, the village had no market. (Ozaeta, 1960: 558) The majority of *campesinos* were day laborers living on *arriendos* (rented lands) in dependence upon the *patrón*. They cultivated land suffering the effects of erosion by rudimentary and traditional methods. (Torres and Corredor, 1961: 9,11) Only 2% of the Colombian countryside was under intense cultivation, the remainder producing one crop annually, barely enough for the *campesino's* subsistence. (Musto, 1971: 47,51)

The Socio-cultural Environment

The geographical environment affected the economic, and both affected the socio-cultural milieu. Geographical isolation and economic dependence fostered traditionalism in the campesino's cultural thinking and provincialism in his social interaction. Both the traditionalism and the provincialism inhibited any movement linking communities for social, economic, or political development. (Torres and Corredor, 1961: 9)

The subsistence economy of the campesino kept him tied to land he would never own, socially dependent in a paternalistic social structure, and rooted in traditionalism and provincialism as a way of survival. (Musto, 1971: 51) Excluded from the possibility of socio-cultural development, the campesino was known to turn to chicha (produced from fermented maize) as a way of relieving a monotonous existence. (Torres and Corredor, 1961: 11)

The Educational Environment

Williams cites the illiteracy rate in the Tenza valley at the beginning of this period as 80%. (1950: 38) Ozaeta states that the school curriculum provided some literacy for a few (two-thirds of rural children never entered primary school) but no instruction in agriculture, husbandry, health, hygiene, nutrition, domestic economy, etc. (1960: 557-58)

Summary of Environmental Needs: Secondary Sources

1. From the physical isolation imposed on the population by sheer geography, the Colombian countryside had a clear need for fundamental

development in the structure of communication. This physical isolation affected the cultural environment by limiting the cultural options available to the population. Isolation further prevented interaction between groups which resulted in a cultural traditionalism and a social provincialism inhibiting both economic and political development.

Thus, for cultural, social, and economic reasons, rural Colombia needed a fundamental development in communications.

2. The Colombian economy's largest sector was operating at a subsistence level for numerous reasons: soil erosion, rudimentary methods of cultivation, single-cropping, lack of roads and transportation. Basic economic needs, therefore, were an increase in transportation and communications as well as technological innovations.

3. The variety of input to the cultural environment was restricted by the lack of communications throughout the countryside. This cultural isolation created a xenophobia toward external cultural influences and nourished a sense of cultural inferiority. Both the xenophobia and the sense of inferiority can be mutually reinforcing. To eradicate the sense of inferiority and to allay any xenophobia, the campesino would need a new sense of his own cultural identity and dignity which could lead to the increased social interaction required for development.

4. The Colombian social environment, supported by the economic environment, placed the campesino in social dependence upon the landowner. Both the economic and social dependence of the campesino deprived him of the independence needed for his own development in these two spheres of his life.

5. The basic educational need was to make the campesino literate enough to gain access to wider cultural and social milieus and skilled enough to solve a greater proportion of his own economic and health problems.

Summary of Environmental Needs: ACPO Sources

ACPO's view of the environmental needs during the fourth phase appears indirectly in an extended introduction which ACPO felt constrained to add to Musto's critical evaluation of Radio Sutatenza carried out by the Deutsches Institut für Entwicklungspolitik of Berlin. Musto's study criticized ACPO for failing to modify its objectives to meet the new environmental needs of the 1960s (a criticism to be discussed in the fifth phase). In the introduction to Musto's study, ACPO describes the needs of the fourth phase to demonstrate that these remained the needs of the fifth phase also. These specific needs are then enumerated and subsumed into some fundamental needs which ACPO considered to be basic environmental needs.

Specific Environmental Needs

6. Rural Colombia suffered from malnutrition.

7. The countryside lacked basic health services.

8. The campesino was isolated and alienated from the rest of Colombia.

9. The campesino had no sense of his own dignity nor that of his community.

10. He had insufficient opportunities for recreation.

11. The campesino's labor was unproductive because of the lack of technology.

12. The campesino's family structure was unstable.

13. The countryside lacked basic economic organizations.

14. It also lacked basic social and community organizations.

All these specific needs, ACPO contended:

> . . . subsisten en la actualidad, en mayores proporciones que hace 20 años, cuando se inició el trabajo de las escuelas radiofónicas. . . . (Musto, 1971: 15)

Basic Environmental Needs

ACPO's enumeration of the fundamental needs underlying all the campesino's specific needs are as follows:

15. The major need and the basic problem of the development of the campesinado did not consist in the lack of material things but rather in:

> . . . la incapacidad de las personas y de las grandes masas para superar sus condiciones de atraso y para vencer los obstáculos surgidos de su propia incapacidad. Estos obstáculos son generalmente de carácter cultural, entendido este término en lo que hace relación al mundo de los valores tradicionales, que implican un alto grado de conformismo, provindencialismo y dependencia. (Musto, 1971: 15)

16. The corollary of this basic incapacity to overcome one's own dependence is that there was a basic need to change attitudes and thought patterns which constitute the conformism, paternalism, and traditionalism. (Musto, 1971: 15)

17. Therefore, the campesino needed to acquire a consciousness of his own dignity and a confidence in himself. (Musto, 1971: 15)

18. This missing sense of dignity rested on his incapacity to "decipher" the world in which he lived. (Musto, 1971: 16)

19. The missing confidence derived in part from the inability to utilize the material world for his own and his community's benefit. (Musto, 1971: 16)

20. The inability to deal with the world with confidence in turn rested in part on the campesino's inability to weigh alternatives and decide on appropriate action, to calculate the future and provide for it. (Musto, 1971: 16)

21. Finally, the inability to provide effectively for the future was related to the campesino's lack of technical skill in using the scarce resources available. (Musto, 1971: 16)

Conclusion

The above two summaries of fourth phase environmental needs represent what there is of an environmental assessment by Acción Cultural Popular and some of its observers available in readily accessible literature. The methodological bias (cf. p. 81) involved in such assessments will reappear in the following section concerned with objectives when it will be evident that the project objectives correspond rather exactly with environmental needs--quite possibly because the objectives had been used in an apriori fashion to identify those needs.

2. OBJECTIVES

Introduction

The objectives which appear in the literature during the fourth phase are general, descriptive, unspecific, and unoperationalized. The methodological difficulty in using these sources to describe ACPO's objectives is that (1) ACPO's original sources may have been more

specific than these sources report them, and (2) ACPO may have developed and expanded its objectives more than these sources indicate. The fifth phase will carry evidence of this increased specification and expansion of objectives, but the fourth phase analysis will be able to employ only those statements of objectives contained in fourth phase sources.

Two analyses will be carried out: the correlation of objectives with environmental needs, and the degree of operationalization of objectives.

The General Objective: Evangelical

Acción Cultural Popular was officially established as an "obra diocesana" of the Bishop of Tunja in 1953 (Musto, 1971: 48) and at the First Latin American Congress of Radiophonic Schools held in Bogotá in 1963, the Colombian representatives at that congress headed the group that "considered the clergy the principal agent of the movement." (Nitsch, 1964: 340)

This close relationship of the Church to the radio school movement in Colombia suggests that the most general objective of Radio Sutatenza was evangelical. Corroboration of this comes from two sources:

> The Sutatenza radiophonic schools are primarily designed to assist rural priests in their evangelical mission. Ten per cent of radio time is religious instruction. (Amaya, 1959: 405)

Nevins cites Salcedo himself regarding this general objective:

> "Christ told us to go to all men. He commanded that we be the light of the world. That is all we are trying to do here in Colombia, to project the social and religious teachings of the Church with the speed of light." (1950: 11)

This evangelical objective is usually left implicit or unstated. Moreover the precise relationship of concepts such as "evangelical

mission" and "the social and religious teachings of the Church" to the objectives such as they are stated in the literature, is left unspecified. Systematically, this most general, evangelical objective should have been both operationalized and precisely related to all officially stated objectives.

Specific Objectives

In the 1960s (phase five) ACPO would come to name its set of objectives "Educación Fundamental Integral." The term educación would come to connote the process of one's personal development within a social community. The term fundamental would refer to a base of potential which would be developed within the person and the social community, and the term integral would come to denote the range of skills and insights of this base as well as the complete range of social activities which would constitute the person's development.

The statements of objectives occurring in the fourth phase contain, in embryonic form, the same three components of ACPO's objectives: a process of behavioral change, a fundamental base of potential for development, and an indication of the range to be covered by the base and the development. These three components will be identified in the following statements of fourth phase objectives.

A First Definition of Fourth Phase Objectives

The first definition is found in one of the UNESCO reports compiled by Williams:

> We [of Radio Sutatenza] are concerned . . . with a cultural campaign. The doors by which culture must reach the peasant masses are shut primarily by illiteracy. For this reason, the

campaign against illiteracy will be the first goal of the school-by-radio.

We do not aim at carrying out a mere campaign of instruction; we want to give the peasant population the basic training which will really serve to raise its cultural level in every way. We want the means we are going to put at their disposal to act as a moral, intellectual, social and economic defence. We also want to enable the peasant population to get a healthy spiritual training which is at the same time educative.

For these reasons, the plan of our "schools-by-radio" includes religious education and catechism, hygiene, agricultural teaching, lectures on rural housing, popular art, etc. (1950: 42-3)

To clarify the components in the definition, it can be outlined as follows: Radio Sutatenza intended:

A. to carry out a cultural campaign;	(education)
B. against illiteracy as a first goal;	(fundamental)
C. to give the peasant population;	(education)
D. a basic training;	(fundamental)
E. which will really serve to raise its cultural level;	(education)
F. in every way;	(integral)
G. to put at their disposal;	(education)
H. a means;	(fundamental)
I. to act as a moral, intellectual, social and economic defence;	(integral)
J. also to give the peasant;	(education)
K. a healthy spiritual training;	(integral)
L. with subobjectives of religious education, hygiene, agricultural teaching, rural housing, popular art, etc.	(integral)

Identifying the components of the statement of objectives as fundamental, integral, or educational does no more than classify the components according to themes which would become more definite in the fifth phase. Outlining the components, however, serves to clarify the shortcomings of the statement.

An initial shortcoming occurs in the statements identified as "education." To carry out a campaign, to give the peasant training, to raise the cultural level, etc., are all phrases too vague and unoperationalized to provide the personnel of the project with role and task definitions adequate enough to function in the project.

A second shortcoming occurs in the "fundamental" components: the basic training with literacy as a primary component is simply predicated as capable of producing the development called "integral" without any logical, much less experimental, guarantee that the basic training will be so capable.

A third shortcoming is seen in the "integral" components: the various areas which sum up the integral or complete "fundamental education" (moral, intellectual, social, economic, spiritual) are stated in terms quite inadequate to specify the behaviors to be monitored and fed back to decision centers by reliability cycle personnel.

Although ACPO itself may have overcome these shortcomings in its actual operation during the fourth phase, there is no indication in this report (emanating, apparently, from ACPO) that ACPO was discontented with this type of statement of objectives.

A Second Definition of Fourth Phase Objectives

A second definition occurs in Ozaeta:

> These [radiophonic] schools were not planned to compete with the state primary schools, but simply to help adult rural workers to improve their progress and integration into the [sic] national life. . . . The main objects were, and continue to be, to give the rural worker greater opportunities to widen his personality and to place him in a position where he can by his own efforts improve his standard of living. (1960: 557)

. . . . . .

> The directors of Acción Cultural Popular . . . maintain that the basic literacy of the adult rural worker should consist of an integral minimum education, both human and Christian, which will promote conditions where progress can be achieved naturally. The acquisition of the skills of reading and writing is one of the ways in which these objectives can be achieved, but it is not the principal one. (1960: 561)

Recasting the statement in outline form, Radio Sutatenza intended:

A. to help rural adult workers improve;	(education)
B. their progress and integration into national life;	(integral)
C. to give the rural worker;	(education)
D. greater opportunities;	(fundamental)
E. to widen his personality;	(integral)
F. and to place him in a position;	(education)
G. where he can by his own efforts improve;	(fundamental)
H. his standard of living;	(integral)
I. to provide an integral	(integral)
J. minimum	(fundamental)
K. education	(education)
L. both human and Christian;	(integral)
M. which will promote conditions;	(fundamental)

N. whereby progress can be achieved naturally; (integral)

O. with two of the subobjectives being reading and writing. (integral)

Essentially the same commentary on the first definition can be directed at this second definition coming at the end of the fourth phase. The educational components lack the operationalization needed to integrate personnel of the project in functional interrelationships; the fundamental components are simply predicted to produce the basic set of skills and insights which constitute the base of development; and the integral components lack the behavioral specification necessary to implement the monitoring and feedback operations of the reliability cycle.

Both statements of objectives terminate with references to specific broadcasting topics which function as subobjectives. In systematic planning it is insufficient to designate subobjectives and assume that they are in fact effective subobjectives of the general objectives. In statements of objectives, the link between objectives and subobjectives can be hypothetical at most. Only the experimental verification of the reliability cycle can identify true and effective subobjectives, that is, subobjectives which implement the objectives effectively.

Conclusion

The above statements of objectives are the most complete of English sources covering Radio Sutatenza during phase four. They were found to be deficient because:

1. the degree of operationalization of the objectives was insufficient to provide task definitions for personnel implementing the action process;

2. the degree of operationalization was also insufficient to designate behavior for monitoring in the reliability cycle;

3. the links between the evangelical and the specific objectives and between the objectives and the subobjectives were left unspecific and unoperationalized. This deficiency necessarily weakens any connection between what is going on in Radio Sutatenza, what is being tested in Radio Sutatenza, and the objectives of Radio Sutatenza. The longer this weakness persists, the less will project planners be able to determine if the project's operation is producing any effects related to its objectives.

Correlation Between Objectives and Needs

The necessity of adequate operationalization applies both to environmental needs and project objectives. The more thorough the assessment of environmental needs the more easily will project planners find the task of specifying objectives. Wherever the assessment of environmental needs is deficient, either for being incomplete or for lack of operationalization, the correlation of these needs with objectives is necessarily subject to the caprice of the correlator's interpretation. The correlation is doubly precarious if the project's objectives are (as were Radio Sutatenza's fourth phase objectives as reported) vague and unoperationalized.

The correlation of needs and objectives in Table 3.1, therefore, is subjective and inferential. The lack of specification in both the statements of needs and objectives appears from the fact that the lists of needs and objectives had to be left more or less in the language in

Table 3.1. Correlation of Objectives with Environmental Needs

---

Objectives:

1. To project the social and religious teachings of the Church.
2. To carry out a cultural campaign.
3. To give the peasant a basic training.
4. To raise the peasant's cultural level in every way.
5. To put at the peasant's disposal a moral, intellectual, social and economic defence.
6. To give the peasant a healthy spiritual training.
7. To help rural workers improve their progress.
8. To help the workers' integration into national life.
9. To give the worker greater opportunities to widen his personality.
10. To place the worker in a position where he can improve by his own efforts.
11. To place the worker in a position where he can raise his standard of living.
12. To provide an integral, minimum education both human and Christian.
13. To teach reading, writing, religious education, hygiene, agriculture, rural housing, popular art, etc., as subobjectives.

Environmental Needs: (#) = Correlative Objectives

1. To overcome geographical isolation. (1,2,4,8,13)
2. To increase cultural inputs. (2,4,7,9,12,13)
3. To increase social interaction. (1,5,8,9,10)
4. To develop transportation.
5. To disseminate technological innovations. (11,13)
6. To eradicate the sense of inferiority. (4,5,6,7,8,9,10,11,12)
7. To allay xenophobic provincialism. (5,8,12,13)
8. To gain social and economic independence of landowners. (3,5,10,11)
9. To gain access to wider social and cultural milieus. (2,3,4,9,12,13)
10. To gain skills to solve one's own economic and health problems. (3,5,7,10,11)
11. To overcome malnutrition. (3,7,10,11,13)
12. To have basic health services.
13. To overcome isolation and alienation. (1,2,4,5,8,9,11,12,13)
14. To gain a sense of individual and communal dignity. (1,5,6,8,9,10,12)
15. To have opportunities for recreation. (4,9,13)
16. To increase productivity through technology. (3,5,10,11,12,13)
17. To stabilize family structure. (1,5,9,10,11,13)
18. To set up basic economic organizations.
19. To set up basic health and community organizations.
20. To equip the individual to overcome underdevelopment. (3,5,7,9,10,11)
21. To change thought patterns and attitudes of conformism, paternalism, and traditionalism. (2,4,6,9,12,13)
22. To give the worker a consciousness of his own dignity and confidence in himself. (3,5,6,7,8,9,10,11)
23. To "decipher" the world. (1,3,5,9,12,13)
24. To enable the worker to utilize the material world. (3,5,7,10,11,12,13)
25. To weigh, judge alternatives, calculate the future. (3,12,13)
26. To give the worker technical skills. (3,10,11,12,13)

which they were found in the literature. Had the needs and objectives been expressed more exactly, the lists could have been condensed and the readily apparent quasi-duplications would have been eliminated. The lack of operationalization in both the statements of needs and objectives appears from the fact that nearly every statement of need can be correlated with a plurality of statements of objectives, a testimony to the lack of precision in the expression of objectives.

Thus the numerous limitations on such a correlation of needs with objectives show how a lack of operationalization can limit anyone's understanding (whether a researcher, a project planner, or the monitoring personnel of Radio Sutatenza) of the effectiveness of any project in its environment.

3. CONSTRAINTS

Formally, constraints are those limiting characteristics of scarce resources within which alternative strategies are formulated and experimented with. The first three phases of Radio Sutatenza were essentially the selection of an alternative within environmental constraints, the fourth phase being an arithmetical expansion of the selected alternative.

The expansion of a system-strategy, however, is an operation of the system and takes place within a certain set of constraints. The constraints within which Radio Sutatenza expanded during the fourth phase appear to have come from two sources of restriction: funding and personnel.

A First Constraint: Private Funding

The expansion of Radio Sutatenza during its fourth phase can be considered to be limited by private funding. It is possible that the necessity of ACPO's being largely excluded from public government financial support derived from its official status as an obra diocesana of the diocese of Tunja and its legal status in Colombia as a private organization. No doubt this status brought certain advantages in the way of fiscal exemptions, but insofar as such a status excluded public funding, it constituted a constraint upon the expansion of phase four.

The Colombian government made some limited contributions. In the early 1950s, the Ministry of National Education provided a curriculum specialist for Radio Sutatenza's literacy programs and some of the exercise books, maps, textbooks, etc., to be used in the broadcast courses. (Williams, 1950: 39) The Ministry of Commerce granted free import licenses and waived customs duties on technical equipment. (Williams, 1950: 41) The Ministry of Health offered cooperation in the health programs. (Nevins, 1950: 10)

Official private contributions came from UNESCO which provided experts to develop a set of textbooks for ACPO which began to appear in 1955 (Ozaeta, 1960: 558), and there is evidence of financial assistance from Su Santidad in Rome for radio receivers and from Spellman, the archbishop of New York, for the construction of ACPO's semana de estudios in Sutatenza. (Torres and Corredor, 1961: 13-4)

Further private funding would come in the fifth phase, but a significant amount of ACPO's funding during the fourth phase came from local level loans and donations. (Nevins, 1950: 10)

Although private funding provides a certain freedom from restrictions governing government-funded organization, in the case of Radio Sutatenza's expansion during the 1950s, such funding placed a limitation on expansion since it subjected planning to the fiscal uncertainties of voluntary contributions.

A Second Constraint: Clerical Personnel

The principal decision centers of ACPO remained a clerical operation throughout the fourth phase. The advantage this factor afforded the expansion of Radio Sutatenza during the fourth phase will be discussed in the implementation of the system-strategy. At the same time, the preponderance of clerical personnel in the project may have constituted a constraint upon its expansion as well as upon its gaining the cooperation and potential funding from non-private sources.

Musto's study suggests at various junctures that the close ties of Radio Sutatenza with the Church and clerical personnel had a constraining influence both on ACPO's organizational efficiency and its capacity to expand and co-ordinate with other organizations. Because Musto's study is more germane to the fifth phase, the constraints he mentions which are applicable to the fourth phase will be only summarized here.

1. In those areas of Colombia where the Church had a diminished socio-cultural influence, ACPO's expansion was constrained by its connection with the Church. (Musto, 1971: 77)

2. ACPO's organizational centralization inhibited its own expansion which would require a certain degree of regional autonomy within ACPO. (1971: 77)

3. ACPO's centralization was due largely to Salcedo's personal influence. (1971: 77)

4. Salcedo's influence in turn was constrained by ACPO's connection with the Church hierarchy. (1971: 72)

5. ACPO's organizational efficiency (which bears on its ability to expand effectively) was constrained by Salcedo's dominant personality with the result that ACPO was able to retain only inferior managerial personnel. (1971: 73)

6. ACPO's centralization was related to its desire for independence of other organizations and this independence constrained its coordination with other organizations. (1971: 142)

In its extended prologue and glosses appended to the text of Musto's study, ACPO contests or qualifies each of the statements given above. The critical evaluation of each of these suggested constraints will be postponed until the fifth phase. The present point is not an effort to decide to what extent the factors mentioned by Musto actually prevented ACPO's expansion, coordination, or efficiency during the fourth phase, but rather that these factors were simply constraints in the fundamental sense that they imposed a certain character upon ACPO's actual expansion during its fourth phase.

4. ALTERNATIVES

At the end of the third phase, Radio Sutatenza's system-strategy of radio broadcasting mediated by the auxiliar inmediato had been selected as the alternative to be implemented. Although phase four was an arithmetical expansion of this system-strategy, the 1950s also saw

ACPO expand this strategy by adding supplementary subsystems. From the viewpoint of a systematic analysis, each addition of a subsystem to a system creates in some degree a new general system functioning in a new way. For this reason, ACPO's expansion of its system-strategy by the addition of various subsystems during the fourth phase will be considered ACPO's continued experimentation with alternatives.

The basic system-strategy can be considered to be the radio broadcasts, the radio schools organized to receive the transmissions, and the complementary printed materials and booklets used in the schools. The subsystems added to the basic strategy during the expansion of the 1950s were the weekly newspaper "El Campesino", the extension services in agriculture and animal husbandry, and the Institutos Campesinos where local level personnel of ACPO received their training.

Institutos Campesinos

At the first General Assembly of ACPO in 1953 it was decided to establish at Sutatenza leadership training schools for both young men and women. (Ozaeta, 1960: 562) The objectives of these Institutos Campesinos were:

1. to discover young men and women known in their villages for their humanitarian character, leadership, and their desire to better their community;

2. to have their parish priest select them for training at Sutatenza at ACPO expense;

3. to train them at the Institutos for four months in areas such as hygiene, health, agriculture, etc.;

4. and to have them return to their villages to establish radio schools and organize rural development. (Ozaeta, 1960: 562)

The Instituto for men was established in 1954, that for women in 1956. (Torres and Corredor, 1961: 13-14)

These trainees are called dirigentes campesinos (Musto, 1971: 103) and upon returning to their villages functioned as assistants to the parish priest in overseeing the local ACPO operation. (Ozaeta, 1960: 561,563)

With the creation of the position of auxiliar inmediato as the interpersonal communication complement to the mass communication radio transmission, ACPO established its basic system-strategy. With the creation of the position of the dirigentes campesinos to organize ACPO activities on the local level, ACPO established the interpersonal component needed to complement its mass organizational structure. The addition of this organizational subsystem to ACPO's basic system gave ACPO an organizational identity at the local level independent, in some slight degree, of the Church's organization. The subsystem of the Institutos Campesinos was integral to the expansion of ACPO in the fourth phase.

The Newsweekly El Campesino

In 1958, ACPO began a weekly newspaper for distribution to rural workers. El Campesino was ACPO's response to Venezuelan communists distributing Cuban-printed literature bearing a bogus ACPO masthead. (Berry, 1961: 112)

The newspaper contains articles on agriculture, animal husbandry, farming editorials, letters to the editor, and a two-page color

centerfold which can be removed and used as a picture inside one's home. (Ozaeta, 1960: 564)

Structurally, El Campesino complements the peasant's initial education received in the radio schools by being printed in large letters, and using simple drawings, photographs, and a vocabulary matching the level of newly literate rural workers. (Ozaeta, 1960: 564) In this way ACPO used a newspaper both to combat recidivism in the newly literate and to complement the broadcast medium with print.

Extension Services in Agriculture and Husbandry

A third complementary subsystem established by ACPO during the fourth phase was a combination of radio broadcasting, print media, and interpersonal contact in order to provide rural workers with practical training in improved agriculture and husbandry practices.

Daily broadcasts of fifteen minutes covering agriculture, husbandry, or home improvement theory were prepared by specialists in ACPO, each broadcast including answers to questions sent to ACPO by campesinos.

Complementing the broadcasts was a series of booklets illustrating and reinforcing the information of the topics covered in the broadcasts.

Completing the extension services was a field team of experts who would hold five-day meetings in various municipalities to demonstrate techniques and methods which had been the subjects of the broadcasts and the illustrated booklets. (Ozaeta, 1960: 563)

Conclusion

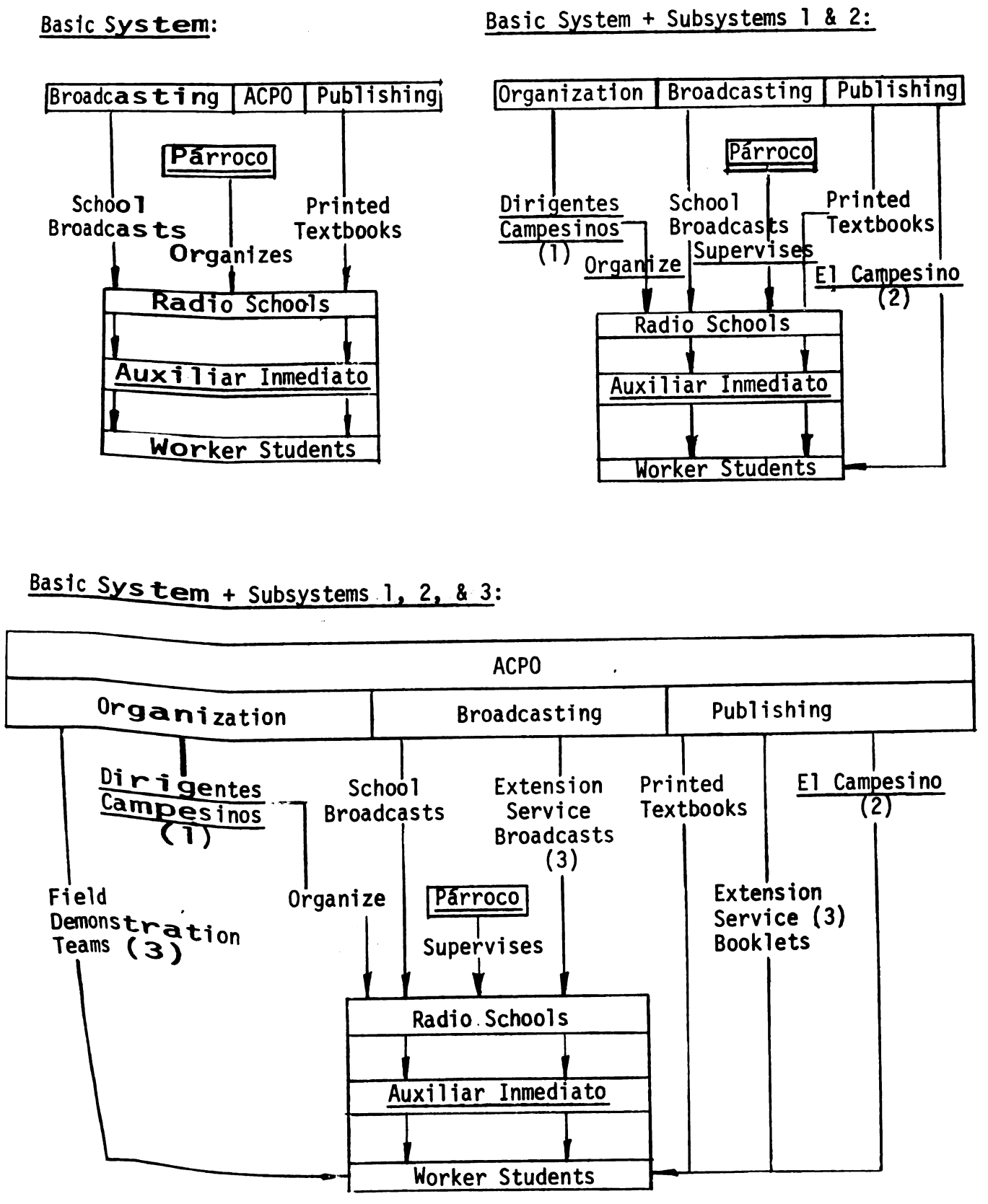
The three subsystems added to the basic strategy of the radio schools amplified (1) the local organizational structure of the schools (the Institutos Campesinos), (2) the print medium subsystem of the schools (El Campesino), and (3) the technological subobjective of the action process (the Extension Services).

Each addition of a subsystem produces a new form of the basic system-strategy, but the succession of new forms can be treated as alternatives only in the limited sense that a given subsequent form of the basic system-strategy constitutes a hypothetical alternative to its antecedent form. The successive forms of the basic strategy, however, are not true historical alternatives since at no point in Radio Sutatenza's history were the three forms (defined by the additions of the three subsystems) of the basic system-strategy simultaneously present as options for selection. Figure 3.4 illustrates the system-forms.

5. SELECTION OF THE MEANS

ACPO's experimentation with alternatives during the fourth phase seems, according to available sources, to have been confined to the very limited sense of experimentation defined above. There appears to be no evidence that the Institutos Campesinos were selected as the optimal alternative from among other possible subsystems providing organizers of radio schools on the local level. Nor is there evidence that El Campesino was selected from among other alternatives preventing recidivism among the newly literate; nor that the Extension Service was selected from among other alternatives providing practical training in the use of technological innovations.

Figure 3.4. Alternatives: system-forms of the Fourth Phase.



To the extent that these subsystems were effective in implementing objectives, they provide evidence of ACPO's imaginative planning. However, insofar as the subsystems were selected without the benefit of other alternatives--if in fact this was the case--their selection would testify to ACPO's unsystematic planning.

6. IMPLEMENTATION OF THE SYSTEM-STRATEGY

Introduction

Two basic processes will describe the implementation of the system-strategy: the decision process including decision centers and information flow, and the action process including the expansion of the project and its various operations.

Decision Process: Decision Centers

Acción Cultural Popular was established with its own statutes in 1949 in Sutatenza. In 1953, ACPO held its first General Assembly to revise these statutes, and in 1957 it held its second General Assembly which was attended by 29 prelates and 300 priests. (Torres and Corredor, 1961: 13-14)

In the early 1950s, the entire ACPO operation was quartered in Sutatenza in a new building equipped with administrative offices, studios, record library, radio laboratories, etc. (Williams, 1950: 39) By 1955, Radio Sutatenza had been established in Bogotá with workshops and warehouses, and the following year work began on the administrative building of ACPO in Bogotá. (Torres and Corredor, 1961: 14) In 1959 ACPO moved its administrative operation to Bogotá along with its electronic libraries, print shop, and radio laboratories. (Amaya, 1959: 404)

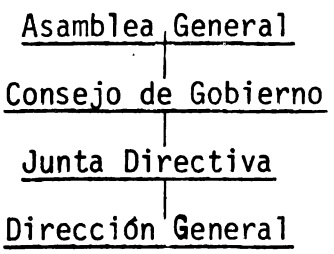
Presumably, teaching, programming, and engineering personnel remained in Sutatenza. (Cf. Williams, 1950: 39)

First Echelon Decision Centers

Torres and Corredor cite the major decision-making bodies in the first echelon at the beginning of the fourth phase, as follows:

> Acción Cultural Popular (ACPO) tiene la siguiente organización:
>
> a) Junta Directiva.
> b) Corporación compuesta de miembros fundadores y miembros ordinarios.
> c) Consejo de Administración.
> d) Oficina de Secretaría General. . . . (1961: 13)

The date given for this first echelon composition is 1950; hence the Asamblea General which first met in 1953 is not mentioned. Unfortunately the citation does not clarify the relationships of the four bodies to one another by placing them in an organizational chart. Such a chart, however, occurs in Musto (1971) with a variant order and somewhat different nomenclature:



(1971: 70)

The one discrepancy in nomenclature between the two citations can be resolved by comparing the characteristics of the Corporación in 1950 with those of the Asamblea General which apparently replaced the former in 1953. With the major discrepancy removed, Torres and Corredor's nomenclature can be retained according to the subordination from Musto.

The functional descriptions of these decision-making bodies will have to be drawn from Musto (1971).

The Asamblea General or Corporación met tri-annually and was composed of ACPO founding members, honorary members, prelates, and ordinary members, generally priests in the radio school movement. This body determined general policy and planning for subsequent three year periods.

The Consejo de Gobierno (or Administración):

> . . . se compone exclusivamente de los representantes de la jerarqúia eclesiástica, tiene por función, la aprobacion del presupuesto anual, la presentación de un informe sobre las actividades realizadas a la asamblea general, la vigilancia del cumplimiento de los estatutos, asi como el nombramiento del director general y los miembros de la junta directiva. El Consejo de Gobierno está presidido por el Arzobispo de Tunja, o por su representante. (Musto, 1951: 71)

Thus the Consejo was composed entirely of bishops or religious superiors general who controlled ACPO's budget, monitored its operations for statutory conformity, and appointed both the Director General and the Junta Directiva.

The Junta was a six-member executive body directing day-to-day operations, meeting weekly with the director general. Three ex officio members are mentioned: the director general (Salcedo), the National Director of Radio Schools (Sabogal, Salcedo's ancien ami of Tibirita--cf. p. 76), and the gerente commercial of ACPO. Three additional members are appointed by the Consejo. (Musto, 1971: 71)

The director general (secretario general) was the legal representative of ACPO, appointed for a four-year term by the Consejo. From the beginning this has been Salcedo who has been responsible for the execution of policy, planning, and coordination of all ACPO activities.

> A subordinate position of subdirector general has been held since early in the fourth phase by Sabogal who has been responsible for ACPO ideology. (Musto, 1971: 71)

The administrative departments of ACPO during the fourth phase have to be inferred from various sources. Torres and Corredor list ten departments in existence by 1950 (1961: 13); Amaya mentions two other departments of the late 1950s (1959: 404-05) and notes the transfer of some departments to Bogotá in 1959. The place of these departments in ACPO will be found in Figure 3.5.

Second Echelon Decision Centers

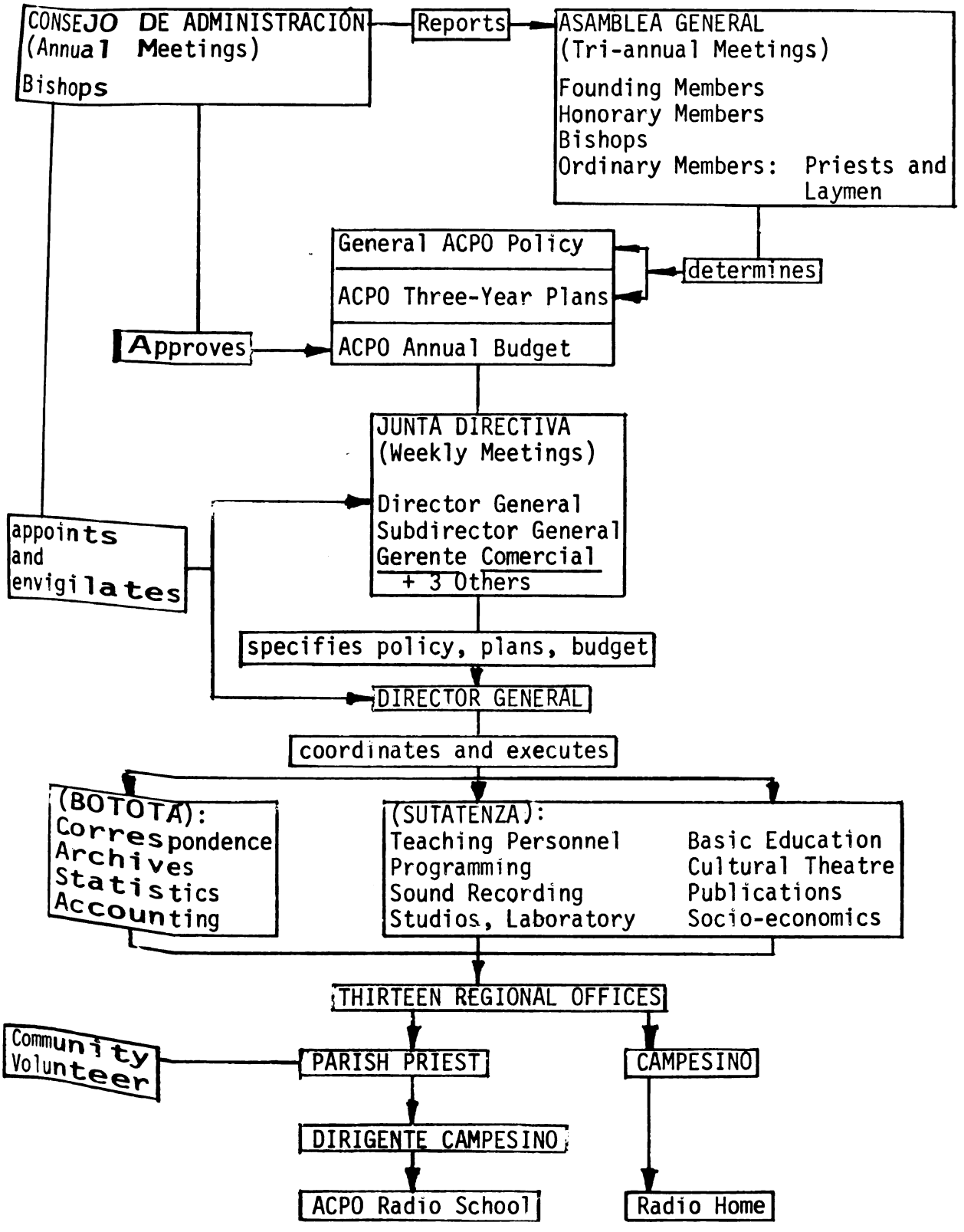
During the fourth phase, a regional echelon of decision centers was created. Williams mentions "regional" inspectors (1950: 39) and Amaya mentions thirteen regional offices coordinating fourth phase expansion. (1959: 404) Presumably the function of this intermediate echelon is materials supply and operational coordination, although this is nowhere delineated in the sources.

Third Echelon Decision Centers

At the local level, two types of decision-makers appear; one establishing a "radio school" and a second establishing a "radio home."

Early in the fourth phase, parish priests were decision-makers in the establishment and supervision of ACPO radio schools, assisted by an auxiliar inmediato and by a community volunteer representative to help in registering students, keeping statistics, and handling correspondence. (Amaya, 1959: 404) Later in the fourth phase, as the dirigentes campesinos trained in the Institutos Campesinos became available, they

Figure 3.5. Fourth Phase decision centers and channels.



became the organizers of ACPO radio schools while the parish priest remained supervisor. (Amaya, 1959: 404)

In remote areas of the countryside, a second (unofficial) decision-maker was the campesino who might decide to make his a "radio home" in order to receive Sutatenza instructional and cultural broadcasting, but without the aid of any auxiliar inmediato. (Nitsch, 1964: 342)

By 1959, according to ACPO statistics (whose accuracy will be treated in the fifth phase discussion), third echelon decision-makers had established 18,160 radio schools with 19,602 auxiliares immediatos and 490,552 students, and there were approximately 24,000 non-school (radio home) receivers already distributed. (Ozaeta, 1960: 559)

Decision Process: Formal Factors in Decision Flow

The analysis of formal factors in decision flow is aimed at discovering those factors influencing a project's functioning which reside in the formal and statutory relationships between decision-centers.

The Consejo

The most influential decision center in the ACPO operation would seem to have been the Consejo, for the following reasons:

1. The Consejo appoints the personnel of both decision centers directly concerned with the implementation of the project: the Junta Directiva and the director general.

2. The Consejo is charged with monitoring ACPO operations for their conformity to official statutes established by the Asamblea General. (Musto, 1971: 69)

3. Although the Consejo of itself does not formally control ACPO policy and planning, it controls every aspect of implementation through its control of the ACPO budget.

4. Finally, the Consejo is charged with formally reporting the state of ACPO operations to the Asamblea General meeting every three years. This report is the only formal feedback link from the project itself to the Asamblea General which issues general policy and planning to the Junta Directiva. Thus the Consejo group of bishops was in a position to control formal information flow to the Asamblea regarding ACPO activities; this information was a source the Asamblea could use in dictating policy and planning goals to the Junta Directiva; and the Junta and the director general were in turn both monitored for statutory conformity in their implementation and controlled in their use of the budget which was subject to review and approval by the Consejo.

The Consejo of bishops, therefore, was in a formal position to control general policy, tri-annual planning, allocation of resources, implementation of planning, and all the major personnel of the implementation.

The Asamblea General

The Asamblea General's exact personnel composition for the fourth phase is not documented. Its formal effectiveness would seem to have been conditioned by such factors as the following:

1. The Asamblea met only every three years. Such an infrequency may have limited its ability to influence the project in cases where ACPO planning needed modification, for planning modifications would seem

to require more frequent than triennial review and evaluation.

2. On the other hand, the Asamblea represented the only body in the formal project structure where points of view different from those of the Consejo could arise, viz., through founding and honorary members as well as through priests and other ordinary members.

The Junta Directiva

The Junta Directiva was formally limited by:

1. its being appointed exclusively by the Consejo;

2. its activities being confined to specifying and executing pre-determined policies and three-year plans.

On the other hand, the Junta, as the principal body in charge of execution of policy and planning, probably had a measure of independence to implement the project, interpret policy, and specify the planning as it saw fit.

The Director General

The director general formally was confined to coordinating the activities of the various departments of the project. He was also formally limited by his four-year term. However, the director general has remained Salcedo from the beginning of the project and ex officio he was the principal member of the Junta Directiva.

Regional Offices

The authority and autonomy of the thirteen regional offices during the fourth phase remain unspecified in the available literature.

Local Level: *párroco* and *campesino*

The *párroco* establishing a radio school in his parish was formally designated as an ACPO supervisor of the activities of the *dirigente campesino* and the *auxiliar inmediato* in his parish.

The *campesino* establishing a radio home was the only decision-maker associated with the project who, by reason of his limited area of decision-making, was independent of ACPO supervision.

Decision Process: Span of Supervision

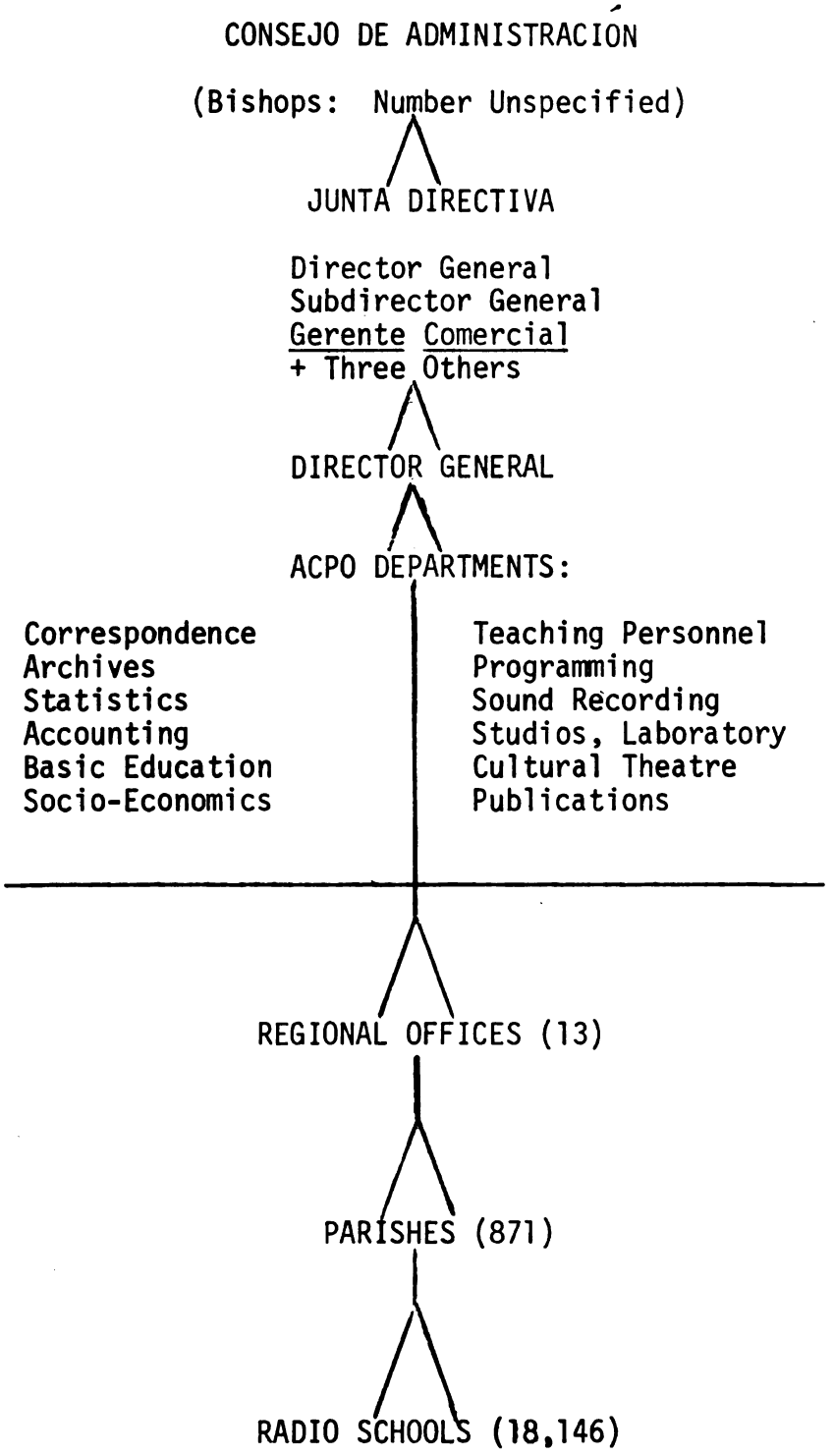
From the literature of the fourth phase it is difficult to compose an exact picture of the various personnel ratios which form the spans of supervision in the ACPO decision structure. The exact composition of the *Consejo*, the *Asamblea*, the *Junta*, or the regional offices, is not clear enough to form any general conclusions as to the effect of ACPO spans of supervision upon decision transmission.

Some indications of ACPO supervision, however, can be gained from statistics in Amaya (1960: 404) and Torres and Corredor (1961: 15). These are illustrated in Figure 3.6.

The organizational model of ACPO is somewhat "tall" in the first echelon and "flat" in the second and third echelons of the decision process. If the number of bishops in the *Consejo* was greater than the six members of the *Junta*, there would seem to have been a greater number of supervisors than personnel supervised. This top-heavy supervision would seem to have been repeated in the case of five of the six members of the *Junta* equivalently supervising the *director general*.

This configuration is reversed below the *director general* who appears to have had wide powers insofar as the spans of supervision

Figure 3.6. Spans of Supervision in the ACPO decision process.



indicate this. He supervised all ACPO departments (estimated as twelve) directly. It is uncertain exactly how the thirteen regional offices were supervised, but the ratio of supervision from regional office to parish was, in 1958, one to sixty-six, and from parish to radio school, one to a little more than twenty radio schools.

Little can be concluded except that the director general appears to have been heavily supervised by decision-makers above him; he appears to have had wide supervisory authority over the ACPO departments carrying out the action process; and that all decision action centers below these departments enjoyed relatively light supervision.

The fact that the first echelon of the decision process was heavily supervised and the second and third echelons less so may indicate that ACPO decision channels permeating the Colombian countryside were extraordinarily efficient because of certain nonformal rather than formal factors. This hypothesis will be pursued below.

Nonformal Factors in Decision Flow

The analysis of nonformal factors in decision flow is aimed at discovering factors influential in the project's operation which derived from historical, social, cultural, and interpersonal conditions surrounding the project.

The efficiency of decision transmission within the project can be inferred to some extent from the rapid rate of expansion which characterized Radio Sutatenza during the fourth phase. This expansion appears in Table 3.2 from Torres and Corredor (1961: 15).

Table 3.2. Radio Sutatenza: Fourth Phase Expansion

Year	Participating Parishes	Receivers Installed	Schools Organized
1948	1	3	3
1949	14	103	103
1950	22	303	303
1951	46	453	430
1952	111	3,403	904
1953	318	5,703	1,804
1954	412	11,703	6,422
1955	533	19,259	7,512
1956	740	29,193	9,991
1957	855	37,174	15,221
1958	871	42,174	18,146

Setting the 1950 statistics as an index of 100, the rate of expansion between 1950 and 1958 was a 3,950% increase in parishes, a 13,918% increase in receivers installed, and a 5,988% increase in schools organized. (Torres and Corredor, 1961: 15) The explanation for such a consistent and efficient expansion of a project would seem to lie in an unusually integrated process of decision transmission.

Historical Nonformal Factors

Historically, the information and decision transmission network of the Catholic Church in Colombia antedated the establishment of the information and decision structure of Acción Cultural Popular. Reference has been made above (pp. 88 and 99) to the close relationship of Church personnel with the project and it is clear that most of the

decision-makers in ACPO during the fourth phase were clerics and members of the Church hierarchy. Thus the rapid expansion of the project during the 1950s can in part be explained by this pre-existing communication structure of the Church. Colombia had already been organized into dioceses with the obispo as principal decision-maker, and dioceses had been organized into parishes with the párroco as a subordinate decision-maker. Once Radio Sutatenza had been incorporated as an official obra diocesana under the bishop of Tunja (Musto, 1971: 48), ACPO was able to expand along lines of communication afforded it by nonformal historical circumstance.

A second nonformal historical factor in ACPO's decision structure was the fact that Salcedo was a founding member of ACPO as well as its director general. This historical circumstance places Salcedo ex officio in the Asamblea General, a position not strictly available to the director general according to statute.

A third nonformal historical factor augmenting Salcedo's personal influence in the decision process was the fact that he succeeded himself regularly in the position as director general. Salcedo remained director general throughout the 1950s and 1960s, and a tenure of this length (which, however legitimate, is not provided for by formal statute) probably constituted a base of nonformal influence and power influencing decisions in the rapid expansion of the fourth phase.

Social Nonformal Factors

Social factors are here understood in the limited sense of role definitions and status relationships. Such definitions and relationships are, of course, intrinsic to any formal organization.

The nonformal aspects of these role definitions and status relationships derive, therefore, not from the formal roles and statuses conferred upon decision-makers and decision-receivers by the organization, but rather from the formally extrinsic characteristics of the personnel who happen to fill the decision-positions.

In the personnel composition of ACPO, at least four distinct roles and three different status relationships--all nonformal--can be discerned. The roles are those of archbishop, bishop, priest, and layman. The major status relationships are archbishop-bishop, hierarchy-priest, and clergy-layman. "Hierarchy" includes both archbishop and bishop since either has authority relative to "priests." "Clergy" includes priests, bishops, and archbishops since each shares in the general religious authority of the clergy relative to the "layman."

Although the decision structure of ACPO decrees by formal statute that personnel of a certain status (conferred by other than ACPO) function in certain positions of ACPO, any given status or role such as archbishop, hierarchy, or clergy is not formally conferred by the ACPO organizational structure. Hence such statuses are formally extrinsic, or nonformal.

These extrinsically conferred roles and statuses which bishops and priests brought to their positions within ACPO can have had the effect of permeating the ACPO decision structure with an ethos of religious authority. Within the structure of religious authority, a bishop defers to the archbishop, priests defer to bishops, and the layman is expected to defer to clergy of whatever rank. Such expectations of deference are termed "paternalism" in the hierarchy-priest relationship, and

"clericalism" in the clergy-layman relationship. The root of this expectation of deference by hierarchy and clergy is the so-called "authority to proclaim the gospel" attached to these two roles in the Church structure. When such a restricted mandate of authority is allowed to enlarge without restrictions, an authoritarian ethos of presumed wisdom and certitude can begin to permeate all opinions and decisions emanating from any person having this restricted mandate. It is this authoritarian ethos with its assumption of wisdom and certitude and its expectation of deference that may have been present in ACPO's decision structure as a nonformal factor.

This authoritarian ethos had the potential of affecting mainly the priests and laymen, the two dependent members of the hierarchy-priests and clergy-laymen relationships. In the first relationship, the authoritarian ethos could have not only demanded of priests a special deference to opinions and decisions of the hierarchy within the ACPO decision structure, but the ethos could have enforced this expectation by threatening a priest's job security. In the Church structure, any priest functions as such only at the good pleasure of the bishop, and priests thinking of defying opinions or decisions surrounded by an authoritarian ethos (at least during the fourth phase which antedated the major changes following the Church Council in Rome, 1961-64) would be priests courting the displeasure of their employers with virtually no possibility of due process.

The layman in the clergy-laymen status relationship would have been no less vulnerable in the ACPO decision structure. The Consejo of bishops controlled personnel throughout the structure and although

the hierarchy could not divest the layman of any religious status, the layman's employment within ACPO was under the same threat from the authoritarian ethos. Furthermore, this ethos could have exerted more pressure on the layman than on the priest because the ethos was fundamentally a religious one, a field of interest in which the layman was a classified non-expert.

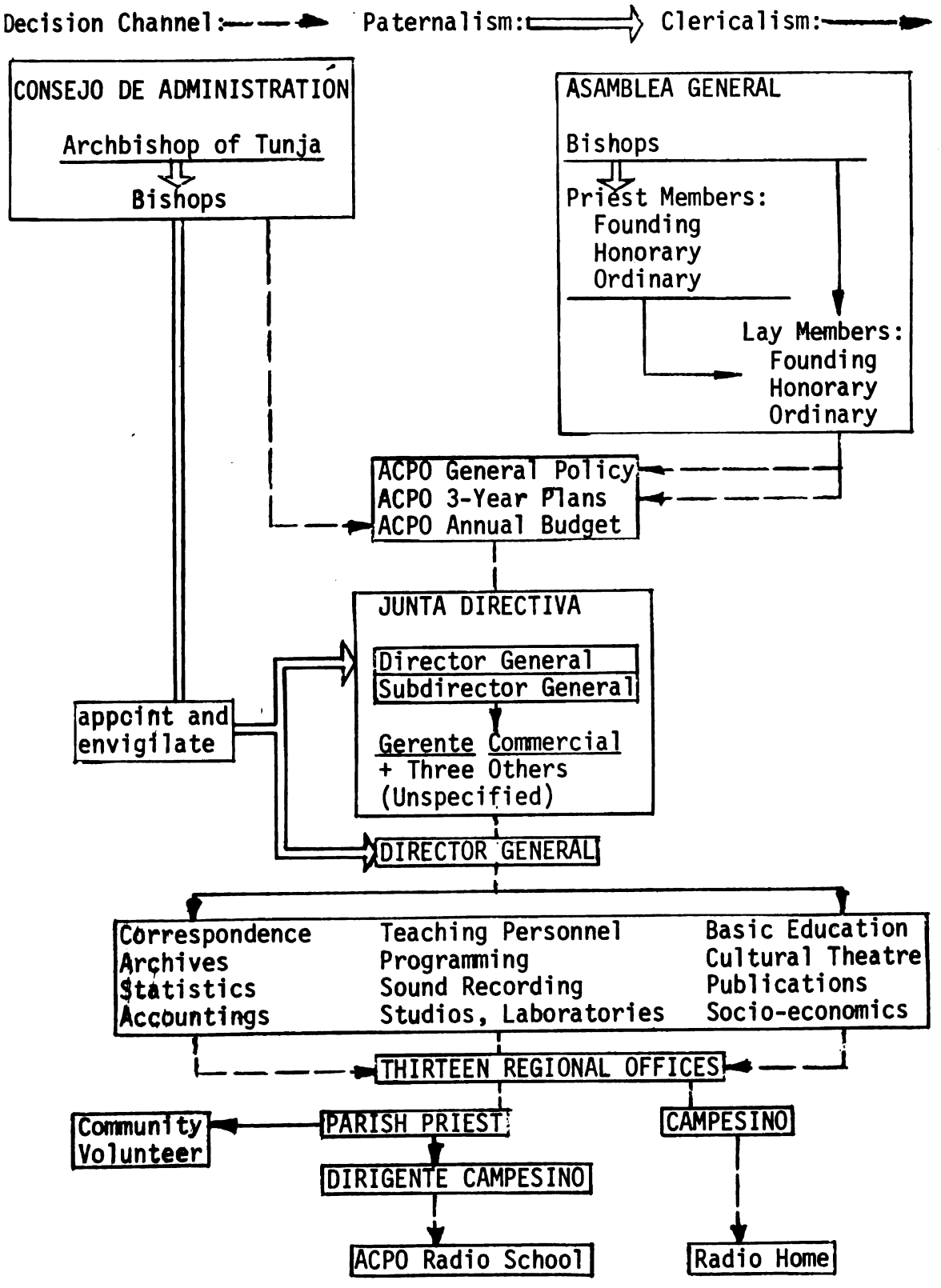
This authoritarian ethos which may have been associated with opinions and decisions of the hierarchy and clergy within ACPO could have had both positive and negative effects. The ethos may have reduced to an unusual minimum the normal kinds of noise in the channels of ACPO decision-flow such as criticism and debate over opinions and decisions. Reduction of such channel noise may have had the positive effect of facilitating the rapid expansion of ACPO radio schools in the parishes of Colombia during the fourth phase. The related negative effects may have been that by reducing criticism and debate over opinions and decisions, the authoritarian ethos eliminated valid alternatives and critical feedback which could have led to fruitful modifications of the system-strategy. Some of these negatives effects will be discussed in the documentation of the fifth phase.

The channels of information and decision flow potentially affected by the two forms of authoritarianism, paternalism and clericalism, are illustrated in Figure 3.7.

Cultural Nonformal Factors

The authoritarian ethos discussed above derives from the status relationship created by a differential in religious roles. Status can

Figure 3.7. Decision channels potentially affected by authoritarian ethos of paternalism or clericalism.



also be created by a differential in cultural roles when a given population is more or less explicitly compared with a standard regarding the degree of achievement of the cultural role. In this sense, the degree of educational achievement (as a cultural role) can be measured and compared to create a differential of educational status.

The authoritarian ethos of educational status is perhaps no less real than that of religious status, and the possibility of an educational or cultural status relationship affecting decision-flow in the ACPO structure suggests itself for the following reasons.

Acción Cultural Popular was primarily a cultural campaign in which the content of communication was discrete units such as courses, programs, campaigns aimed at specific innovations, etc. The recipient of such communication was made, through examinations, certificates, etc., to feel that he had "gained" or "achieved" something such as "literacy", "education", or "culture." The nonrecipient by implicit comparison or the unsuccessful candidate by failure could have felt himself to be of inferior status. As the dependent member of a status relationship, such a person could have been susceptible to the presumed wisdom and certitude of the educational authoritarian ethos surrounding the opinions and decisions of someone of "higher" educational or cultural status.

This nonformal cultural factor of educational status may have affected information and decision flow within the Asamblea General where bishops by ecclesiastical prerequisite had higher educational status than most priests and perhaps a proportion of the laymen included in that body. The bishops of the Consejo likewise may have had additional leverage in decision-making through their educationally higher status as

compared with the recipients of these decisions in the Junta and the office of director general.

Similarly at the local level, since Radio Sutatenza was a cultural campaign directed toward illiterate rural workers, the decisions and opinions of the comparatively better educated ACPO operatives may have been enhanced by the educational authoritarian ethos and have facilitated decision transmission at the local level.

The price, however, for presuming wisdom and certitude and gaining efficiency in decision transmission, is usually paid by overlooking alternatives because of impaired feedback from decision-recipients. The possible negative effects of implicit educational status relationships in the project will be pursued in the discussion of the fifth phase.

The Action Process: ACPO Financing and Aid

Local Level Sources

Throughout the fourth phase Acción Cultural Popular was able to continue the pattern of local level financing which characterized the first three phases. Early in the fourth phase ACPO built its first official headquarters in Sutatenza with offices, studios, theatre, library, staff and visitor hostel, etc., by means of funds provided mainly by Tenza valley campesinos. These latter contributed approximately 470,000 pesos to the building program with the Colombian government contributing 30,000. (Williams, 1950: 39-40)

The theme of local financing and support is also seen in the ACPO requirement that any radio school or radio home pay for its own receiver. (Nitsch, 1964: 341)

Another kind of support required by ACPO organizational design was nonfinancial in character. In order to establish a radio school a local committee headed by the parish priest had to be set up to oversee the installation of a radio receiver and to provide a volunteer auxiliar inmediato to mediate the broadcast to rural students. (Williams, 1950: 39,42) In another area, ACPO sponsored rural basketball teams by providing sports equipment, but only after local volunteers had cleared and leveled a field and organized a team. (Ozaeta, 1960: 560)

Apart from these scattered references, fourth phase local financing and support is left unspecified in the literature. However, the financial support which ACPO was able to stimulate and sustain at the local level, as well as the work commitment on the part of villagers by which they would match ACPO's inputs for various action projects, would seem to be a particularly valid indication of a design-complementarity of the project. An organizational chart may indicate a clear allocation of formal authority to the local level, yet factors in the actual operation of the project may inhibit the exercise of local decision-making power. A chart showing the monitoring and feedback circuits of a project may seriously hinder the operation, or indicate an adequate reliability cycle, yet the actual conditions of operation at the local level may seriously hinder the effectiveness of the reliability cycle. Hence it would seem to be especially significant that throughout the fourth phase, ACPO was able to attract financial support and volunteer labor at the local level as evidence to corroborate its relevance and effectiveness.

Government and Organization Sources

According to Amaya, from 1950 to approximately 1959 the Colombian national government had contributed 27,385,000 pesos to the operation of Acción Cultural Popular. (1959: 404) According to Williams, early in the fourth phase the government had also provided exercise books, maps, pencils, copies of a Laubach method literacy textbook, and an inspector-general of literacy to collaborate with ACPO in its literacy campaign. (1950: 39)

The literacy campaign was further aided by UNESCO's contribution of two experts to develop a special set of textbooks for ACPO, the first of which appeared in May, 1955. (Ozaeta, 1960: 558)

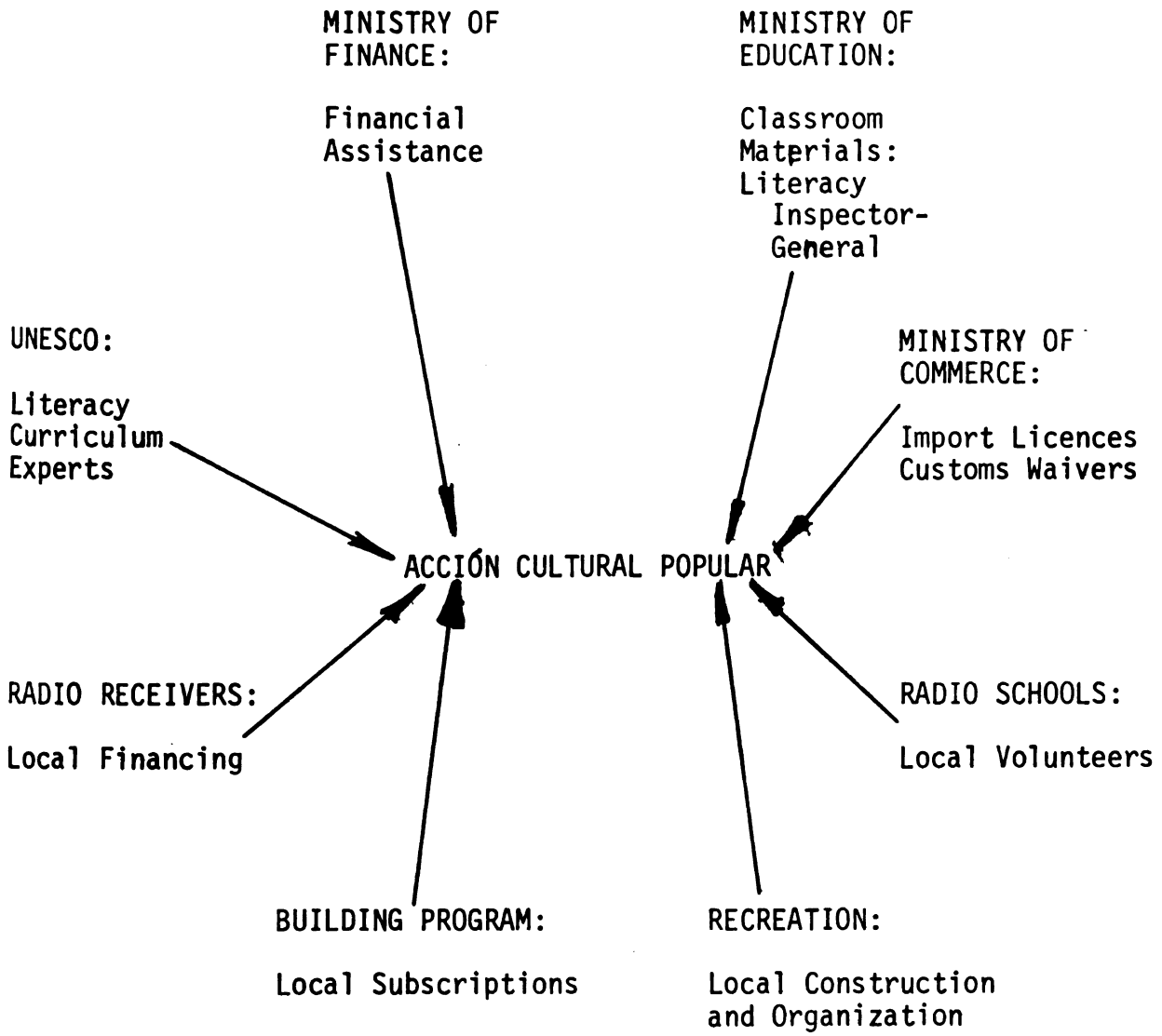
The Import Control Office of the Ministry of Commerce also granted ACPO free import licenses for equipment and waived customs duty. (Williams, 1950: 41) The complementarity of official and local support for ACPO is illustrated in Figure 3.8.

Action Process: ACPO Technical Infrastructure

As Radio Sutatenza expanded during the fourth phase it improved its technical infrastructure by regularly upgrading its transmitting power and broadcasting range. Three sources document the number of transmitters as at least five at the end of the fourth phase, but the sources do not completely agree on the power of each transmitter. The discrepancy may be due to the different time-periods presumably covered by the different observers.

Amaya states that ACPO had five transmitters, one 25 kH and four 10 kH. (1959: 404) Ozaeta states that ACPO had five transmitters:

Figure 3.8. Complementarity of official and local support.



one 25 kH, one 10 kH, and three 1 kH. (1960: 559) Torres and Corredor cite six transmitters, a 100 H installed in 1947, a second of 250 H installed in 1949, a third of 1 kH installed in 1950, at least two ("nuevos transmisores") of 25 kH installed in 1953, and a 50 kH transmitter installed in 1960. (1961: 12-14)

The expansion of the technical infrastructure including the distribution of radio receivers appears with discrepancies unresolved in Table 3.3 adapted from Torres and Corredor except where indicated.

Table 3.3. Technical Expansion

Year	Transmitters: Ordered:	Transmitters: Installed:	Radio Receivers: Ordered:	Radio Receivers: Installed:
1947		1 100 H		3*
1948	1 25 kH	1 300 H**	700 GE**	10***
			5,000 Philips	
1949		1 250 H		103
1950		1 1 kH		303
1951				453
1952				3,403
1953		2 25 kH		5,703
1954			10,000 Philips	11,703
1955				19,259
1956				29,193
1957				37,174
1958				42,174
1959		1 25 kH****		45,914
		4 10 KH****		
1960		1 25 kH*		
		1 10 kH*		
		3 1 kH*		
		1 50 kH		

* Ozaeta, 1960: 558
** Nevins, 1950: 11
*** Scully, 1954: 26
**** Amaya, 1959: 404

Radio Sutatenza did not long remain only in Sutatenza. In addition to the Sutatenza transmitters, Radio Sutatenza in Belencíto began broadcasting in 1954, and Radio Sutatenza in Bogotá began in 1955, although there is no indication of respective transmitting power in these two stations. (Torres and Corredor, 1961: 13-14)

The radio receivers distributed by ACPO were, by the early 1960s transistor-types with tuning limited to the three wavelengths used by Radio Sutatenza. Cost at that time was approximately $21,00 (U.S.). (Nitsch, 1964: 341)

Action Process: ACPO Programming

According to Ozaeta, by the end of the fourth phase, ACPO was broadcasting:

> . . . programmes lasting an hour . . . four times a day, and consist of classes for reading and writing, arithmetic, religious and moral instruction. The rest of the programmes are made up of cultural talks, news, music, variety, plays, sporting events, remote control programmes, and so on. . . . [The] transmitters are also used for training rural teachers, for literacy campaigns for soldiers, and for those serving prison sentences. (1960: 559)

Amaya cites a total of five broadcast times, given in Table 3.4 with programming topics.

Table 3.4. Daily Programming (1959)

6:00 - 7:00 AM:	Reading, writing, arithmetic.
7:15 - 8:15 AM:	Colombian history and geography.
3:00 - 4:00 PM:	(Repeated for women:) reading, writing, arithmetic.
7:00 - 8:00 PM:	Program for beginners and advanced students.
8:00 - 9:00 PM:	Colombian history and geography.

The amount of programming devoted to various subjects during the years 1953-1958 appears in Table 3.5, reproduced from Ozaeta (1960: 559) with percentages interpolated.

Table 3.5. Topical Programming (1953-58)

Religious and Moral Instruction	507 hours	(3.39%)
Reading and Writing	2,030 hours	(12.0%)
Arithmetic	580 hours	(3.44%)
Social Subjects	803 hours	(4.76%)
Agriculture, Stock Breeding	1,400 hours	(8.27%)
Special Campaigns (Afforestation, etc.)	720 hours	(4.26%)
Catechism Guidance	819 hours	(4.80%)
News Bulletins	990 hours	(5.86%)
Plays	1,120 hours	(6.57%)
Instruction for Soldiers	780 hours	(4.60%)
Rural Teacher Training Courses	1,300 hours	(7.70%)
General Culture	595 hours	(3.54%)
Music and Variety	5,152 hours	(30.81%)
TOTALS:	16,796 hours	(100.00%)

Correlation of Programming with Objectives

Although radio broadcasts were but one component in the ACPO system-strategy, programming constituted the major effort to meet as many of the objectives of the project as possible. The topics that were programmed represented project subobjectives; hence, a correlation of objectives with programming can indicate to what degree the subobjectives found in the composition of Radio Sutatenza programming met the general objectives of Acción Cultural Popular.

It will be recalled that the objectives of ACPO as reported in the literature suffered from imprecision and therefore were listed in Table 3.1 as they appeared in various sources. Since the point of imprecision has been made, the objectives of ACPO will be cited in Table 3.6 in a more precise and condensed form.

Table 3.6. Correlation of Programming with Objectives

Objectives:

1. To project the social and religious teachings of the Church.
2. To provide the worker with a basic moral, intellectual, social, and economic training as a defense against exploitation.
3. To help the worker raise his standard of living by his own efforts.
4. To widen the worker's personality by raising his cultural level and so integrate him into national life.

Programming-Objectives Correlation:

Topics:	Objectives:	Percentages:
Religious and Moral Instruction	(1,2)	3.29
Reading and Writing	(2)	12.00
Arithmetic	(2)	3.44
Social Subjects	(1,2)	4.76
Agriculture, Stock Breeding	(2,3)	8.27
Special Campaigns	(2,3)	4.26
Catechism Guidance	(1,2)	4.80
News Bulletins	(4)	5.96
Plays	(4)	6.57
Instruction for Soldiers	(2,3)	4.60
Rural Teacher Training Courses	(2,3)	7.70
General Culture	(4)	3.54
Music and Variety	(4)	30.81

The correlation should not be overestimated. It does appear that Radio Sutatenza programming formed a rather complete set of subobjectives to implement general ACPO objectives. The correlation itself,

however, is based on induction and inference, that is, the commonly understood language of the objectives is related to the commonly understood meanings of the programming topics. What is missing is the primary requirement of systematic formulation and strict correlation: complete behavioral specification of objectives and subobjectives and correlation by logical deduction.

Action Process: Campaigns

Ozaeta is the most detailed source for an element in the ACPO action process called the "campaign." This is a specific type of programming which concentrates on a single topic for a limited length of time. A citation from Ozaeta will characterize this type of ACPO programming:

> . . . For example, in the campaign to improve the home it was recommended that wooden or cement floors should be used instead of earthen ones; that the height of the stove (made of three stones) should be raised to one metre and that it should have an oven; that the roof of straw or grass should be replaced by tiles, asbestos-cement, or zinc; that the walls should be whitewashed; that the doors and windows should be painted; that the number of rooms should be increased by one or more; that a small garden should be planted around the house; that simple aqueducts should be made to bring water to the house; that latrines should be built, etc. (1960: 561)

ACPO was able during its fourth phase to develop a feedback circuit through which statistics could be amassed regarding the success of these campaigns:

1. Up to December, 1958, improvements to 22,500 houses had been carried out.

2. Free seed provided by ACPO in conjunction with a specific campaign resulted in 184,700 vegetable plots being planted.

3. An afforestation campaign resulted in the planting of about 2,030,450 trees in a few months, although one-third were lost.

4. In 1958, communities built 3,689 aqueducts, each serving ten houses or more.

5. By the end of the fourth phase, 2,160 basketball fields had been cleared and 3,200 teams organized by students of the radio schools.

6. Using the Indore system, 28,000 cesspits were constructed as sources of manure. (Ozaeta, 1960: 562)

The campaigns of ACPO show evidence of a design complementarity of broadcasting, publishing, and materiel in the system used to carry out these campaigns.

> The ACPO sends, free of charge, . . . agriculture and health textbooks, . . . special booklets on milch cows, poultry-keeping, pig-keeping, cesspits, trees for timber, bee-keeping, and so on. Up to December, 1958, a total of 7,556,809 copies of the various publications had been distributed.
> . . . Equipment for use in basketball games are [sic] sent when the field has been made and a team built up. (Ozaeta, 1960: 560)

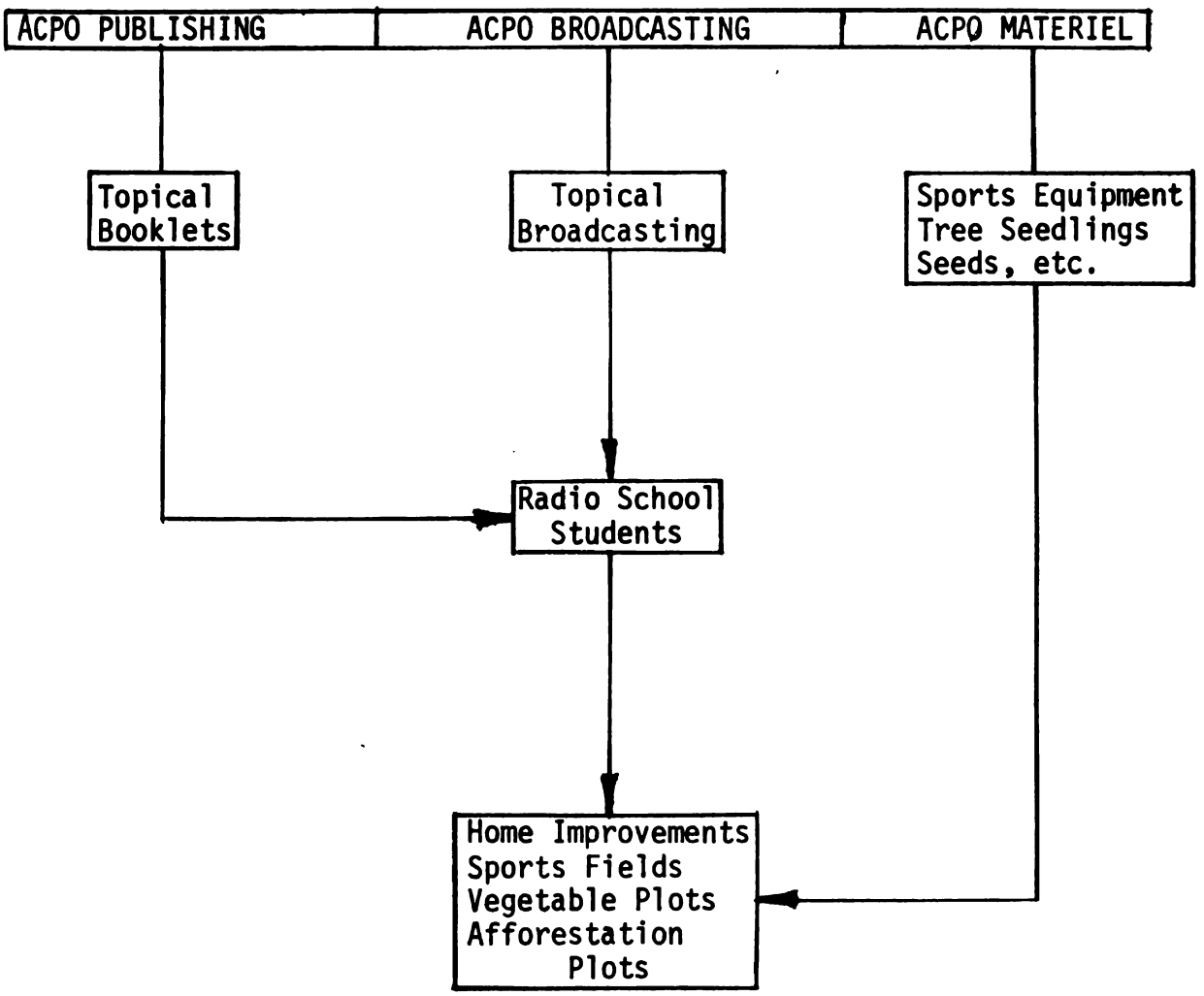
The design-complementarity used in the system of the campaigns is illustrated in Figure 3.9.

Action Process: ACPO Publishing

ACPO Literacy Course Textbooks

At the beginning of the fourth phase ACPO distributed literacy textbooks based on the Laubach method provided by the Ministry of National Education. (Williams, 1950: 39) Eventually, after five years of study of the system using the auxiliar inmediato, ACPO began publishing its own series of textbooks with the help of two experts from UNESCO.

Figure 3.9. Design-complementarity of ACPO campaigns.



The first edition of 300,000 copies appeared in May, 1955. (Ozaeta, 1960: 558-59)

ACPO Extension Services

Ozaeta mentions only one type of publication of the Socio-economic section, the booklets to complement extension services broadcasting. More than likely the Socio-economic section was involved in publishing in each of the "campaigns" organized by ACPO through its extension services. By 1960, 17 booklets with printings of 400,000 had been published. (Ozaeta, 1960: 563)

El Campesino

This newsweekly begun in 1958 has been described as a complementary strategy whose addition to the basic system-strategy created in effect a new system. (Cf. p. 102) Table 3.7 gives the circulation figures of El Campesino during the fourth phase. (Musto 1971: 100)

Table 3.7. El Campesino Circulation

Year	Weekly Publication	Annual Circulation
1958	29,800	960,000
1959	40,130	4,320,000

Action Process: ACPO Personnel Training

The Dirigente Campesino

In Sutatenza ACPO created the Institutos Campesinos for men (1954) and women (1956) between the ages of 18 and 25 to be trained as community organizers and returned to their villages to coordinate the efforts of ACPO at the local level. (Nitsch, 1964: 341) The objectives of this training have been described earlier (p. 101). Ozaeto describes the curriculum:

1. Philosophy and objectives of Acción Cultural Popular.
2. Personal hygiene and first aid.
3. Diet and household economics.
4. House, cesspit, sty, and stable construction.
5. Animal husbandry and bee-keeping.
6. Crop rotation and soil care.
7. Seed care.
8. Methods of pruning and grafting.
9. Use of fungicides and insecticides.
10. Use of veterinary medicines and instruments.
11. Methods of community organization and cooperation. (1960: 562)

ACPO set the criteria of entry behavior into the Institutos as "humanity, standing in the community, leadership, and a desire to work for the betterment of the community as a whole." (Ozaeta, 1960: 562) The parish priest functioned as gatekeeper in recommending and sending candidates to the Institutos. Upon returning to his home village the dirigente campesino was expected to organize various community activities including radio schools under the supervision of the parish priest.

ACPO maintained liason with the dirigentes campesinos by mailed bulletins and annual meetings. (Amaya, 1959: 406)

The complementarity of infra- and superstructural design in this training system is illustrated in Figure 3.10. Part of the success of the system may have been due to the fact that ACPO provided both training for the village volunteer and a role and an official ACPO status to which he could return at the local level.

Auxiliar Inmediato

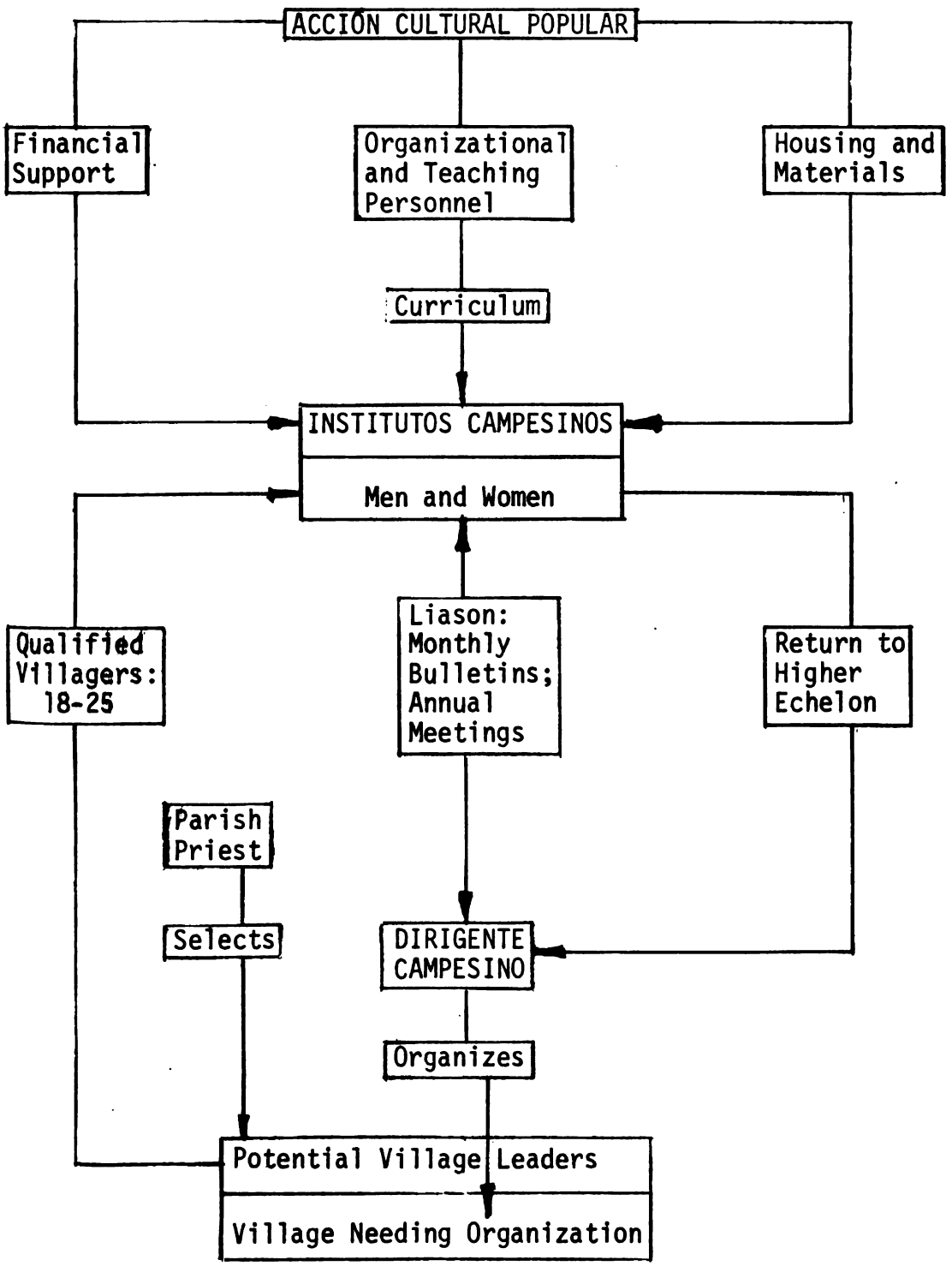
The function of this auxiliar will be described in conjunction with the organization of the radio school. The discussion here will be confined to how the auxiliar was enlisted and how he was supported.

The auxiliar was generally the most literate person in a neighborhood (Scully, 1954: 26) who would volunteer to form a school and register pupils. (Williams, 1950: 38) Since the parish priest is the local supervisor of ACPO activities, it may be that the auxiliar was usually requested to accept the position of auxiliar, and according to Williams, quite willingly:

> We stress the point that in the places where this system has been tried out, it has been extremely easy to get people to act as Assistants; that is because there exists in the peasant population a deep-rooted desire to raise its culturel level. . . . [and] when the peasants see that efforts are being made to smooth the way of instruction and culture, and to overcome obstacles, they become enthusiastic and eager to cooperate. (1950: 42)

The willingness of the peasant population to volunteer as auxiliares inmediatos is evident from the fact that by 1959, 19,602 were teaching in 18,160 radio schools having 490,552 pupils. (Ozaeta, 1960: 559) The etiology of the willingness to volunteer on the part of the peasant

Figure 3.10. Institutos Campesinos: complementarity of super- and infrastructure circuits.



population may have been at least as much a "deep-rooted desire to raise its cultural level" as the fact that ACPO enlisted this barely literate person into its organization to operate within an already achieved capability (reducing the threat of novelty); supported him with instructions (via the broadcast) while he was most vulnerable to critical pressure (while teaching); and rewarded him with an ACPO organizational title and status (auxiliar inmediato).

ACPO maintained liason with the auxiliares through monthly meetings with the parish priest and bulletins from ACPO headquarters. (Amaya, 1959: 405)

Action Process: Socio-economics Section Extension Services

By the end of the fourth phase a Socio-economics Section within ACPO was providing extension services in agriculture and livestock. This increment in the basic system-strategy of the radio schools has already been given a preliminary description (p. 103). Here will be described the process triggering the flow of information, personnel and materiel constituting the extension service subsystem.

Superstructural System

ACPO broadcasting provided fifteen minute daily programs on specific agriculture or husbandry topics. (Amaya, 1959: 406) ACPO publishing produced general and specialized pamphlets to reinforce the broadcasts which by the end of the fourth phase had amounted to 17 different booklets of printings of 400,000 each. (Ozaeta, 1960: 563)

The Socio-economics Section of ACPO had experts available as extension service teams which would travel to a municipality to hold a

five-day demonstration seminar for interested campesinos. (Amaya, 1959: 406) ACPO would provide the demonstration equipment such as clinical thermometers, veterinary syringes, grafting and pruning tools, bee-keeping tools, insecticides, fungicides, special seeds, etc., and these would be left at the place of demonstration for future utilization by the campesinos. (Ozaeta, 1960: 563)

The decision-maker triggering this subsystem was the parish priest who had the responsibility of deciding when students had received sufficient theoretical training through the broadcasts and booklets and who would then invite experts from ACPO to hold a field demonstration seminar in his parish. There is evidence that the system succeeded: by 1958 more than 15,000 campesinos had learned to vaccinate animals and seminars had been held in 242 districts. (Ozaeta: 1960: 563)

Two complementarities, broadcasting, publishing, personnel, and material on the one hand, and super- and infrastructural design on the other, are illustrated in Figure 3.11.

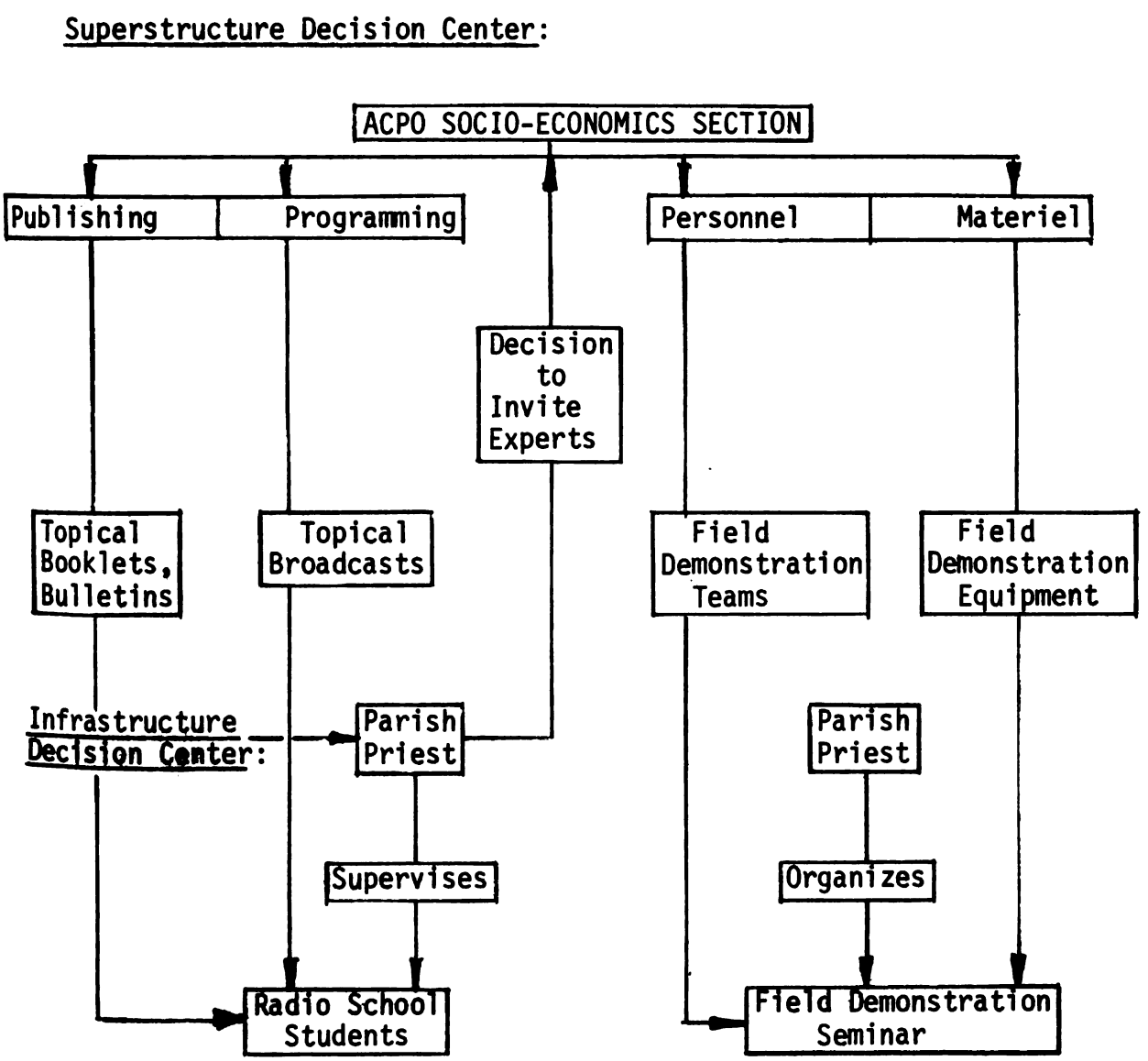
Action Process: The Radio Schools

By the end of the fourth phase, ACPO was organizing radio schools for three segments of the isolated Colombian population: the rural Andean campesino, illiterate soldiers in military service, and illiterate Colombians serving prison terms.

The Campesino Radio School

Early in the fourth phase, the basic system-strategy of the radio school was carried out on the local level by the párroco who would organize campesinos to form a school and enlist an auxiliar inmediato to

Figure 3.11. Socio-economics section extension services.



mediate the broadcast lessons. (Cf. Figure 3.8) As the dirigentes campesinos from the Institutos Campesinos became available, they became radio school organizers under the supervision of the párroco. (Cf. Figure 3.11)

Once a radio school became organized, ACPO would supply a limited-tuning radio receiver at cost (Nitsch, 1964: 341) as well as blackboards, alphabet tables, a gong, a clock (Williams, 1950: 42), and reading and writing sheets, visul aids, and textbooks, free of charge. (Amaya, 1959: 405)

Programming times and general subjects are given in Table 3.4.

The pivot of the radio school was the auxiliar inmediato. His function was to:

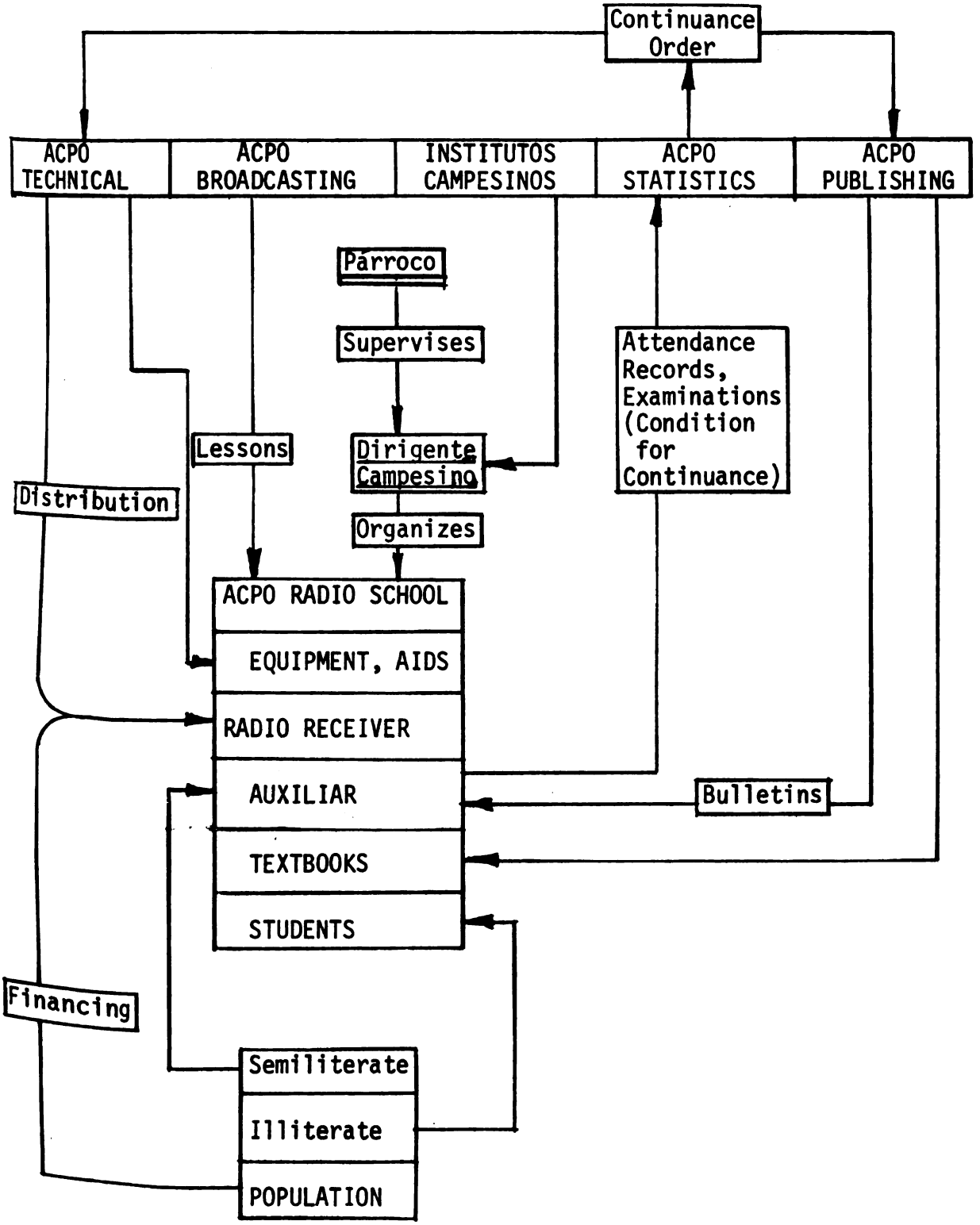
> . . . obey the simple instructions which come to him over the radio: "Point your stick to the red letter at the top of the page. . . . Tell the student to show the letter 'O' on the blackboard. . . ." (Ozaeta, 1960: 558)

Besides interpreting instructions and writing words on the blackboard, the auxiliar would also correct the exercises and drills of the students. Liason with ACPO was maintained by reporting directly to the dirigente and the párroco during monthly meetings and by receiving bulletins from ACPO. (Amaya, 1959: 405)

Regular students were required to register and take written and oral examinations periodically. Records of these were kept and were required to be forwarded by the auxiliar to ACPO along with attendance records in order for the radio school to continue to receive ACPO services. (Amaya, 1959: 404; Ozaeta, 1960: 560)

The complementarity of inputs comprising this subsystem is illustrated in Figure 3.12.

Figure 3.12. Radio school structure.



Radio Schools for the Military and Prisoners

These schools were presumably organized in a way similar to the rural schools: some organizer functioning as supervisor in liason with ACPO and an auxiliar inmediato drawn from the semi-literate population. The literature of the fourth phase mentions only that the programming consisted of seventy-five lessons of reading, writing, and computation directed to 158 prisons and to army training centers, 38% of whose entrants were illiterate. Statistics showed that 88% of the soldiers and 85% of those in prison were passing the examinations at the end of this course. (Ozaeta, 1960: 564)

Action Process: The Radio Home

Fourth phase literature gives little attention to the ACPO radio home where:

> . . . especially in regions with widely dispersed population . . . the radio is located in the house of a peasant and he, his family, and perhaps some neighbors listen to the program at certain hours. (Nitsch, 1964: 342)

The evidence that these radio families existed during the fourth phase may be found in Table 3.2 where the number of radio receivers distributed by ACPO exceeds the number of radio schools by more than 24,000 sets. Further evidence comes from Berry:

> High up in an isolated valley of Colombia's Andes mountains a peasant family hunches around a portable radio in the morning cold. On the roughhewn table in front of them lies a writing pad and a colorful booklet illustrating the letters of the alphabet.
>
> "Today's lesson," says a voice from the radio, "covers the last letters of the alphabet. Please follow me in your copybooks."
>
> The father of the family tries first. . . . He hands the pencil to his wife. She imitates the booklet as best she can, listening to encouragement from the radio. The children look on, eager for the lone pencil to be handed to them. The radio instructor pauses frequently, patiently offering advice.

> A half hour later the instructor signs off. For a moment the family looks proudly at the neat rows of letters in the copybook. Then they hustle off to the fields for a hard day's work. (1961: 109)

Purchasing an ACPO receiver entitled the peasant to receive all necessary materials distributed free of charge by ACPO. (Ozaeta, 1960: 560)

The effectiveness of this subsystem is suggested by Nitsch:

> On a visit to a typical family radio school, the following practical consequences of radio education could be noted: the campesino, formerly illiterate and uneducated like millions of his countrymen, lived on a mountain slope, inaccessible by jeep, in a clean white house surrounded by a garden with flowers. He grew pineapple, coffee, and oranges, using modern agricultural techniques, bred hogs and chickens, and in front of his house a basketball field was installed. He knew about his country and his faith, owned some books and pamphlets of ACPO's and others, played a typical local instrument, and was anxious to learn about foreign countries when meeting the visitor. (1964: 342)

The channels of materiel input and information and decision flow of this subsystem are not clearly specified in the literature. It is suggested in Figure 3.9 that the campesino was in liason with a regional office by the end of the fourth phase, but this is conjecture: the campesino's liason with ACPO in establishing a radio home may have been the párroco.

Action Process: Other ACPO Services

During the 1950s ACPO was cooperating with the Ministry of National Education in offering broadcasting time daily for the instruction of teachers in rural areas. (Amaya, 1959: 407) By 1959, according to Ozaeta, 6,500 such teachers had taken the terminal examinations in these courses. (1960: 564)

7. MONITORING AND FEEDBACK PROCESSES

ACPO Monitoring Centers

The monitoring process within ACPO during the fourth phase is rarely mentioned in the literature of the 1950s; therefore, to reconstruct this process, inferences from later literature will be used to supplement the few references to monitoring.

Superstructure Monitoring

Monitoring can be implicit in the decision process if the latter receives feedback from decision-recipients. Monitoring can also be discriminated in organizational spans of supervision if the supervising echelon is required to provide feedback to some higher echelon. However, the quality of monitoring depends upon the criteria used in this process, and since there was little evidence that ACPO operationalized its objectives of the fourth phase, whatever evidence there may be of ACPO monitoring centers must be qualified by the fact that such centers may have been operating without behaviorally specified criteria.

The Asamblea General was a monitoring center through its membership of bishops some of whom were members of the major monitoring center, the Consejo. Founding and ordinary members of the Asamblea who were active members of ACPO could have supplemented the feedback provided by the Consejo's annual report to the Asamblea and enabled the latter to function as a kind of triennial monitoring center.

The Consejo was a major monitoring center of ACPO operations by reason of its designated function of envigilating ACPO operations for statutory conformity. (Cf. Figure 3.9)

The Junta Directiva had occasion through weekly meetings with the director general to monitor the entire departmental operation of ACPO which the latter supervised and monitored. (Cf. Musto, 1971: 69-71)

Although the regional offices of ACPO were components in the decision process (at least as transmission centers), their functions during the fourth phase are too little specified to permit any conclusions regarding their monitoring functions.

Three departments within ACPO may have been, in effect, monitoring centers. Williams is the only source to mention the Cultural Theatre as a potential monitoring center:

> . . . In the gatherings which are held there [at the Cultural Theatre in Sutatenza] we try to maintain enthusiasm for the cultural campaign, at the same time verifying the results of this campaign. (1950: 43)

The Statistics Department was the destination of various types of statistical data provided by local level monitoring centers. The data of this feedback will be described below. Another department, Correspondence, was a center processing the feedback of letters written by campesinos receiving or requesting ACPO services.

Infrastructure Monitoring

The párroco in each parish affiliated with ACPO was designated an ACPO supervisor who monitored the organization of radio schools by the dirigente. The párroco as the decision-maker regarding the Extension Service seminars to be held in his parish also monitored the level of campesino understanding of Extension Service broadcasts in order to determine when the Extension Service teams were to be summoned.

The Extension Service teams of experts may also be considered local level monitoring centers. By holding seminars for the campesino such teams were formally positioned to observe the effectiveness of ACPO operations.

The dirigente campesino in his work of organizing radio schools on the local level was also formally positioned to observe ACPO effectiveness.

Finally, the auxiliar inmediato was in effect a monitor of the attendance and progress of the rural students of the radio school.

ACPO Feedback Process

Superstructure Feedback

One clear instance of formal provision for feedback is the "presentación de un informe sobre las actividades realizadas a la asamblea general" which was the responsibility of the Consejo. A second, less specific, instance likely originated with the director general when "los seis membros de la junta se reunen semanalmente con le director general." (Musto, 1971: 71)

Although it must be considered that additional feedback occurred within the ACPO superstructure, such feedback is left unspecified in the literature.

Correspondence

One of the exercises which ACPO encouraged the newly literate campesino to undertake was to write letters of information about community projects, and of inquiries over problems, to ACPO headquarters. Ozaeta reports that an average of 800 letters daily reached ACPO's

Correspondence department (1960: 560) and that the Socio-economic department responsible for the Extension Service was answering an average of 200 inquiries a day sent in by listening farmers. (1960: 563) Presumably this correspondence was drawn upon for the page of letters published regularly in El Campesino. (Ozaeta, 1960: 564)

Statistics Service

Further evidence of feedback is the reporting of community projects carried out in response to ACPO campaigns (Ozaeta, 1960: 562; cf. p. 132) The source of this feedback is unspecified in the literature of the fourth phase. Another type of feedback, however, was provided by the auxiliar inmediato whose function it was to register attendance in ACPO radio schools along with the results of any examinations and forward these to the ACPO Statistics section. (Amaya, 1959: 404)

Local Level Personnel

The auxiliar inmediato was required to meet once each month with the párroco and the dirigente campesino. These meetings would apparently have constituted instances of feedback from both the auxiliar and the dirigente to the párroco as monitor of the local ACPO operation.

The Socio-economics Extension Service teams presumably were able to provide feedback to the superstructure upon their return from holding seminars in agriculture and husbandry on the local level. Cf. Figure 3.11.

A Cultural Theatre at Sutatenza is mentioned in Williams (an early source) where ACPO attempted to "maintain enthusiasm for the cultural

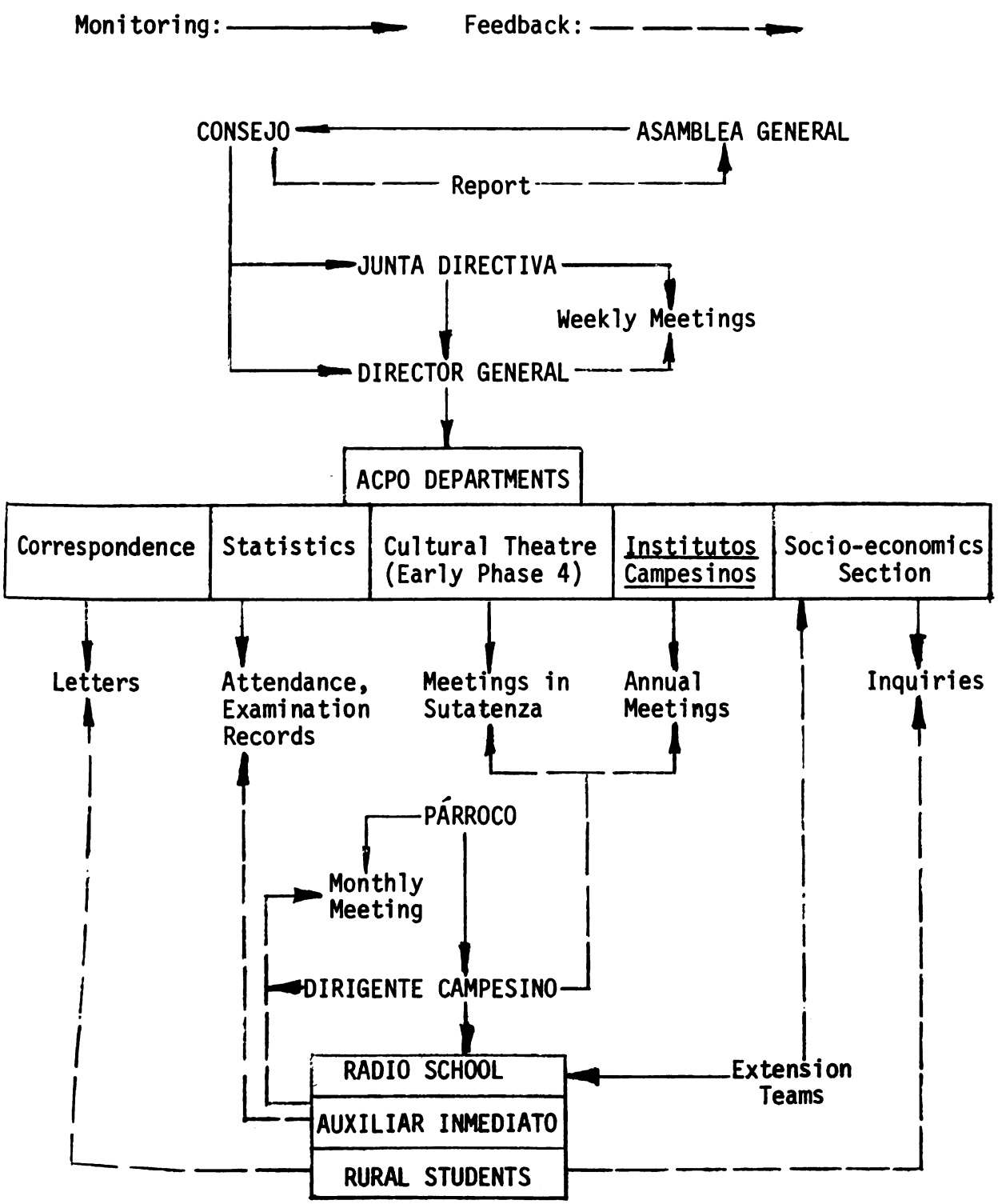
campaign" and "verify the results of this campaign." (1950: 43) The former function of the theatre would appear to have become that of the later Institutos Campesinos where local level personnel would be selected and trained at Sutatenza. The latter function of "verifying results" through the meetings at the Cultural Theatre can also be considered to have been carried out later by the dirigente campesino. The dirigentes provided two types of feedback to the ACPO superstructure. By being drawn from villages and trained in Sutatenza, the dirigente trainee would have provided ACPO with immediate interpersonal contact with the local level. After training the dirigentes were also recalled for annual meetings which provided a further regular feedback from the dirigentes to ACPO. (Amaya, 1959: 406)

The sources, types, and channels of feedback are illustrated in Figure 3.13, to the extent these are specified in the literature.

Conclusion

It will be noted from Figure 3.13 that phase four of the project seemed to provide monitoring from the Consejo to the Junta Directiva but no feedback channel in the reverse direction. Similarly, the párroco had a monitoring function but no formally specified feedback channel to a higher echelon. The only direct contact of the superstructure with the infrastructure of the project appears to have been the sporadic monitoring and feedback of the Socio-economics Section's extension teams. This deficiency may have been supplied by the abundance of correspondence and inquiries from rural students to departments in ACPO, as well as by the annual meetings of the dirigentes campesinos.

Figure 3.13. ACPO Fourth Phase monitoring and feedback.



If such was the case, the critical personnel in the ACPO reliability cycle upon whom the effective implementation and adaptation of the project depended were those personnel of the Correspondence, Socio-economics, and Institutos sections charged with interpreting the three major sources of feedback from the local ACPO echelon.

8. PROJECT MODIFICATION

Introduction

In systematic planning, the effective implementation of a system-strategy depends upon the formulation of clearly specified objectives drawn from accurately assessed environmental needs. In a limited and contingent world, both the environmental needs and the environment surrounding the system-strategy are subject to changing conditions. Hence the effectiveness and maintenance of any system-strategy depend both upon the system's monitoring and feedback processes as well as the ability of the system to re-define roles and re-arrange relationships in adapting to changing conditions.

ACPO Project Modification

The fourth phase of Radio Sutatenza has been characterized basically as an expansion of a system-strategy rather than as a development. Yet the addition of those subsystems such as the newsweekly El Campesino, the publications of the Socio-economics Section and its extension teams, and the training centers for dirigentes, can be considered to be fundamental developments of the basic ACPO system-strategy.

The addition of print media and local level interpersonal contact to complement ACPO broadcasting and the organization of radio schools can be considered evidence of Acción Cultural Popular's capacity to monitor its operation and its environment, interpret feedback, and supplement its basic strategy with new roles and relationships. These operations constitute the process of system-modification, and the developments cited testify at least to the existence of the process. As Amaya states:

> These radio programs are the results of years of experimentation. Different techniques have been tried by the broadcasters, and the reactions of the student groups carefully recorded and analyzed so as to adapt the teaching methods to their mentality. (1959: 406)

This citation, however, is virtually the only direct reference in fourth phase literature to the ACPO process of modification. The remainder of the evidence for this process was derived only indirectly by inference from the fact that during the fourth phase ACPO added subsystems to its basic system-strategy.

The Effectiveness of Acción Cultural Popular

The study of Torres and Corredor sponsored by FERES (the International Federation of Catholic Institutions of Social and Socio-religious Studies based in Fribourg) and published by CIS (Centro de Investigacions Sociales, Bogotá) summarizes the effectiveness of the ACPO system-strategy at the end of the fourth phase.

The major conclusions of this study were:

1. Acción Cultural Popular has been established as "un factor de cambio social por contacto."

2. ACPO views social change fundamentally as "un cambio de actitudes."

3. ACPO has worked to change principally attitudes toward the "valor del progreso técnico" and "valor del progreso cultural." ACPO has succeeded in introducing:

> . . . la inquietud del cambio y, por tanto, al progreso mediante la teoría y la practica. Los campesinos comienzan a darse cuenta de que es posible un mejoramiento, que hoy les abre mejores horizontes. (1961: 53)

4. However, "el mejoramiento obtenido no corresponde aún a las necesidades objetivas ni a las necesidades sentidas de los campesinos." (1961: 53) The authors urge an expansion of the infrastructure to provide technical experts within a closely coordinated plan of social and technical reform in order to close the gap between the campesinos' rising expectations and disappointing results.

5. ACPO, the study found, stood as a symbol of the párroco and the Church.

6. The párroco has come to be viewed as "un factor de cambio socioeconómico eficaz." (1961: 53-54)

7. The success of the ACPO project "no reside únicamente en el prestigio o interés del párroco de la localidad . . . pero donde el párroco se interesa y se consagra íntegramente a la causa, allí los resultados son magníficos." (1961: 54)

8. The ACPO system-strategy in itself is one effective solution to the problem of a dispersed population. However, for reasons such as violence and the insecurity of the countryside, the Colombian population was becoming increasingly urbanized: by 1960 an estimated 33.7% of the population was living in urban centers of 10,000 or more.

Therefore it was indispensable for ACPO to maintain a continuous program of investigation, planning, and development through the use of demographic and economics experts in order to insure the continued relevance of its operation.

9. Success of the ACPO project, the study urged, would depend upon:

A. ACPO planning which would be coordinated with other regional and national planning if the former were not to become a hindrance to the latter;

B. the continuous evaluation of results of Radio Sutatenza;

C. the use of the most advanced technical means available together with highly qualified personnel;

D. the scientific utilization of all resources of rural communities using methods recognized as valid for community development;

E. ACPO's cooperation with all governmental and non-governmental organizations working for urban development.

10. The effectiveness of ACPO is discernible more "en el género de vida del campesino que sobre el nivel de vida en sí." The reason was that ACPO's objectives were principally educational rather than directed toward the reform of structures. In conclusion:

> Por ello, y para mejorar el nivel existente, será necesario que en la segunda etapa se dedique una atención preponderante a la reforma absoluta de estructuras. De la forma y orientación que se dé a dicha reforma dependerá la suerte de la presente década. (1961: 54)

CONCLUSION

The study by Torres and Corredor designated the ACPO system-strategy as educational rather than revolutionary relative to social

structural change, employing the *párroco* as an agent of social attitudinal change. The one positive conclusion from the study was that the ACPO system-strategy in itself was an effective response to the problems of a dispersed population.

The study did not indict the original assessment of the environment by ACPO for the study found that the system-strategy worked effectively in areas of dispersed population. Nor were objectives aimed at a dispersed population indicted. The planners' consideration of alternatives was not indicted for the study considered ACPO's system-strategy "in itself an effective response." The implementation of the project by its personnel, notably the *párrocos*, was not indicted for where the project was so implemented, ACPO results were "magnificos." (1961: 54)

What was indicted by the FERES study was ACPO's reliability cycle. The criticism of Torres and Corredor was essentially that the Colombian environment had undergone changes to which ACPO did not respond. At the end of the fourth phase, ACPO might have been able to reply either that ACPO was taking measures to respond to these changes or that responding to these changes was not the work or responsibility of ACPO. Whatever ACPO's *apologia*, the implications of the FERES study were that ACPO's reliability cycle had missed:

1. the increasing urbanization of the Colombian population;

2. the importance of coordinating ACPO planning with governmental national and regional planning;

3. the necessity of more consistent evaluation of ACPO results;

4. the necessity of employing more highly qualified personnel, more advanced technical means, more scientific use of community resources and proven methods of community development;

5. the necessity of ACPO's cooperation with other organizations working for urban development;

6. the necessity of ACPO to address itself not only to social attitudinal change but the reform of social structures if ACPO's own strategy was not to be ultimately destroyed by the frustration of the campesino's rising expectations.

The FERES study, however, is as much subject to review as the operation of Acción Cultural Popular. In effect the study challenged ACPO to respond more specifically to designated changes in the Colombian environment. Such a challenge rested on specific assumptions such as the relative significance of the indicated changes and the appropriateness and responsibility of ACPO relative to other organizations to create a system-strategy to meet those changes in the environment.

The fifth phase, the 1960s, of the ACPO operation will be examined primarily through documentation provided by a critical study carried out at the end of that decade, in order to discover to what extent ACPO met the challenge set by the FERES study.

THE FIFTH PHASE

INTRODUCTION

The description of the fifth phase of Radio Sutatenza will be drawn almost exclusively from the study of ACPO by Musto under the sponsorship of the Deutsches Institut für Entwicklungpolitik, Berlin.

This study was carried out between November 10, 1968 and January 20, 1969 to analyze and evaluate the efficiency of Acción Cultural Popular for the Ministry of Economic Cooperation of the Federal Republic of Germany. (Musto, 1971: 45)

The edition of the study which will be used is the Spanish translation financed by ACPO to which ACPO appended a critical prologue and explanatory glosses within the text. Because of the unavailability of an English text of the Musto study, citations from the Spanish text will be rather extensive, to provide sufficient context for the various lines of argument based on a foreign language text.

Scope and Method of the Musto Study

The objective of Musto's study was to evaluate the effects of Acción Cultural Popular relative both to ACPO's objectives and the developmental objectives of the government of Colombia.

The method used was to operationalize ACPO's main objectives under the concepts of (1) modernization of personality, (2) modernization of living conditions, and (3) the degree of contribution by ACPO to the socio-economic development of the Colombian population. (Musto, 1971: 58)

The concept of "modernization of personality" was operationalized in terms of the degree of information, motivation, and attitude relative to social change. The concept of "modernization of living conditions" was operationalized in terms of innovations and improvements carried out by the rural population in the areas of social or economic life, health, etc. The concept of the "contribution to rural socio-economic development"

was operationalized in terms of the integration of the marginal Colombian population (ACPO's target population) into the economic process of the country, and the increase of agricultural productivity expressed as the increase of a campesino family's income. (Musto, 1971: 59)

The study was effected through an investigation of six different regions of Colombia selected according to their degree of influence by ACPO, their socio-economic development, and their socio-cultural comparability. Thus, the three experimental regions of the study were regions heavily influenced by ACPO and the three control regions were regions practically uninfluenced by ACPO; three regions were relatively developed socio-economically, and three were relatively undeveloped. Socio-cultural comparability was attained by selecting the six areas so as to reflect both the ethnic heterogeneity of Colombia in general and the target population of ACPO in particular.

The investigation was carried out through interview by questionnaire of 1000 subjects comprising three classes: alumni of ACPO radio schools, non-alumni listeners of Radio Sutatenza, and the control group of non-listeners of Radio Sutatenza. In addition to this quantitative data, qualitative data was obtained through interviews of ACPO personnel, Colombian national and local government officials, representatives of organizations concerned with socio-economic development, and local level ACPO and non-ACPO personnel such as párracos, alcades, dirigentes campesinos, and campesinos. (Musto, 1971: 63)

Secondary data was added to the study from sources such as ACPO statistics and literature dealing with ACPO as well as problems of socio-economic development in Colombia. (Musto, 1971: 63-64)

The study and its results will be described in the discussion of the fifth phase only to the extent required by a systematic analysis.

Scope and Method of ACPO's Prologue and Glosses

The ACPO translation into Spanish of Musto's study contains not only an extended prologue critical of the German investigation of ACPO but also a running critical commentary inserted into the text of the report. The general reason ACPO gives for such additions is that ACPO disagreed with the methodology and many of the affirmations of Musto's study. (Musto, 1971: 9-10)

The specific reasons for ACPO's critical additions were:

1. ACPO felt the German study lacked objectivity in its use of anonymous sources critical of ACPO or the hierarchy of the Church. (Musto, 1971: 11)

2. ACPO felt that the methodology used in the study was of insufficient breadth in permitting conclusions from extremely localized results. (Musto, 1971: 65)

3. ACPO felt that the investigation was biased toward a view of development applicable only to developed western countries.

4. ACPO felt that the study was further biased by assumptions regarding democratic institutions as well as the role of the public sector in development which were assumptions inapplicable to the largely privately-sponsored Radio Sutatenza in a country like Colombia with its particular political traditions. (Musto, 1971: 11)

5. ACPO felt that the methodology of the study in employing concepts such as "modernization", "innovations", "modernity", and "change",

etc., was resorting to abstractions which were both irrelevant and illusory to the Colombian campesino. (Musto, 1971: 58)

The method of the ACPO commentary added to the German study is summed up in a section entitled "Critica--Anticritica--Autocritica". The first principle of the method is that ACPO must be recognized as a Colombian fact--which indeed the Musto study did. The second principle is that when something is criticized, "siempre existe una razón (racional) que permite dicha critica, independientemente de la intención del criticante." (Musto, 1971: 13) This ACPO calls the principle of objective truth and adds the implication that the objective truth of anything is always a larger whole than any particular criticism. (Musto, 1971: 13)

The third principle in ACPO's "method" is the principle of subjective truth, viz., all critique is an interpretation from a particular viewpoint and to evaluate the criticism, the viewpoint must be understood. (Musto, 1971: 13) A fourth principle in its method ACPO terms that of converging and divergent criticism. When criticisms from ideologically different viewpoints agree, it can be assumed that the criticism is valid; when criticisms contradict each other, it can be assumed that none of the criticisms is objectively true and that the object of the criticism holds a third position. Thus, when ACPO is criticized by some as overly clerical and by others as insufficiently clerical, it can be assumed that ACPO (the object of the criticism) holds neither, but a third, position. (Musto, 1971: 13-14)

The fifth principle of the method is that a critic has more objective truth to the extent the critic understands the context of the object of criticism. (Musto, 1971: 14)

With these five principles ACPO evidently felt that it had established philosophical credentials sufficient to sift Musto's study for what ACPO considered valid criticism, and qualify or deny whatever criticism ACPO considered ACPO considered vitiated by the investigators' western viewpoint.

It would seem that by elaborating with such tortuous argument a justification for its counter-critique of the German study, ACPO reveals how unusual a process it considers "criticism" to be. Criticism in fact is nothing more pretentious than the operations of monitoring a system-strategy and its environment, feeding back significant data to decision centers, and modifying the system-strategy to meet environmental needs more effectively. If ACPO's reliability cycle had been fully operative during the fifth phase, it would seem that Musto's study would have revealed little that ACPO had not already recognized.

Finally, the method ACPO advances as its justification seems less than valid. The principle of "subjective" truth as distinct from a principle of "objective" truth applies equally to Musto's study, ACPO's commentary, and to ACPO's observations concerning subjective and objective truth. Thus, ACPO's five principles of criticism can justifiably regarded as an incomplete, subjective epistemological viewpoint, just as much as this sentence criticizing ACPO's five principles can be so considered. For a discussion of this dilemma and its solution, cf. "The Notion of Objectivity" in Lonergan, 1970: 375ff.

1. THE ENVIRONMENTAL NEED

Introduction

There are two views of the Colombian environment contained in Musto's study of ACPO which differ not as much in their empirical details as in their empirical philosophy. Both the ACPO prologue and glosses on the one hand, and Musto's critical evaluation of ACPO on the other, contain some agreement on the concrete environmental needs of Colombia. ACPO and Musto differ, however, in the hierarchizing of certain environmental needs relative to others, the identification of the most strategic needs, and the empirical philosophy which should determine both the identification of needs and their strategic hierarchization.

The empirical philosophy both of ACPO and the Musto report varies in explicitness, and yet nowhere does either contestant go beyond an assertion of an implicit philosophical position regarding empirical effects to a radical critique of the difference between the two philosophical views.

The following discussion will diverge from previous discussions of environmental needs. The specific environmental needs of the fifth phase will be cited in order to demonstrate how ACPO and the Musto report viewed the Colombian environment, but the focus of the discussion will be the variant hierarchizing of these needs and the empirical philosophy underlying the process of hierarchizing.

The Specific Environmental Needs

The Viewpoint of ACPO

As in the fourth phase, so also during the fifth phase, ACPO shows no evidence of a formal, systematic investigation of the environment

controlling its formulation of objectives. There is evidence, however, of ACPO's awareness of specific needs of the Colombian environment in passages of its commentary such as the following.

> . . . En efecto, los problemas relativos a la salud, la vivienda, la carencia de servicios, la desnutrición, el aislamiento, la inestabilidad familiar, la falta de participación en las decisiones communitarias, la ineficiencia laboral, la carencia de organizaciones de base efectivas, la falta de técnica y productividad, la carencia de adecuados sistemas de recreación, el desconocimiento de los valores de la propia dignidad personal y communitaria, etc., subsisten en la actualidad, in mayores proporciones que hace 20 años, cuando se inició el trabajo de las escuelas radiofónicas. (Musto, 1971: 15)

Although the list of environmental needs cited above is lacking in operationalization, ACPO demonstrates its familiarity with Colombian environmental needs.

The Viewpoint of the Musto Evaluation

The needs of the Colombian environment during the fifth phase as depicted by Musto can be summarized as follows:

1. An estimated 48% of the Colombian population of 19.8 million lived in communities of less than 2,000 inhabitants. This figure represented a decreasing percentage in view of Colombia's rapid urbanization. (Musto, 1971: 132) In a gloss in the text, ACPO immediately challenged this interpretation by stating, ". . . por el contrario, los indicos reales señalan las mayores tasas de crecimiento demográfico en las áreas rurales." (Musto, 1971: 132)

2. "En el campo de la salud, los dos problemas más graves que afectan las áreas rurales, son la insuficiente atención medica y las deficiencias en las nutrición." (Musto, 1971: 133)

3. "Las condiciones habitacionales son similarmente deficientes. . . . 80% de las viviendas rurales son de inferior calidad. En promedio, 6.7 personas ocupan un recinto habitacional y la quinta parte de las casas tiene un solo dormitorio." (Musto, 1971: 134)

4. The educational situation of the 1960s as compared with the 1950s had notably improved. In 1964, the percentage of the population over fifteen years of age who were illiterate stood at 27%; half the school age population attended school during the year 1965-66; the prediction for the school year 1969-70 was that 83% of the population seven to twelve years of age would be attending school; and the number of adult illiterates continued to decrease. (Musto, 1971: 134)

5. The agricultural needs of the Colombian environment, however, remained serious:

> . . . Los rudimentarios métodos de producción, el monocultivo ampliamente extendido, la falta de credito y una estructura de la propiedad asocial, y económicamente inefective, son indudablemente los factors responsables de la baja productividad agricola. (Musto, 1971: 135)

6. The 1960s saw a radical change in the demographic and sociocultural structure of Colombia. Violence in the countryside forced the <u>campesinado</u> out of total isolation into forms of community which dissolved certain traditional structures and created others "<u>de tipo secundario functional</u>." (Musto, 1971: 199) The ACPO gloss upon this analysis is that "el significado y el efecto de estas expresiones tempranas de communitarismo en las áreas de la economía y la sociología varían grandemente de un analista a otro." (Musto, 1971: 199)

7. The 1960s further saw infrastructural changes in the agricultural economy. Government planning began to exploit uninhabited lands,

the technology of production improved, and the electrification of rural areas had at least begun. (Musto, 1971: 199)

8. The seventh decade also saw a significant increase in radio transmitting stations with ranges covering the isolated campesino population. (Musto, 1971: 199)

9. In the field of education, government planning had considerably increased the number of rural primary schools. (Musto, 1971: 200)

10. The need for a sense of community on the part of the isolated campesino was far less acute than formally because of the operation of various organizations of development which "logran producir automáticamente tales efectos." (Musto, 1971: 200)

The Hierarchization of Needs

ACPO's Target Population: The Isolated Campesino

A primary instance of ACPO's hierarchization of environmental needs occurs in its continued orientation toward the marginal rural population. Salcedo reiterated this selection within the field of Colombia's environmental needs in an interview cited in Musto (1971: 130):

> Pregunta: ACPO tiene la alternativa de concentrar sus esfuerzos a aquellas regiones en las que el proceso de desarrollo ya ha comenzado y donde el trabajo educativo alcanza con mayor facilidad los resultados deseados, o a aquellas regiones cuya población vive todavia en un aislamiento total. En este ultimo caso, ¿ ACPO corre el peligro de no alcanzar sino un éxito minimo?
>
> Salcedo: Nosotros hemos elegido la segunda posibilidad, de esto no cabe duda.
>
> Pregunta: Si ACPO, en vez de acelerar el desarrollo en aquellas regiones donde este proceso ya se encuentra en una fase dinámica, se decide por actuar en las zonas marginales

> ¿ tendra que luchar contra un circulo vicioso, contra una estructura básica que no podrá romperse o alterarse por el único instrumento de la educación?
>
> Salcedo: Nosotros no buscamos resultados espectaculares, sino el éxito a largo plazo.

The line of questioning pursued by the investigator suggests that the Musto investigators considered that ACPO would do better to direct its efforts not toward the marginal population but toward sectors of the environment which had begun a dynamic phase of development. The argument advanced is that ACPO's minimal education tended to leave the marginal population in a vicious circle of raised expectations with no realistic possibility of soon being integrated into the social community on the basis of that education. However, regarding its selection of the marginal population, ACPO was confident:

> . . . Estamos seguros de la necesidad de nuestro trabajo: justificamos la existencia de ACPO, y estamos dispuestos a continuar en esta tarea, cuyos resultados necesariamente son a largo plazo. (Musto, 1971: 19)

The foregoing of short-term and obvious results by ACPO may have served as an effectiveness criterion supporting its choice of the marginal campesino as the target population. Musto criticized such a criterion and its implicit philosophy of empirical effects:

> . . . En el supuesto de que la institución haya disagnosticado correctemente las necesidades de la población rural y propagado innovaciones realmente relevantes, el resultado de sus esfuerzos debería manifestarse a la larga, en cambios concretos y significativos a nivel nacional. (Musto, 1971: 129; italics added)

That ACPO's activity should generate results identifiable on the national level is a statement of Musto's philosophy of empirical effects, and as such, is no more an argument than ACPO's statement that the

results of its activity will be identifiable only in the long run. ACPO was confident of its hierarchizing the needs of the Colombian environment in such a way as to make the isolated campesino population its target, and deflected criticism of its effectiveness by claiming its results were long-term. Musto entered the counter-claim that results, whatever their character, should be noticeable--given ACPO's more than twenty years of operation--at the national level. Neither the critic nor the criticized, however, evaluated the implicit philosophies of empirical effects underlying the two positions.

The strongest argument advanced by Musto against ACPO's restricting its activity to the marginal campesino was that Colombia's overall development planning required the coordination of all economic sectors. The rural population (estimated to be 48%) constituted the primary economic sector contributing 30% of the gross national product. This contribution, however, represented 80% of all Colombian exports. Hence:

> . . . El crecimiento de la economiá y el desarrollo del país, estan, pues íntimamente ligados a las relaciones de producción existentes en el sector primario y al destino de la población rural. (Musto, 1971: 133)

Since the export economy depended upon the rural population, development planning relative to the marginal population of necessity had to be coordinated with the planning of other sectors. Such coordination had been lacking. The gross national product from 1961-66 was estimated to have increased 4.4% against a relatively constant population increase of 3.2%. The GNP increase, however, was:

> . . . un crecimiento desequilibrado: el sector agrícola, con la tasa de crecimiento demográfico mas elevada, queda muy relegado respecto al desarrollo general. (Musto, 1971: 133)

Thus, in summary, Musto states:

> El desarrollo del sector primario tiene efectos decisivos sobre el desarrollo nacional, por sus repercusiones sobre la balanza de pagos, la estructura ocupacional y distribución del ingreso. Las medidas de fomento por eso no pueden limitarse a mejoramientos aislados. Mejoras conducentes a afirmar la autarquía de la economía rural de subsistencia serían diametralmente opuestas a las [nationales] metas declaradas. (Musto, 1971: 133)
>
> . . . . . .
>
> . . . Como ya lo señalaba el Plan de Desarrollo de 1961, es vano discutir la preponderancia del crecimiento económico ante el desarrollo social o viceversa, o si las medidas promotoras del desarrollo rural deben concentrarse sobre la educación e instrucción del campesinado o sobre la introducción de innovaciones técnicas y de relevancia económica. Solo promete un éxito permanente, si el mejoramiento tiene lugar simultáneamente a todos los niveles, mediante la aplicación de medidas múltiples y complementarios. (Musto, 1971: 135)

ACPO's Target Area: Attitudes and Thought Patterns

A second instance in ACPO's hierarchization of environmental needs can be seen in its selection of the educational need for changes in attitudes and thought patterns over the educational need for technological knowledge or the socio-cultural need for structural change. Regarding its preference, ACPO is quite explicit:

> ACPO considera:
>
> 1. Que el mayor problema del subdesarrollo, no consiste en la carencia de cosas, sino en la incapacidad de las personas y de las grandes masas para superar sus condiciones de atrasó y para vencer los obstáculos surgidos de su propia incapacidad. Estos obstáculos son generalmente de carácter cultural, entendido este término en lo que hace relación al mundo de los valores tradicionales, que implican un alto grado de conformismo, provindencialismo y dependencia.
>
> 2. Que los problemas relativos a los niveles de vida, se derivan primordialmente de las actitudes y esquemas de pensamiento arriba descritos, y no solo subsisten en la actualidad, sino que tienden a agravarse. (Musto, 1971: 15)

While ACPO has shown evidence of its awareness of the concrete needs of the campesino, in the above passage ACPO is clearly engaging in hierarchizing these needs by subordinating them to the fundamental incapacity of the masses to improve their own conditions of life because of attitudes and thought patterns of conformism, paternalism, and dependence.

The empirical philosophy of development underlying this subordination by ACPO can be gleaned from passages relating specific concrete needs to "fundamental" needs:

> . . . la educación fundamental integral, según la hemos entendido siempre en la Institución, va al fondo de estos problemas, pues está orientada en su contenido a crear en las masas populares un cambio de actitudes. . . . (Musto, 1971: 15; italics added)
>
> . . . . . .
>
> . . . "ACPO no crea cooperativas, pero las agencias estatales dedicadas a esta tarea frecuentemente basan su trabajo en los fundamentos creados por ACPO," declara Salcedo: ". . . En todo caso, la institución considera como su función preparar al campesinado para el proceso de desarrollo, sin influir directamente en la determinación del contenido concreto y en el control formal de este proceso." (Musto, 1971: 131; italics added)

Thus, the empirical philosophy held by ACPO was that there is an indentifiable foundation of attitudes and thought patterns of conformism and dependence which are the origin of the concrete problems of the isolated campesino. The fundamental environmental need underlying other environmental needs, therefore, was to change these attitudes and thought patterns. In addition, such changes were considered by ACPO to be feasible without influencing or directly determining the content of development.

The criticism by Musto of ACPO's empirical philosophy implies an alternate philosophical viewpoint which can be discerned in passages such

as the following:

> La problemática general del "subdesarrollo" se ha reducido en buena parte a problemas técnicos y de organización para la satisfacción de necesidades concretas. (Musto, 1971: 182; italics added)
>
> . . . . . .
>
> Al mismo tiempo se han creado neuvas necesidades y neuvos problemas en las áreas rurales, marcando tareas neuvas para todas las instituciones empeñadas en ofrecer instrumentos de solución. Estas tareas consisten cada vez menos en la divulgación de contenidos educacionales generales para elevar el nivel socio-cultural y cada vez más en la solución de problemas concretos de índole economica y técnica. (Musto, 1971: 200; italics added)
>
> . . . . . .
>
> ACPO no desea dirigir y organizar el desarrollo, sino inducirlo. . . . Esta es un auto-restricción que la institución se impone conscientemente. . . . ¿ Qué sucede, por exemplo, si los campesinos, despues de haber sido movilizados por ACPO, son abandonados a su propia suerte y voluntad? (Musto, 1971: 129)

ACPO's answer to the question would be:

> Las revoluciones inauténticas consisten en el cambio de unas figuras impotentes, por otras figuras impotentes, en el cambio de los esclavos de un régimen por los esclavos de otro régimen. La revolución auténtica tiene sus raíces en el pueblo mismo. Esta revolución auténtica, sin embargo, necesita un período de preparación que consiste en la construcción del "hombre" en cuanto sujeto consciente del cambio.

Thus, the Musto evaluation and the ACPO commentary present a stand-off. ACPO considered that the "mayor problema del subdesarrollo" was the need to change attitudes and patterns of thought identified as conformism, paternalism, and dependence. The Musto evaluation considered that "la problematica general del 'subdesarrollo'" had come to be basically technical problems and the need to create organizations to satisfy concrete needs. Regarding the concrete needs of the campesino, ACPO considered that its work "va a la base de estos problemas" (Musto, 1971: 135), and that its task was "preparar al campesinado para el proceso de

desarrollo." This implicit separation of the structure or base of development from the content or expansion of development was termed an arbitrary "auto-restricción" of ACPO's that in effect abandoned the campesino in that it prepared him for a development which, in his isolation, would not be available unless ACPO provided it. What Musto saw as a period of abandonment, ACPO saw as a period of preparation--and vigil--until other organizations should reach the campesino to complete his development.

Conclusion

The Musto evaluation and ACPO differed in their assessment of the Colombian environment in at least three identifiable areas: the specific needs of the environment, ACPO's target population, and ACPO's target area of attitudes and thought patterns. The two divergent views have been argued to stem from divergent philosophies of empirical effects. The philosophy of ACPO was that the needs of the marginal campesino could be targeted independently of the needs of other sectors of the population, that the base of development could be isolated from the development itself, and that specific concrete technical and economic needs could be separated from fundamental needs. The philosophy of Musto underlying his criticism was that the development of the whole of Colombia was closely tied to the development of the marginal campesino, that separating a putative base of development from development itself effectively raised and dashed the hopes of the campesino for development, and that there was no more fundamental need of the campesino than that of concrete, technical and economic development.

However, nowhere in the Musto evaluation or the ACPO commentary does either side advance a conclusive argument that its particular empirical philosophy had an incontestable right to determine the assessment of Colombian environmental needs. These two divergent philosophies will consistently re-appear in the following descriptions and criticisms of ACPO planning, where further effects and the epistemology of these two philosophies will be considered.

2. FORMULATION OF OBJECTIVES

Introduction

In order to understand the objectives of ACPO as they were formulated during the fifth phase, two contexts will be considered. The first context will be that advanced by ACPO describing its objectives in contrast to the objectives of other, notably revolutionary, organizations. The second will be the context of objectives attributed by Musto to other, principally governmental, organizations engaged in planning for development.

The objectives of ACPO will be placed between these two contexts, followed by a discussion of operationalization.

ACPO Objectives vs. Revolutionary Objectives

It will be recalled that ACPO considered a fundamental need of the campesino masses to have been the change in attitudes and thought patterns of conformism, paternalism, and dependence. From its unique point of view, ACPO viewed the objectives of revolutionary organizations advocating the reform of social structures as in fact further entrenching attitudes

and thought patterns of conformism and dependence. ACPO had steadfastly refused to be drawn into the marxist revolutionary movements even to the extent of not accepting the responsibility for promoting directly basic organizations as simple as economic cooperatives. (Musto, 1971: 20)

> Si se analiza la programación radial /of ACPO/, o el contenido de las publicaciones, se encuentra una carencia de los planteamientos dialécticos de esa llamada justicia social, que contrapone en dos bandos irreconciliables a pobres y ricos y fomenta abierta o veladamente la lucha de clases. (Musto, 1971: 20)

ACPO saw the advocacy of the marxist theory of the inevitable class struggle as a courting of the masses:

> . . . Ademas, sería inútil no aceptar que exista otra cosa de mayor atracción para las masas, que hacerlas caer en la cuenta de que toda la causa de su desventura, son los ricos, que las esclavizan y se adueñan de lo que les pertenece. (Musto, 1971: 20)
>
> . . . . . .
>
> . . . El principal motivo es el convencimiento cierto que tenemos, que una actitude revolucionaria de este tipo a lo único que lleva es a la "manipulación" de grandas masas populares, con el único y exclusive objeto de cambiar los gobernantes, sin realizar realmente un cambio de estructuras.
>
> En que las masas dejen de pensar en forma conformista y milagrera, no se soluciona con este tipo de revolución. Una vez realizada, seguirán pensando que las soluciones les vendrán de lo "alto", ya no de un Dios a quien tratarán de borrar de sus mentes con toda la fuerza de una propaganda bien establecida, sino de un caudillo semidios, a quien dicha propaganda obligara a venerar con igual devoción. (Musto, 1971: 20-21)
>
> . . . . . .
>
> Pero tampoco dudamos que ese planteamiento dialéctico esta triunfando, y día por día gana terreno en la America Latina. . . . ¿ Para llegar a qué? A un fracaso más profundo y más definitivo, sin duda. Las grandes masas, completamente frustradas, en rebelión latente contra sus dominadores, y sin capacidad de expresarse. Pero esclavizadas eso sí en nombre de un sistema que se proclamará popular. (Musto, 1971: 21)

Thus, ACPO saw the advocacy of the class struggle as but another appeal to the conformist and miracle-minded masses to accept a simplistic explanation for their misfortune. Similarly, leaders advocating such simplistic solutions in effect were merely cultural replacements of the traditional "God" from whom all benefits and solutions would come. In ACPO's view, for the masses to accept such simplistic solutions from demogogic demi-gods amounted to remaining in their traditional enslavement of conformism, paternalism, and dependence. In such a theoretical context, the following description of ACPO objectives can become more understandable.

ACPO Educational Objectives

The principal objective of ACPO was educational, viz., to promote the "Fundamental and Integral Education of the People." (Nitsch, 1964: 340) This principal objective will be described through three operative definitions, five operative "notions" and five corollaries.

Three Operative Definitions

Each term in the phrase "educación fundamental integral" was considered operative by ACPO. "Educación" signified the participation in a process enriching both the educator and the educated.

> . . . Ese proceso se opera en todas las actividades de la vida humana sin excepción. Es algo que ocurre en la misma medida en que el sujeto va progresando y se va desarrollando como persona. Es un proceso de socialización en cuanto implica que el individuo aprenda a vivir en sociedad. Esta forma de concebir la educación se aparta de la concepción tradicional en cuanto esta hace un énfasis mayor en el individuo y pierde de su vista el criterio comunitario. (Bernal, 1971: 23)

The term "fundamental" most clearly demonstrates ACPO's empirical philosophy. ACPO's "educación" provides a foundation for further education. Hence "educación fundamental" was not intended as a technical education aimed at the economic aspects of development, nor as an academic education such as can be acquired through regular schooling.

> . . . Se trata de un Educación Fundamental . . . para que el hombre pueda asumir consciente, libre y responsablemente su tarea en la promoción del desarrollo. Se trata de enseñar a vivir, a participar en sociedad a un individuo que no sabe vivir y que generalmente no tiene idea de cómo puede participar activamente en la solución de sus propios problemas.
>
> La Educación es Fundamental, puesto que no pretende sacar de los individuos "profesionales" in ningún ramo. La alfabetización forma parte de este tipo de educación en cuanto capacita al hombre para incorporarse al progreso. No ocupa sin embargo el puesto de mayor importancia, puesto que existen nociones . . . orientadas hacia una incorporación más urgente del hombre a su responsabilidad social; tales son las nociones sobre tecnologia, organización, productividad, espiritualidad, democracia. (Bernal, 1971: 24)

Thus, a fundamental education was to dispose the individual to participate actively in the solution of his own problems, to enable him to be incorporated into general development, and to take up his social responsibility.

Bernal goes on to cite the sociological justification for such objectives which in effect is a list of environmental needs specific to the Latin-American man. Bernal's "justification" makes more explicit the environmental need for changes in attitudes and thought-patterns contained in the ACPO prologue of the Musto evaluation. "Educación Fundamental" addresses itself to the following problems of the Latin-American man:

1. His cultural values and conditions of life create obstacles to development.

2. His traditional religious attitudes have been based on an animistic conception of the natural world which fails to recognize causal relationships and factors of variability in the development of the material universe.

3. His traditional ideals of "caciquismo" (nobility) have veiled a paternalistic structure which disenfranchised him from his responsibility for his own development.

4. His clan traditions restricted his allegiance solely to his family.

5. His impoverished conception of the dignity of the human body restricted the measures he took to provide for his own health.

6. His impoverished conception of the value of education and organization restricted his participation in social institutions.

7. His impoverished vocabulary and forms of expression restricted his communication with others.

8. His impoverished conception of personal and family hygiene prevented his living in human dignity. (Bernal, 1971: 24)

It should be noted that many elements in the "justification" are of the ideal and not the practical order. The needs of the environment as it was conceived by ACPO were far more of a platonic nature, defined by attitudes and thought patterns, than of an experimental nature, defined by specific technical, organizational, and economic needs. These two ways of construing environmental needs, viz., the platonistic vs. the experimental, again reflect the two empirical philosophies operative in the Musto evaluation and the ACPO commentary.

The third operative term in ACPO's definition of objectives was the term "integral."

> . . . "Integral" es aquel tipo de educación que cubre todos los campos donde se desarrollo la actividad de la persona humana. Es integral porque abarca el complejo campo de las necesidades materiales biologicas de la persona humana; aspectos tales como el vestido en toda su múltiple complejidad, las formas y sistemas de alimentación, la adecuada funcionalidad y embellecimiento de la vivienda, la transformación de la ecologia, la dotación, de los servicios communales minimos para una vida digna y sana. (Bernal, 1971: 25)

Bernal elaborates the areas embranced by "Educación Integral" as follows:

1. Health, to provide the potential for the individual to function in society.

2. Language, to provide the means for the individual to communicate in society.

3. Family, to provide the understanding of affective and sexual problems as well as the individual's responsibility to his family and to society in the limitation thereof.

4. Work, to provide the individual with an understanding needed to participate in the production of goods and services for society.

5. Technology, to create standards of thought and behavior for the individual to produce a greater quantity and quality of goods.

6. Commerce, to create in the individual a sense of enterprise, a willingness to undertake risks, plan, and organize to increase his income.

7. Politics, to create in the individual an interest in the common good beyond particular parties and an ability to discern alternatives presented by particular parties according to solid criteria of effectiveness.

8. Religion, to provide the individual with a worldview matching the world in which the campesino lives, and a religious and moral context for his living and working in that world.

9. Social living, to stimulate the individual to value recreation and healthy competition. (Bernal, 1971: 25-26)

Thus, ACPO considered that "Educación Fundamental Integral" was a socializing process of individual development which provided a foundation of thought patterns and attitudes for all future development in every significant area of human life. ACPO demonstrates its philosophy of empirical effects by its conception of a foundation distinguishable from future development and by its restriction of its objectives to attitudes and thought patterns as existentially separable from actual social, economic, cultural, political, and technological interaction and organization.

Five Basic Notions

The educational subobjectives of a fundamental integral education are the five themes termed "nociones de la educación fundamental integral." These five themes organize the educational effort directed to the many areas of life covered by education as integral, and provide the "subject matter" of education as fundamental. They are as follows:

> Con la noción de Alfabeto, las Escuelas Radiofonicas intentan transmitir las habilidades básicas para leer y scribir.
>
> La noción de Número comprende capacitación para manejar las operaciones matemáticas más simples, poniendo énfasis especial en su aplicación a los problemas diarios del campesino.
>
> La noción de Salud incluye algunas ideas sobra practicas sanitarias, primeros auxilios, etc.
>
> La llamada noción de Economía y Trabajo difunde ideas acerca de las innovaciones tecnológicas, con énfasis especial en la agricultura.

> La noción de Espiritualidad comprende conceptos sobre ética, religión, libertad, democracia, etc.
> La educación complementaria proporciona algunos conocimientos sobre historia, geografía, organización comunal, cooperativas, sindicatos, musica, etc. (Bernal, 1971: 66)

The platonistic, non-experimental empirical philosophy of ACPO is again evident in its subobjectives which center on the transmission of ideas and concepts more than the development of skills.

Five Corollary-Effects

In its prologue to the Musto evaluation, ACPO states five characteristic effects that ACPO intends to result as corollaries of a fundamental integral education. With such an education, the marginal campesino will:

1. Acquire an awareness of his own value and confidence in himself which will enable him to address himself to the specific problems of his own development;

2. Be enabled to interpret the world in which he lives and to utilize that world for his own benefit and that of society by engaging the world and its problems actively instead of passively accepting problems as inevitably insoluble;

3. Acquire an attitude of planning and calculation, of weighing alternatives and evaluating his own life;

4. Acquire a minimal ability to use the technical resources available for improving agriculture and husbandry. ACPO leaves to other organizations with their resources the development of agriculture and other areas of the economy;

5. Acquire a sense of his own relation to the wider community enabling him to emerge from his traditional isolation. (Musto, 1971: 15-19)

The restriction of ACPO objectives to attitudes and thought patterns as opposed to socio-economically-related skills remains evident in the above properties of "Educación Fundamental Integral."

Acción Cultural Popular vs. Other Organizations

As was elaborated above, ACPO described its objectives against a context of marxist revolutionary organizations. The Musto evaluation, on the other hand, frequently placed ACPO's objectives against a context of the objectives of other organizations, notably those of the government.

In 1961, the Colombian government established a ten-year General Plan of Development with the following objectives:

1. To improve the Colombian balance of payments by diversifying exports and replacing food imports;

2. To raise the standards of living in the primary economic sector, viz., the rural campesino;

3. To increase agricultural productivity;

4. To increase the production of foodstuffs;

5. To increase the supply of basic materials for the building industries.

These objectives Musto summarizes as the increase of overall productivity and the integration of the rural population into the economic structure. (Musto, 1971: 133)

The Musto evaluation then cites other organizations active in rural Colombia. INCORA (Instituto Colombiano para la Reforma Agraria) was created in 1961 to re-distribute land, increase agricultural productivity

and rural standards of living by advancing credit through cooperatives for the campesino. (Musto, 1971: 138)

In 1964, ICA (Instituto Colombiano Agropecuario) was established to carry on a program of experimentation, publish the results of its programs, and prepare experts in agronomy. (Musto, 1971: 138)

Another organization, similar to one in Brazil, had been established in 1957: SENA (Servicio Nacional de Aprendizaje) was organized to increase productivity through education directed to all technological and administrative fields of occupation. (Musto, 1971: 139)

An organization dedicated to community development was Acción Comunal, which promoted community projects such as roadbuilding, aqueducts, schools, and erosion schemes. (Musto, 1971: 139)

Musto made a number of basic observations relative to ACPO's lack of coordination with the above organizations which bear on the objectives formulated by ACPO.

The first observation was that ACPO pursued objectives identical to those of the General Plan of Development many years before the publication of that plan. (Musto, 1971: 51) However, the specific subobjectives of a "fundamental integral education" promoted by ACPO tended, according to Musto, to confirm the marginal campesino in a self-sufficient independence. This self-sufficiency the Musto evaluation implicitly related to a kind of disinterest and disaffection for the goals of the General Plan of Development which include the incorporation of the campesino's subsistence sector of the economy into the general economic development of the whole country. Hence, relative to the context of the government goals of development, Musto considered ACPO's objectives as

"diametralmente opuestas a las metas declaradas" [in the General Plan of Development]. (Musto, 1971: 133)

It should be clear from the foregoing consideration of ACPO objectives that the fostering of a critical sense in the campesino regarding simplistic solutions offered by demogogues, was an objective that might result in negative interest on the part of the campesino for government-sponsored programs.

A second observation by Musto was that development must be coordinated for all sectors and levels of Colombian society if development is to have an enduring effect. (Musto, 1971: 135) He further considered that the basic Colombian need of the latter 1960s was less related to ACPO's platonistic objectives of a fundamental education than with specific action programs aimed at concrete problems of the campesino, objectives promoted by organizations such as INCORA, ICA, SENA, and others. (Musto, 1971: 200)

The response of ACPO was that its cooperation was present although indirect because its goals were ideological. (Musto, 1971: 107, 141) ACPO's more direct response, however, was that the lack of cooperation was mutual and a matter of the attitudes of the other organizations, and that the actual aim of both the Musto report and government organizations was to lure ACPO out of its political and fiscal independence into subordination to the government agencies of the public sector. (Musto, 1971: 40-41)

The root of the conflict may possibly have been, once again, the empirical philosophies of ACPO on the one hand and the Musto study investigators and action-oriented organizations of development on the

other. ACPO could legitimately claim its objectives were aimed at the base of development upon which other action-oriented organizations could build, if and only if its philosophy of development were empirically verified. That is, if the base of development can be isolated from the specific problems and solutions of development, then ACPO's pursuit of ideological objectives could be understood as entirely complementary to the objectives of other organizations. However, as long as ACPO steadfastly maintained (Musto, 1971: 16, 130) that its effectiveness could be seen only in the long run, ACPO remained in a position where its philosophy of the empirical effects of development could be maintained only by belief and not by experiment.

The willingness of ACPO to forego short-term for long-term results might seem admirable if ACPO's empirical philosophy were more susceptible of verification. Musto's evaluation attempted just this, and the following discussion will further exemplify the divergence between the two empirical philosophies.

Operationalization of Objectives

In place of an examination of ACPO's objectives for the degree of behavioral specification implicit in the terms used, a discussion of the Musto evaluation's operationalization of ACPO objectives and ACPO's reaction will better serve to illustrate the systematic implications of ACPO's formulation of objectives.

The Musto evaluation attempted to do what ACPO was reluctant to perform, viz., measure the present, short-term, effectiveness of Acción Cultural Popular. In designing the evaluation study, (cf. p. 159), Musto

resorted to his own operationalizing of ACPO objectives according to: "1. La modernización de la personalidad; 2. La modernización de las condiciones de vida, y 3. Una contribución al desarrollo socio-económico de la población campesina." (Musto, 1971: 58)

The instruments used by Musto to measure these operationalizations of ACPO objectives were scales of information level, attitudes toward social change, use of innovations, integration into the economic process, income, etc. (Musto, 1971: 58-59)

However, in a gloss at this point in the Musto text, ACPO categorically rejects these operational formulae:

> ACPO no rechaza ni resta importancia a conceptos tales como modernizacion, innovatividad, modernidad, expansion, ingreso, cambio, . . . pero . . . los considera innecesarios, presuntuosos y vagos, y lo que es peor, inductores para que aún gentes cultas y capacitadas constituyan en torno a ellos una idolatría formal y ceremonial.
>
> Indicadores tales como el de la "modernización de la personalidad" . . . peuden ser simples generalizaciones de fenómenos vitales y esenciales como el de la dignidad, . . . la participación. . . . Ni las palabras ni los hechos mismos son equiparables in ciertas realidades. . . . Modernidad para un teorizante de la academia es un concepto bastante distinto al del compesino que hoy no peude hacer sino una de las tres comidas diarias que hacían sus padres. . . .
>
> Los campesinos hambreados, marginados y provados hasta de un lenguaje para reclamar derechos, no soportan mediciones demasiado abstractas. (Musto, 1971: 58)

ACPO apparently objected to the use of Musto's operationalizations of its objectives because the terms of reference were abstract, academic generalizations no more verifiable than other terms such as "dignidad," "participación", etc. Yet both the latter terms and a multitude of others like "incapacidad" are consistently used by ACPO to frame its objectives. (Cf. Musto, 1971: 15-19; Bernal, 1971: 24-26)

It is true that, in listing the five corollary-effects or properties of a fundamental integral education, ACPO adds its own attempt at operationalization by offering what might be considered immediately visible effects of the five properties. Yet the cursory nature of the additions leaves the impression that a basic tenet of ACPO's empirical philosophy was not only that its objectives would have results visible only in the long-run, but also that as a matter of principle, ACPO results were totally invisible in the short run. ACPO not only gave no evidence of an interest in the operationalization of its objectives; it positively rejected Musto's operationalizations both on grounds of inaccuracy as well as on grounds of principle.

ACPO rejected operationalizations such as "modernidad" and "innovatividad" as incapable of measuring the effects of ACPO objectives. However, in rejecting these terms because the campesino can be manipulated by slogans using these terms and because the campesino is not concerned with such abstractions, ACPO was rejecting more than one of the canons of empirical method. The questionnaire, moreover, used in the Musto evaluation (cf. Musto, 1971: 210-230) did not contain these terms; the campesino was asked such concrete questions as his use or non-use of fertilizers and the informational sources about certain innovations, etc.

Thus it appears that ACPO's empirical philosophy made the organization opposed in principle to any operationalization of its objectives in concrete, specific terms put into questions which the campesino could answer. This opposition came not only from its conviction that changes in attitudes and thought patterns are of an ideological character too

subtle to be measured, but from its epistemological conviction that empirical method uses academic abstractions to measure the concrete realities of life, and between the abstract and the concrete there is no authentic bridge.

In conclusion, ACPO eventually must face its own dilemma, for if its oft-repeated prediction is true that its results will be visible only in the long run, when that "long run" becomes the "short run," ACPO will have to devise an empirical method and operationalized objectives in order to measure ACPO results effectively.

3. CONSTRAINTS

The principal constraints previously noted as affecting the fourth phase were the financial constraint of ACPO's largely private funding and the socio-cultural constraint of clerical personnel. (Cf. p. 99ff.) During the fifth phase, both these constraints with the additional constraint of ACPO's organizational size, appear to have been operative.

ACPO Financing

The consideration of ACPO's funding is properly part of the analysis of the action process. The financial structure of ACPO will be discussed at this point because the Musto evaluation considered the financial structure to have been a constraint upon ACPO expansion and operation.

ACPO derived a large measure of its financial support from various German religious organizations such as Misereor, Adveniat, and the Zentralstelle für Entwicklungshilfe. (Musto, 1971: 45) For Musto this input of private institutional funding was a departure from Radio

Sutatenza's early years of self-sufficient financing, and however necessary the former may have been, financial dependence limited ACPO's political and economic independence as well as its continued operation and modernization. (Musto, 1971: 50, 115)

One factor inhibiting ACPO's economic self-sufficiency according to Musto was its fiscal exemption as a private organization which prevented its entering into realistic competition with other commercial organizations. (Musto, 1971: 87)

A second factor inhibiting ACPO's financial independence was its lack of sound management. (Musto, 1971: 74, 122, 201)

ACPO's financial dependence and inferior management had, according to Musto, constraining effects upon ACPO's regional expansion (1971: 77) and its cooperation with other organizations. (1971: 78)

ACPO's response to such criticism was that educational institutions perennially need subsidy and that its objectives never included the commercialization of its operation. (Musto, 1971: 37)

Clerical Personnel and Superstructure

The Musto evaluation considered that a major constraint upon ACPO's expansion and modernization was the paternalistic and authoritarian centralization of its operations. (Musto, 1971: 72, 77) From the previous analysis of nonformal factors in the fourth phase decision structure (cf. pp. 117ff.) it can be argued that the tendency in ACPO toward centralization derived at least in part from the nonformal authoritarian ethos penetrating the project. This centralization, according to Musto, affected regional expansion and, in consequence, the local relevance of much of ACPO programming. (1971: 90)

The tendency toward centralization also affected the size of the ACPO superstructure, for the lideres campesinos trained by ACPO for regional and local operations wished, in many cases, to return to ACPO headquarters as permanent employees. (Musto, 1971: 108)

4-5. ALTERNATIVES AND THEIR SELECTION

Following the analysis of alternatives done in the fourth phase, the analysis of the fifth phase will treat the following components as equivalent to alternatives in the system-strategy of ACPO.

The Biblioteca del Campesino

According to Bernal, ACPO began publishing a series of booklets designed to reinforce its broadcasting which treated specific problems of campesino families. By 1965, ACPO had published eleven of one one hundred projected booklets dealing with subjects such as "La Vaca del Campesino", "La Madre y el Niño", and "Productividad." (Bernal, 1971:

ACPO Pilot Projects

In the 1960s, ACPO inaugurated a series of pilot projects which produced negative results, according to ACPO's evaluation:

> . . . Era ese un momento en lo cual la metodología de la acción social enfatizaba el valor de dichos proyectos. Se seleccionaron algunas zonas que se denominaron de "labor intensiva." Muchos esfuerzos de la Institución se volcaron especialmente sobre ellas. . . . Realizada una evaluación, se comprobó la inefectividad, y los altos costos de la utilización de medios masivos en programas de acción demasiado restringida. . . .
>
> Como conclusion de todo lo dicho hasta el momento, la utilización de los medios de comunicación de masas en la promoción del desarrollo social es efectiva solamente cuando se respeta la masividad de los medios. (Musto, 1971: 30)

Evidently the pilot projects subjected selected areas to mass means of communication without the complementarity of an infrastructural action process. The conclusion was implicitly identical to the very first pilot project of the third phase when the auxiliar inmediato was introduced to complement the radio broadcast: mass communication must be complemented by interpersonal communication. (Musto, 1971: 31)

Conclusion

During the fifth phase, only the Biblioteca and the pilot projects appear as equivalent to an exploration of alternative components in the system-strategy of Acción Cultural Popular.

6. IMPLEMENTATION OF THE SYSTEM-STRATEGY

Introduction

Various components of the information, decision, and action processes of the fourth phase remained unchanged in the fifth phase. These components will be noted but not treated in the following discussion.

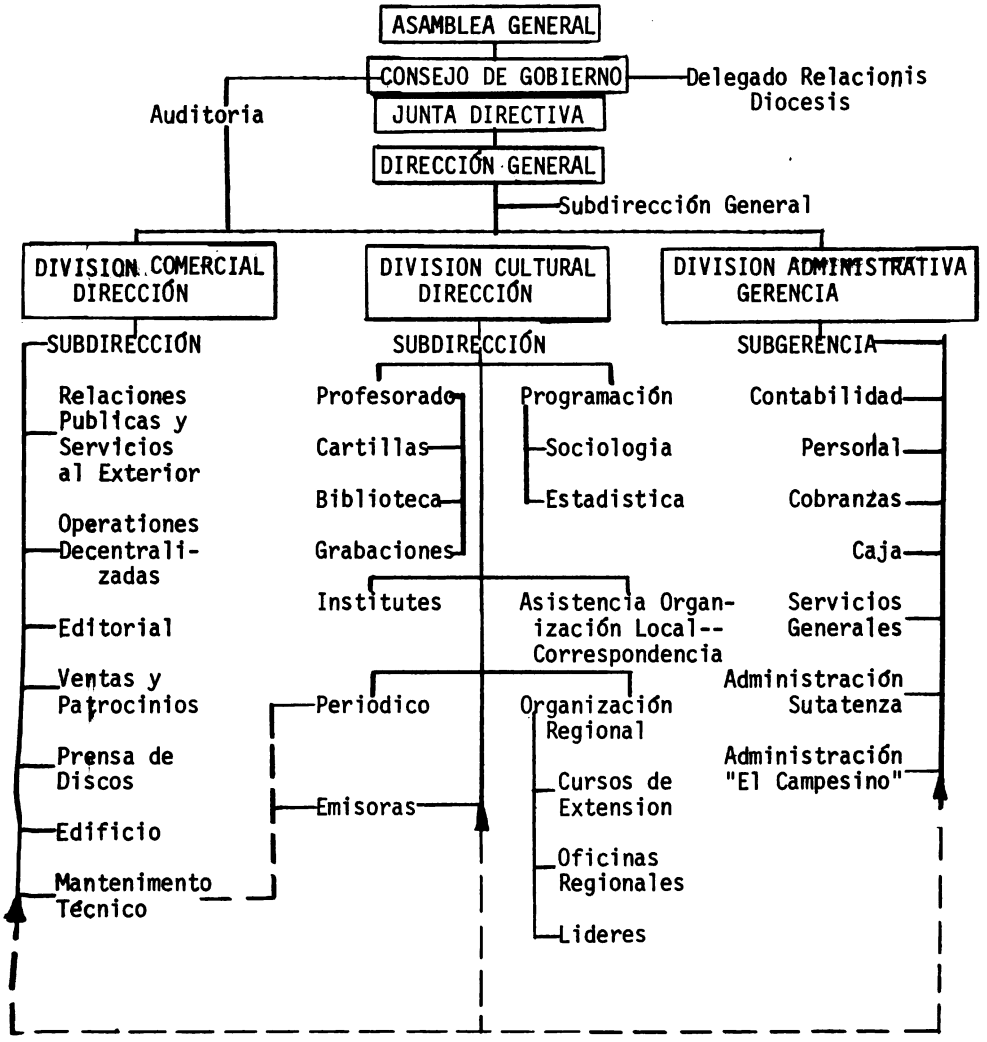
Central Organization: Decision Centers

From Figure 3.14 the expansion of the central ACPO organizational structure during the fifth phase can be seen. The functions of the principal components were as follows:

1. The Asamblea General approved general policy and three-year plans and revised official ACPO statutes periodically.

2. The Consejo de Gobierno oversaw all activities of ACPO, maintaining their conformity to established statutes.

Figure 3.14. ACPO Fifth Phase Organizational Structure



3. The Junta Directiva was "responsable . . . por la dirrección y ejecución de los programas de acción corrientes."

4. The director general (Salcedo) was "responsable por la ejecución de las decisiones; el planea y coordina todas las actividades de la institución. . . ." (Musto, 1971: 69-71)

The personnel composition and decision flow of the above components was discussed in the fourth phase. The most notable organizational differences between the fifth and the fourth phases would seem to be the divisional structure and the components establishing decentralized and regional operations.

Decentralized Operations: Decision Centers

During the fifth phase ACPO began to decentralize its administration and operations with the establishment of Operation Antioquia in 1964 with transmitters in Medellín, Operation Costa Norte in 1967 with administration in Barranquilla and transmitters in Mangangué, and Operatione Valle in 1969 with administration and transmitters in Cali. (Musto, 1971: 75-76)

The purpose of the decentralization was localization of planning and programming. Radio Sutatenza in Bogotá was thus able to concentrate on problems of Colombia's colder climate, Radio Sutatenza in Cali and Medellín (Antioquia) on problems of the temperate regions, and Radio Sutatenza in Barranquilla upon problems of the tropical zone. The decisions to decentralize ACPO's operations, however, were conditioned by more than the differential in Colombia's climate. Musto claimed that ACPO was reluctant to release its centralized grip on the organization's

operations, and cites Salcedo's cautious decision "'ampliar las actividades descentralizadas de la institución con el maximo cuidado y cautela.'" (Musto, 1971: 76; italics added)

Operation Antioquia with transmitters in Cali and Medellín was the first step in decentralization. Established in 1964, it has its own special ACPO statutes, limited autonomy within the central organization regarding administration and finances, its own Instituto Campesino, and a regular page in El Campesino devoted to its region. (Musto, 1971: 79)

The components in the decision structure of Operation Antioquia are the following:

1. A Junta Directiva directs the operation and is composed of nine members appointed by Salcedo (according to Musto) or the central Junta (according to ACPO) in addition to a permanent delegate of the central organization.

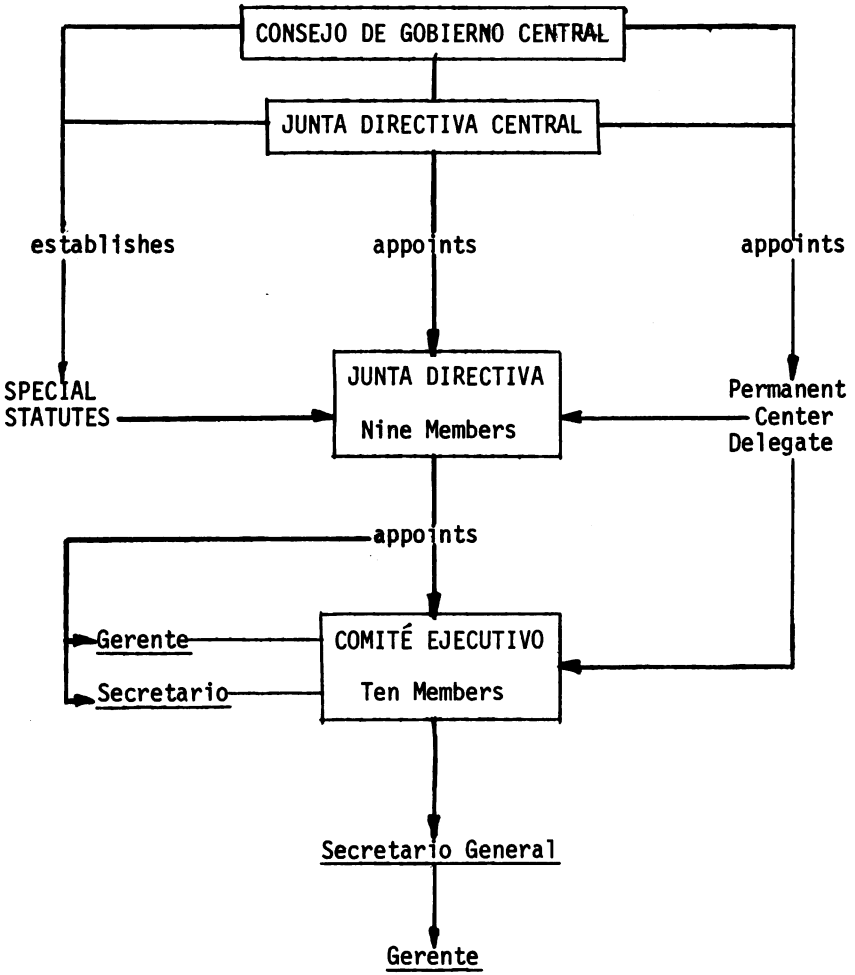
2. A Comité Ejecutivo consists of ten members designated by the above Junta as well as the permanent delegate of the central organization, the gerente and the secretario of Operation Antioquia.

3. The gerente and the secretario are appointed by the Junta also. (Musto, 1971: 79)

In the literature, only Operation Antioquia's organizational structure is described fully. Presumably the later decentralized Operation Costa Norte and Operation Valle followed the same pattern which is illustrated in Figure 3.15. However, the source of the special statutes and the relative positions of the gerente and secretario general is left unspecified in the literature.

Figure 3.15. Organizational structure of decentralized operations.

Decision transmission:



Decentralized Operations: Decision Transmission

The autonomy of ACPO's decentralized operations is clearly limited by the central Junta Directiva. The Junta controlled the membership of the decentralized Junta explicitly and most probably controlled the appointment of the permanent delegate and the content of the special statutes.

The decentralized Junta, functioning under the central Junta, then would appoint the members of the Comité including the gerente and the secretario who were responsible for the implementation of decisions.

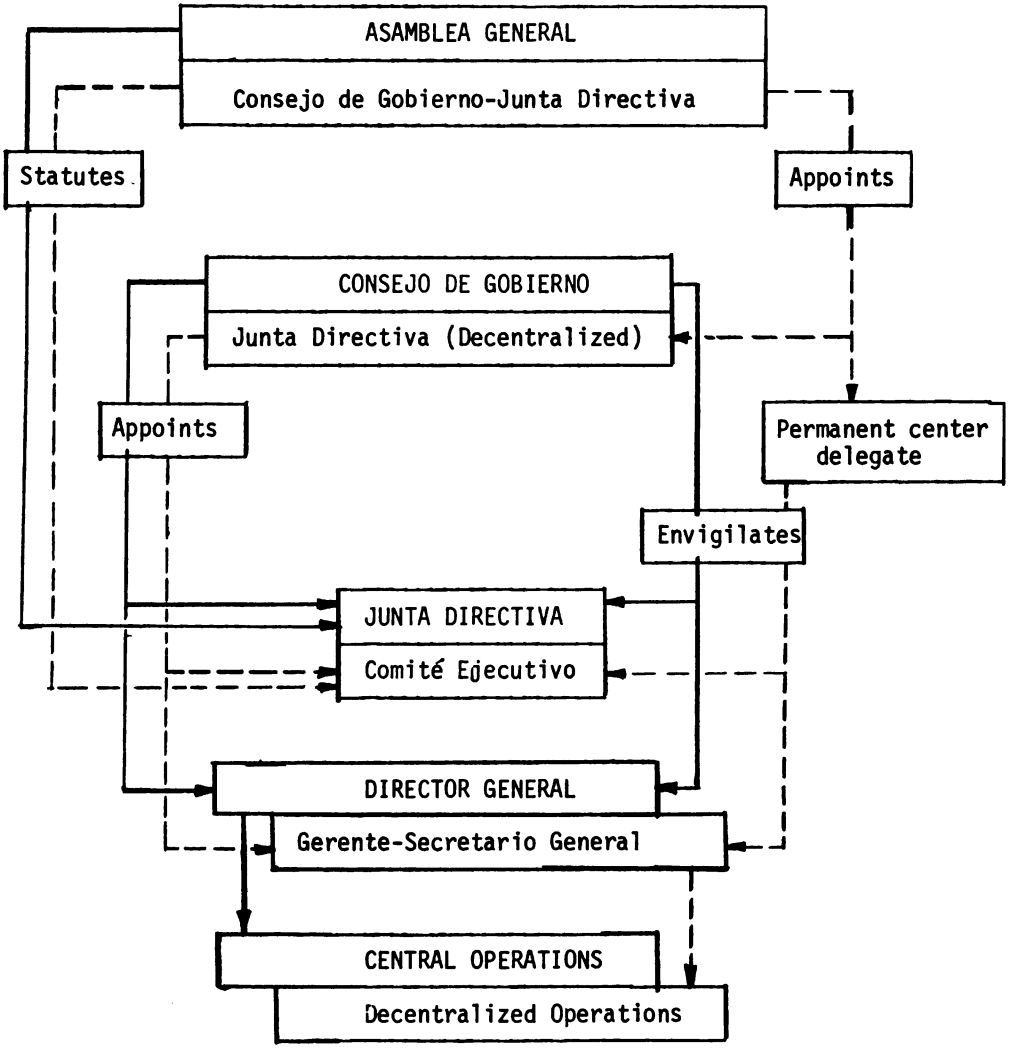
The permanent delegate from the ACPO center would seem to have had powers analogous to the Consejo de Administración of the central organizational structure. By reason of his position in both the Junta and the Comité coupled with his dependence on the latter for his appointment, he would seem to have been placed in a monitoring position similar to the envigilating position of the Consejo. (Cf. Figure 3.5) His presence in the Junta and the Comité added central control to the decentralized operations beyond the center personnel appointments alluded to above.

The relationships of decision transmission in the decentralized organizational structure in fact duplicate relationships found in the central organizational structure. A comparison of the two structures is found in Figure 3.16 which combines data from Figures 3.5 and 3.15. Thus, just as the Asamblea established statutes for central Junta, so the Consejo established them for the Comité. Just as the Asamblea appointed the Consejo, so the central Junta appointed the decentralized Junta. Similarly, just as the Consejo appointed both the center Junta and the director general, so the decentralized Junta appointed both the Comité

Figure 3.16. ACPO Central and Decentralized Structures Compared

Central Structures: Upper case (——►)

Decentralized Structures: Lower case (- - - - ►)



and the gerente and secretario. The Consejo envigilated the central Junta and the director general for statutory conformity just as the permanent center delegate was positioned to do the same relative to the Comité and the gerente and the secretario.

Decentralized Operations: Spans of Supervision

The implication of the above comparison lies in the fact that each echelon within the central organizational structure assumed the functions of its immediately superior echelon and carried out these functions to create the decentralized structure. By having certain center organizational components carry out higher functions vis-a-vis the decentralized organizational components, ACPO effectively interlocked its central and decentralized structures. Thus, if the Comité wished to revise its statutes, it could go no further than the central Consejo or Junta which, within the central organization, had no power to establish statutes by which they themselves were governed. If the Comité or the Operation Junta were to object about their personnel composition, they could appeal no further than the central Junta which was itself subject to the personnel decisions of the Consejo.

This method of echelon-interlocking not only insures tight supervision by the central organization, but also witnesses to the relatively slight autonomy granted to Operation Antioquia, Costa Norte, and Valle by ACPO.

Regional Structure: Decision Centers

During the fifth phase, the regional as well as the local organizational structures underwent expansion. In addition to its training program for dirigentes campesinos established in 1954, ACPO established a second leadership course for lideres locales in 1962 and a third course for lideres regionales in 1965. (Musto, 1971: 103) By 1967, there were 33 lideres regionales, 188 lideres locales, and 5,661 dirigentes campesinos providing ACPO with the interpersonal component in its communication structure.

In 1966, ACPO established regional offices in all the principal towns of Colombia including all diocesan sees (residences of bishops). These offices were staffed by administrative structures and lideres regionales with a delegate appointed by a bishop to oversee the regional operation "desde el punto de vista espiritual y no desde el administrativo. . . ." (Musto, 1971: 75)

As in the fourth phase, the organizational structure of the fifth phase seems to have retained the párroco as supervisor of the radio schools, while it appears to have re-assigned certain functions of the local level to other personnel:

1. the parish priest was "apoyado" by a representante parroquial;

2. the radio schools were established by either lideres locales or dirigentes campesinos;

3. the dirigentes campesinos sometimes performed the functions of auxiliar inmediatos. (Musto, 1971: 75)

Regional Structure: Decision Transmission

The structure of decision transmission at the regional and local levels is illustrated in Figure 3.17 following Musto, 1971: 76. Liason with ACPO was maintained both by the lider regional and the delegado in their respective areas. The exact relationship of the párroco and other personnel on the local level is unclear in Musto.

The difference between the decentralized structure treated previously and the regional structure is evident in the direct line relationship of the regional office with the central organization in Bogotá and the staff relationship of the lider regional and the regional admintration. Regarding the autonomy of the regional offices, Musto states:

> . . . su funcionamiento administrativo es eficaz, pero su autonomía es muy limitada. Representan, de tal modo, sin autoridad y presupuesto propios, los puntos de enlace entre el aparato central en Bogotá el movimiento radiofónico a nivel local. (1971: 75)

Decision Process: Nonformal Factors in Decision Transmission

Central Organization: Salcedo

The hypothesis of an authoritarian religious and educational ethos permeating the ACPO decision structure was explored in the discussion of the fourth phase. Since the structure of the central organization remained essentially the same in the fifth phase, the hypothesis needs no further elaboration. However, significant criticism was directed by Musto toward the nonformal power held by Salcedo within the central organization.

gional and Local Decision Transmission

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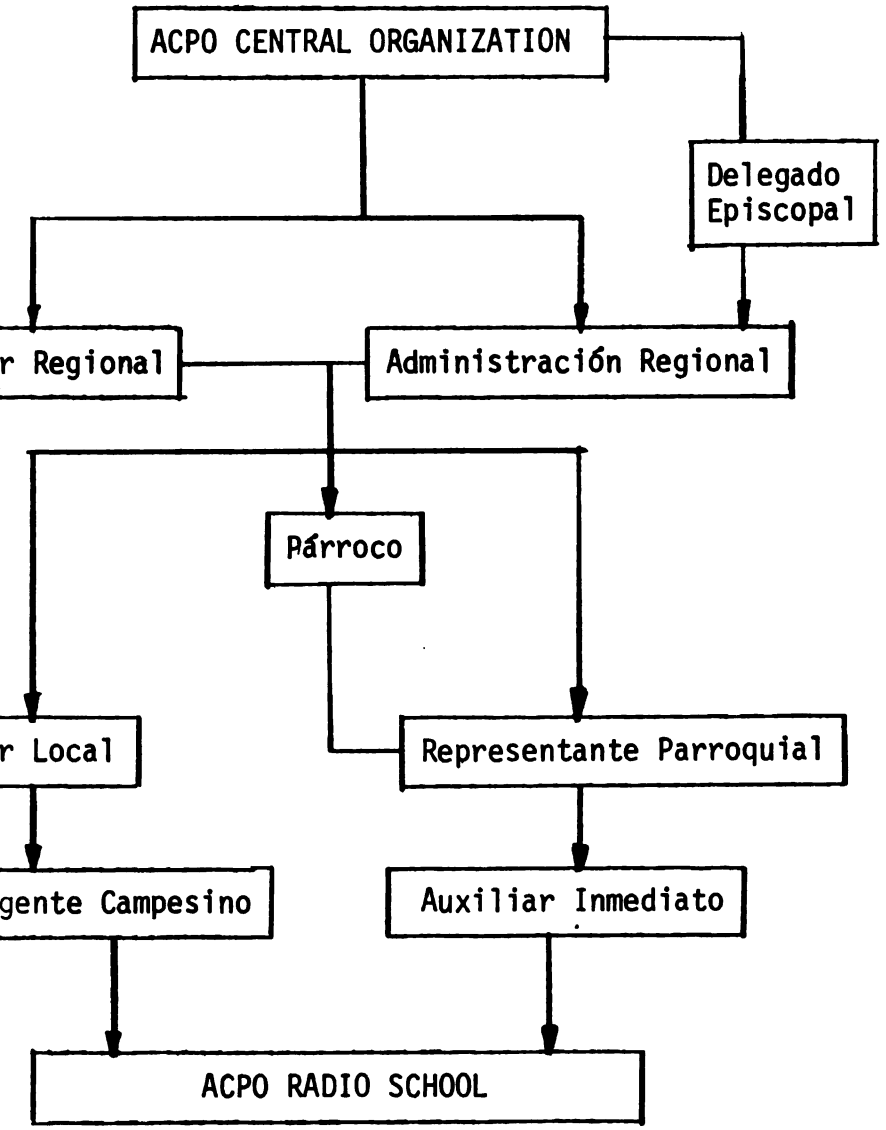
tionship: ———



The centralization of ACPO is seen in the inter-echelon linking and relatively limited autonomy of the decentralized operations as well as the heavy financial and personnel dependence of the regional structure. This centralization Musto attributed less to the statutory limitations imposed by the Asamblea than to the nonformal influence of Salcedo, the director general:

> La centralización vertical está determinada, más que por lo previsto en los estatutos, por la personalidad y estrategia de Salcedo. Aparte de ser él fundador y director general de ACPO, el representa practicamente la única y última instancia de decisiones fundamentales. (Musto, 1971: 71)

Salcedo's influence, was conditioned formally by statute as well as his formal relationship as an appointee of the Consejo. Yet his position as a founding member in the Asamblea (owing to nonformal historical circumstance) could have been enhanced in its nonformal power by Salcedo's years of experience in the formal position of director general.

In a gloss at this point, ACPO categorically denied Salcedo's undue influence in the organization by citing the formal statutory restrictions upon his office. (Musto, 1971: 72) Salcedo was also formally conditioned by his being an appointee of the Consejo de Gobierno. However, by nonformal historical circumstance, Salcedo was a founding member in the Asamblea General which was responsible for writing ACPO statutes. Further, his experience as ACPO's only director general throughout its history might have exercised a nonformal influence in the Asamblea.

By formal statute, Salcedo was a member of the Junta Directiva which supervised him; by historical circumstance he was a member of the Asamblea which gave him statutory authority as director general. The only body of which Salcedo was not a member within ACPO was the Consejo

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which supervised him. According to Musto, Salcedo's position:

> . . . no es completamente independiente frente a este [the Consejo] órgano de control, compuesto por los representantes de la alta jerarquía eclesiástica, de mode que las relaciones mutuas se caracterizan muchas veces por compromises tácticos. El precio que Salcedo paga por el poder que ejerce sobre la institución, es su subordinación formal a la jerarquía de la Iglesia. Algunos proyectos interesantes tuvieron que fracasar a consecuencia de esta "auto-censura" del director general, Salcedo: "Hay varios planes que no puedo presentar a los obispos." (Musto, 1971: 72)

ACPO categorically denied the charge of Salcedo's "compromisos tácticos" and stated that: ". . . jamás ha habido planes especificos de la Institución que no puedan ser presentados a los Obispos." (Musto, 1971: 72; italics added) "Specific plans of the Institution" is a phrase not necessarily co-extensive with the "various plans" which Salcedo in interview with Musto said "could not be presented to the bishops." Thus, Salcedo's own aptitude for opportune compromise may well have been a nonformal factor influencing the decision process.

Hence, there may be grounds for the view of Musto that ACPO's centralized structure was largely due to Salcedo and that the character of decision transmission within the structure was determined by Salcedo's nonformal influence. To some extent, ACPO admits this influence. While Salcedo's critics designate this nonformal influence "paternalism", ACPO terms it the charism required to organize and administer an institution such as Acción Cultural Popular:

> Desde el punto de vista científico, consideramus que ACPO presenta un formidable campo de estudio, para probar la hipotesis weberiana sobre lo que el denomino "rutinazación del carisma", que no es otra cosa sino la evolución del mismo hacia una neuva forma de organización. (Musto, 1971: 27)

There can be little doubt that Acción Cultural Popular has been the result of something approaching charism. Salcedo could hardly have brought

the radio school movement from three schools in 1948 to 21,000 in 1968 and performed this feat in a complex environment of economic, socio-cultural, and socio-religious constraints, without charismatic management. Whether Salcedo has truly "routinized" this charism by establishing role definitions and line-staff relationships which will keep ACPO operative after Salcedo leaves the organization, is a question difficult to answer as long as Salcedo holds his present positions in the organization and as long as the potential autonomy of the decentralized operations remains limited by echelon-interlocking with the central organization.

Central Organization: ACPO Mystique

From its inception, Radio Sutatenza has depended upon voluntary cooperation. Initial instances were the local level financial contributions of the early years and the numbers of volunteer auxiliares inmediates and parish assistants. Throughout the 1950s and 1960s ACPO continued to enlist amounts of cooperation which were vast by almost any measure. According to Musto, in 1968, ACPO had 660 "colaboradores" within the institution. (1971: 49) Of these, 188 were regional and local leaders, the remainder presumably regional and central organization personnel. (Musto, 1971: 106) On the supposition that the colaboradores were for the most part wage-earners within ACPO, the remaining ACPO personnel of the 1000-plus parishes and the 21,000 radio schools were voluntary collaborators of ACPO. This willingness to collaborate with ACPO constitutes a nonformal factor in the process of decision transmission, and merits some discussion of its sources and effects.

otive term for ACPO's ability to elicit cooperation on
is "mystique." Musto suggests that part of the ACPO mystique
ts general objective:

> novimiento de las escuelas radiofónicas no carece de una
> Tstica. Sin duda, se aspira a más que a la sola promoción
> reso: ACPO pretende crear un neuvo tipo de "hombre latino-
> o", capaz de tomar decisiones racionales en base a la
> a cristiana y de contribuir al establecimiento de un orden
> iferente, basado en la idea de la dignidad humana.
> 1971: 52-3)

source of the ACPO mystique in Colombia may have been the
s ethos introduced into the organization by the particular
CPO. The vast majority of personnel in ACPO positions of
members of the Colombian hierarchy and clergy, which lent
e to ACPO's aims and operations. Its canonical Church
nstitución of the diocese of Tunja provided a certain sacred
The close connection of the authoritative echelon of
CPO's central organization and the párrocos with the ACPO
cion could provide a volunteer contributor with a sense of
s dedication as a reward for his labors. (Musto, 1971:

remained however, that as long as ACPO continued as an
the diocese of Tunja with the Consejo of bishops deter-
neral policy, the volunteer lay contributor of ACPO had no
ving up in the organizational structure. As Musto states:

> institución requiere de sus colaboradores, por razones
> un entusiasmo y una convicción personal: sin embargo, no
> recerles la posibilidad de un ascenso interesante en la
> profesional. Faltan, pues elementos realmente dinámicos
> mpetencia eficaz y animada entre el personal de ACPO.
> 74)

With no "room at the top" except for ecclesiastics, the decision transmission process in ACPO had to depend upon its "mystique" to elicit the cooperation needed for its vast operation; financial and professional incentives were lacking.

According to Musto, this dependence upon enthusiasm and personal conviction alone for its operational efficiency left ACPO with second-rate managerial personnel. This deficiency was as much due to the lack of opportunities for upward mobility within the organization as to the dominant influence of Salcedo's personal character. (Musto, 1971: 73)

Thus, in addition to the socio-religious authoritarian ethos affecting decision transmission (discussed also in the fourth phase), both Salcedo's charismatic character and ACPO's socio-religious objectives can be considered nonformal factors stimulating enthusiasm and voluntary cooperation in ACPO's decision process, a process lacking the more usual financial and professional incentives.

ACPO Action Process: Fifth Phase Expansion

The expansion of ACPO during the fifth phase included both organizational expansion and the amplification of its services. The former expansion has been discussed, and the latter is summarized in Table 3.8, from Musto, 1971: 94.

These statistics were arrived at by a formula of interpolation used to rectify what Musto considered inaccuracies and duplications in ACPO's official statistics. The years 1965 and 1964 in Musto's table appear misprinted in the text. If the misprint includes the statistics of the radio schools and alumni, then the year 1964 was the watershed in ACPO's

Table 3.8. ACPO Fifth Phase Expansion

Year	Municipal Locations	Radio Schools	Alumni
1960	861	14,504	114,186
1961	892	15,924	129,861
1962	899	22,145	215,309
1963	905	24,059	227,735
1965 [sic]	911	26,101	238,563
1964 [sic]	916	28,535	240,915
1966	909	22,129	200,161
1967	849	22,781	179,685
1968	1,054	21,094	127,072

expansion of radio schools. Thereafter, both radio schools and alumni decline in numbers. The increase in municipal locations from 1967-68 may have been the result of Operation Barranquilla, just as the high point of expansion may have been the result of Operation Antioquia in 1964.

Action Process: Fifth Phase Financing

ACPO financing came from the following sources during the fifth phase:

1. a limited commercialization of mass communication enterprises, notably ACPO publishing, limited radio advertising, rental of part of its central headquarters, and capital returns;

2. a grant of 5,000,000 pesos annually from the Colombian government in subsidy of ACPO's educational work in literacy;

3. donations and grants from Colombian and non-Colombian organizations. Between 1963 and 1969, ACPO received credits and donations from

56 national and 26 non-Colombian organizations. (Musto, 1971: 113)

During the period of Musto's study, ACPO's annual budget stood at 27 million pesos and 1967 was the first year of the fifth phase in which ACPO's income exceeded its expenditures. (Musto, 1967: 114, 123)

Action Process: Technical Infrastructure

Radio Sutatenza in the fifth phase had transmitters in four major cities, and with eleven transmitters, was the largest broadcasting service in Colombia with a total broadcasting range covering the entire country except the Amazon interior in the southeast. (Musto, 1971: 84) Table 3.9 lists the transmitting stations. (Musto, 1971: 84)

Table 3.9. Fifth Phase Transmitting Stations

Stations	Transmitter Type	Frequency	Power	Range (Km^2)
Bogotá	1. medium wave	810 KHz	250 Kw	125,000
	2. short wave	5.095	50	
	3. short wave	5.075	25	
	4. short wave	6.075	10	
	5. long wave	810	10	
Cali	6. medium wave	700 KHz	125 Kw	70,650
	7. medium wave	700	10	
Barranquilla (Mangangué)	8. medium wave	960 KHz	10	70,650
	9. medium wave	960	125	
Medellín	10. long wave	590	10	50,000
	11. long wave	590	1	

The locations and relative ranges of these four transmitting stations are given in Figure 3.18 from Musto, 1971: 86.

During the fifth phase, ACPO was purchasing radio receivers from two companies, Toshiba of Japan and Philips of Holland, at a cost of $160.00 pesos and distributing them for $190.00. Between 1961 and 1967, 108,000 radios were distributed. (Musto, 1971: 92) The receivers were of the limited tuning type, receiving only Radio Sutatenza, for reasons of pedagogy (Musto) and because of the difficulty of tuning shortwave receivers (ACPO gloss). (Musto, 1971: 91-92)

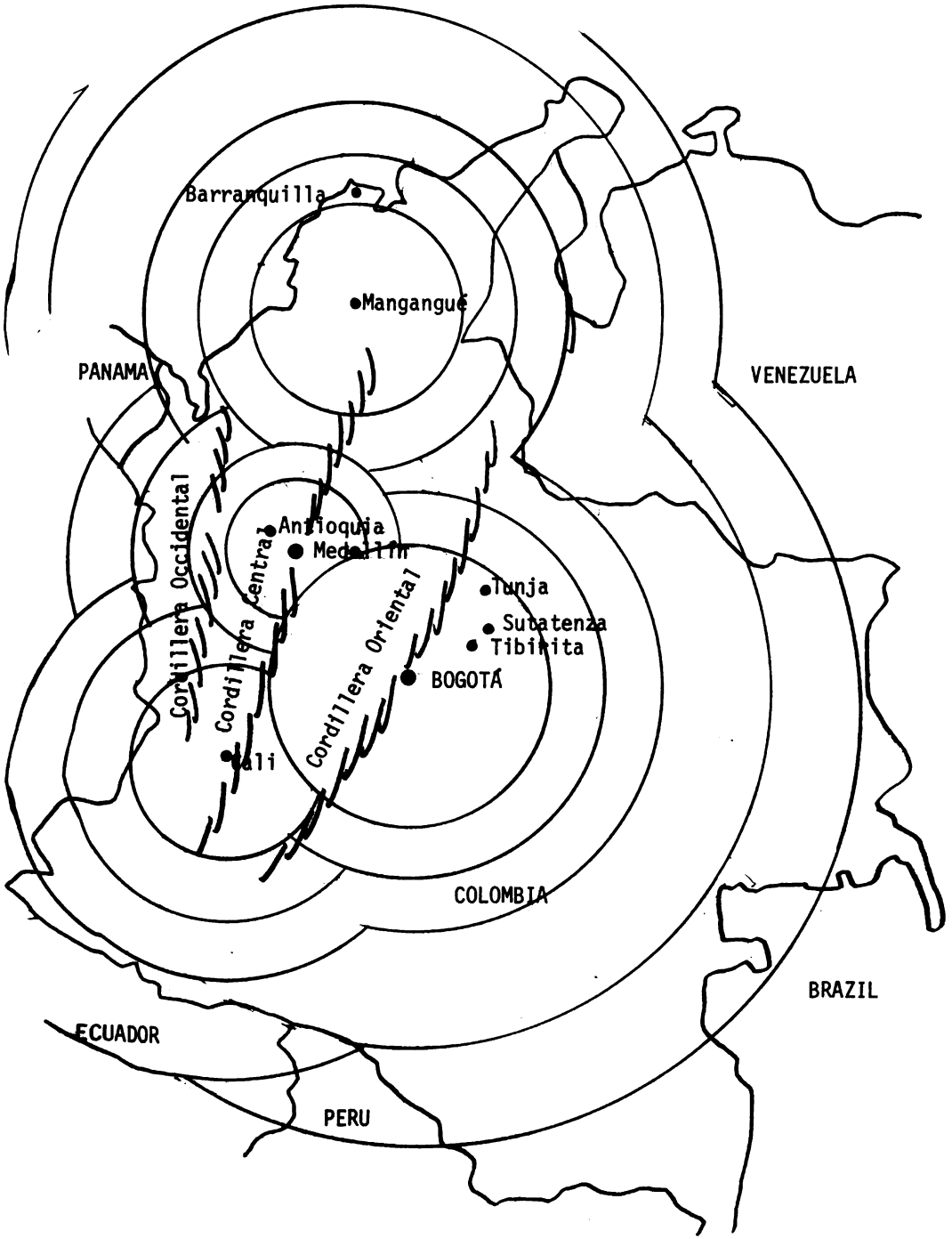
Action Process: ACPO Broadcasting

A sampling of the distribution of broadcasting time during the fifth phase can be seen in the following summary of the Bogotá transmitting station for the year 1967. (Cf. Table 3.10 from Musto, 1971: 88)

Table 3.10. Broadcasting Time-Distribution Bogotá, 1967

Programs	Broadcasting (in hours)	% of Total
Radio school, primary course	217	--
Radio school, secondary course	201	--
Special vacation courses	92	--
Total Radio School Time	510	9
Dramatizations	450	8
Selected music (classical)	1,526	26
Popular music	2,684	45
General cultural programs	364	6
Commentary, reports	134	2
Commercials	240	4
Totals:	6,418	100.0

Figure 3.18. ACPO Fifth Phase Transmitting Stations



sic alone accounted for 71% of Radio Sutatenza broadcasting
cultural programming including news and information, 16%,
ool programming totalling only 9%. The ACPO objectives
the preponderance of music programming. While music falls
view of the cultural objectives of ACPO, the campesino's
re not education in music. ACPO's response to this objec-
threefold: (1) that the distribution of broadcasting time
ate with the hierarchization of environmental needs,
des sound entertainment during the working day of the
(3) broadcasting is but one of the means of obtaining ACPO
it cannot be held responsible for reflecting all objectives
.

tion of the relevance of ACPO programming to the life of
was the subject of intense discussions within the organiza-
ne of the installation of the 250 Kw transmitter in Bogotá
ixties. ACPO revised its programming policy following
ons, and as Musto notes:

ora se transmiten más reportajes y comentarios políticos
enta en mayor medida la participación activa del oyente,
mesas redondas, concursos y transmisiones vivas. (1971:

of ACPO into political commentary is noteworthy, for
to avoid scrupulously taking sides on political issues
survival in Colombia's turbulent political climate (Berry,
well as reasons of ACPO objectives which were to encourage
o come to his own political conclusions (Musto, 1971:

One of the most general criticisms in Musto's study was that ACPO ideology and methods were irrelevant to the needs of the campesino. (Cf. Musto, 1971: 132, 198) With respect to ACPO broadcasting, this criticism bore on the lack of local specificity characteristic of Radio Sutatenza programming. The general character of ACPO programming Musto related to its monolithic ideology which in turn was considered to have been reflected in the organizational centralization promoted by Salcedo. Hence, according to Musto, Salcedo's rigid, domineering character promoted an ideological uniformity which centralized administration, generalized programming, and inhibited organizational decentralization. (Cf. Musto, 1971: 132, 198, 77)

> ACPO's response to this criticism was that the pilot projects of the early sixties attempted such specific programming but failed because such specificity was in fact more redundant from region to region than originally appeared to be the case, and that such localness in programming is inconsonant with the mass character of broadcasting as a means of communication. (Musto, 1971: 28-30)

Action Process: ACPO Publishing

ACPO's literacy textbooks and Extension Service booklets were described in the discussion of the fourth phase. During the fifth phase, ACPO added the "Biblioteca del Campesino" series of booklets and increased the circulation of the newsweekly "El Campesino."

Biblioteca del Campesino

ACPO has planned one hundred booklets treating subjects of interest to the rural campesino such as oven construction, cookery, infant care,

recreation, and productivity. (Bernal, 1971: 71) By 1968, twelve booklets had been published and 370,000 copies sold. (Musto, 1971: 54)

El Campesino

The increased circulation of ACPO's newsweekly during the fifth phase followed a pattern of rise and decline similar to that of the radio schools, as is clear in Table 3.11 from Musto, 1971: 100.

Table 3.11. El Campesino Fifth Phase Circulation

Year	Weekly Circulation (Avg.)	Yearly Circulation
1960	55,237	4,560,000
1961	72,643	4,697,160
1962	100,863	4,860,780
1963	80,563	4,340,874
1964	66,442	3,388,542
1965	57,810	2,948,305
1966	52,753	2,690,452
1967	57,521	2,991,140

Musto claimed the increase and decline of circulation was due to an intensive promotion campaign in 1962 and a subsequent realistic adjustment to actual demand. ACPO claimed the pattern of rise and decline was not due to special promotion but to ACPO's experimenting with levels of circulation to determine the newsweekly's market potential in 1962 and, in 1963 and following, ACPO's financial inability to subsidize the newsweekly at such high levels. ACPO subsidizes about one-third of the cost of production, the other two-thirds coming from sales and advertisements. Hence, ACPO claimed that the declining circulation

figures of 1963 onward represent not the realistic sales potential of El Campesino but rather the realistic figures of ACPO's financial ability to subsidize the newsweekly during those years. However, the increased circulation of 1967 is left unexplained. ACPO would claim that the demand for El Campesino was far greater than the cited circulation figures and that it has been exploring ways of financing a weekly circulation of 300,000 issues. (Musto, 1971: 100-101)

Musto's evaluation studied the readership composition of El Campesino, and found the following (adapted): 1971: 99:

Table 3.12. El Campesino Readership (percent of interviewed)

Read El Campesino:	Radio School Alumni	General Radio Listeners	Non-listeners
Regularly	34.6	25.5	11.1
Occasionally	52.6	52.2	45.4
Never	1.3	4.7	5.6
No response	11.4	17.4	37.7
Prefer El Campesino	81.1	65.5	43.9
Other periodicals	8.5	21.7	26.2
No response	9.8	12.5	29.5

Thus, both the readership and preference of El Campesino among campesinos was found to be significantly high. The reasons undoubtedly were that, of 500 different publications in Colombia, only El Campesino was addressing itself regularly to the problem of providing a comprehensive view of the nation's political and economic problems for the campesino. (Musto, 1971: 96)

at of El Campesino during the fifth phase was an edition
thirty-two pages of three sections: (1) news and edi-
ural activities and innovations; (3) articles on ACPO
and results of campaigns. The first section was composed
itorial staff; the second comprised for the most part
rations of activities and innovations provided by various
engaged in campesinado development as well as the organizers
ls; and the third section contained campesino letters and
munity projects and problems. (Bernal, 1971: 70)
criticism of the content of El Campesino was that the in-
ticles written by the editorial staff tended to be didactic,
y the ACPO ideology (1971: 98) and that the material was
al, with little local or human interest. (1971: 101)
its editorial policy, stating that local vs. general inter-
blem common to all periodical publications, and that
policy of general themes followed its general objectives
undamental integral. (Musto, 1971: 102)
ific criticism of El Campesino by Musto thus followed the
ism that ACPO's general ideology and organizational central-
ted it from engaging in the concrete and specific problems
no. ACPO's defense was equally consistent in replying that
mass communication and its objective is a change in general
ce again, the standoff would seem to derive from unresolved
empirical philosophies.

Action Process: Personnel Training

During the fifth phase, ACPO offered a sequence of three training courses to provide personnel for its infrastructure. The first carried over from the fourth phase and provided a four month course for dirigentes campesinos; the second was a five month course for lideres locales; and the third was a ten month course providing the organization with lideres regionales. A description of the three courses is found in Table 3.13 adapted from Musto, 1971: 104.

From 1954 to 1968, ACPO trained 5,631 men and women dirigentes campesinos. Of these, 507 went on to complete the second course in lideres locales, and of the latter, 94 completed the third course for lideres regionales. In 1968, Musto found approximately 1,970 trained dirigentes (35%) still collaborating with ACPO and 158 lideres locales and 30 lideres regionales still employed by ACPO. The average tenure for such trained personnel in ACPO was two years. (Musto, 1971: 105-96)

The role definitions and course content described in Table 3.13 illustrate how closely the training of these personnel followed ACPO's empirical philosophy and ideology. Both content and objectives become specific relative to ACPO ideology, techniques and organization, but remain general relative to methods and techniques of solving specific rural problems and supplying the organization of action programs at the local level. One criticism of the leader-training of ACPO was that:

> . . . la educación fundamental impartida a través de los institutos campesinos debería estar mucho más orientada por criterios funcionales de modernizacion de las técnicas de producción, antes que por valores culturales generales. Los representantes de INCORA ponen gran énfasis en que ACPO debería lograr una participación más activa del campesinado en la realización de proyectos concretos de reforma agraria. (Musto, 1971: 147)

Table 3.13. Fifth Phase Personnel Training

	I--Dirigentes Campesinos	II--Lideres Locales	III--Lideres Regionales
Admission Requirements	Rural origin 18-27 years of age Literate	Minimum 20 years of age Minimum one year spent as dirigente Promise to work as lider upon graduation	Minimum one year spent as lider Examination by regional office
Duration of Course	Four months	Five months	Ten months
Role Definition	Improve his own standard of living Promote life of the community Exemplary life Promote radio schools	Establish radio schools Instruct auxiliares inmediatos Supervise radio schools Participate in ACPO Campaigns Carry out demonstrations in radio schools Organize meetings	Direct meetings and seminars Maintain communication between Center and local level Direct regional offices Public relations
Course Objectives and Content	Fuller treatment of five basic notions Implementation of ACPO campaigns Domestic economy Community life and recreation Women: child care and education	General culture Leadership ACPO methods and techniques Organization of radio schools Economic problems of rural communities Social and personal hygiene	General culture Agronomy and husbandry Technical problems Ideology and organization of ACPO Functions of other organizations of development
Status and Income	Work in place of origin	Current employee of ACPO; Salary: 550-750 pesos/mo.	Employee of ACPO; salary: 750-950 pesos/mo.

It was ACPO's intention that, after approximately two years of service within ACPO, its dirigentes and lideres would continue working for rural development in other organizations. Other organizations, however, like INCORA, found the training of these personnel much too general for its organization's work. (Musto, 1971: 106) ACPO claimed that many of its personnel found positions in other organizations or in their own communities. Its parenthetical comment, however, is significant:

> . . . Los más se encuentran en sus comunidades de origen, con un poco más de cultura y sobre todo con una magnífica seguridad sobre su propia dignidad.
>
> Por otro lado, ACPO insiste en que no forma para ideologías, partidos o instituciones especiales. Simplemante hace hombres un poco más cultos y dignos. (Musto, 1971: 107)

Thus, ACPO personnel training objectives differed not in kind but only in degree when compared with the objectives stated for the rural campesino: "seguridad . . . dignidad . . . un poco más cultos y dignos." Clearly, ACPO's empirical philosophy of training its personnel remained consistent with the general ideology underlying its objectives.

Action Process: ACPO Campaigns

One of the principal purposes of ACPO's personnel training was to provide organizers to implement its multi-media approach to raising the standard of campesino living. The use of radio braodcasting, the newsweekly, booklets, and demonstrations to focus upon a single problem, ACPO termed its "campañas."

During both the fourth and fifth phases, ACPO developed four permanent campaigns: "Vivienda," "Suelo," "Nutrición," and "Recreación."

The campaign represents the most concrete and specific component in ACPO's methodology, and is aimed at the "symptomatic" level of definition of an environmental need, as Table 3.14 (Musto, 1971: 110) illustrates.

Table 3.14. Official ACPO Campaign Results

Campaña	Innovación	1966	1954-66
Vivienda	Casas neuvas	.....	32,585
	Pisos	6,507	
	Paredos	16,858	
	Techos	6,246	viviendas
	Cocinas	5,478	mejoradas:
	Fogones en alto	6,744	80,284
	Dormitorios	8,158	
	Ventanas	7,241	
	Acueductos	2,450	26,993
	Jardines	10,291	63,990
Suelo	Fosos de abono	9,993	120,218
	Barreras vivas	18,334	.....
	Terrazas	3,987	.....
	Arboles sembrados	353,429	4,158,991
Nutrición	Huertas caseras	9,656	91,133
	Huertas frutales	7,661	.....
	Gallineros	6,413	34,281
	Porquerizas	3,905	31,054
	Establos	3,523	23,988
Recreación	Campos deportivos	959	9,893
	Groupos de teatro	1,225	11,672
	Conjuntos musicales	1,640	6,389

Musto's study found that (1) radio school alumni introduced significantly more innovations than radio listeners in general, and (2) the proportion of innovations attributable to ACPO's efforts was much greater among ACPO radio school alumni than among other listeners of ACPO

broadcasts. In general, it was found that ACPO campaigns to introduce innovations reached even those who did not listen to ACPO broadcasts. (Musto, 1971: 111)

The fact that ACPO engaged in such campaigns to introduce innovations and improved standards of living and that it, further, kept detailed records of the results of the campaigns, might seem to conflict with ACPO's assertion that the results of its objectives will be discernible only in the long run. However, ACPO considered innovations as merely potential indicators of its objectives:

> . . . Queda claro, que para ACPO la innovación en si misma no significa nada, si no es la resultante o "indicador" de un cambio más profundo. Aqui encontramos una de las fallas metodológicas más profundas del estudio del Instituto Aleman. . . . (Musto, 1971: 15)

Action Process: Radio Schools

Musto's study gives a clearer picture of the operation of the radio schools than fourth phase sources. Generally, the radio school was a single family (fourth phase radio home) having an ACPO radio and following the broadcasting of the courses. In many cases (especially in schools following the second, advanced course), a number of families would gather together to follow the radio courses. Nearly every "school", however, would employ an auxiliar inmediato who might be merely a youth of 10 to 12 years of age who had attained elementary literacy at a local regular school. (Musto, 1971: 91)

The school year would run from February to November, during which period approximately 200 lessons each of the elementary and advanced courses would be broadcast four times daily, an hour for each lesson.

Each elementary course lesson would include twenty-five minutes of reading and writing, eighteen minutes of arithmetic, and seventeen minutes of health, economy, and spirituality. The advanced course treated the subjects of geography, history, social science, civic and community education, cooperatives, music, recreation, etc. The schedule of topics of the advanced course would generally coincide with themes of current campaigns promoted in El Campesino. Final written exams were administered by the auxiliar inmediato in December of each year. (Musto, 1971: 91) The statistics of the radio schools of the fifth phase are found in Table 3.8. Musto's opinion that the alumni statistics may be vastly inflated--owing to the fact that a student registering for the advanced course may have been recorded a second time--must be considered in any literal interpretation of such ACPO statistics.

Musto records that during the years 1956-67, 66% of 27,000 soldiers, and 56% of 40,457 prisoners received certificates for the elementary ACPO radio school course. These statistics Musto considered particularly reliable. (Musto, 1971: 95)

7. MONITORING AND FEEDBACK PROCESSES

Fifth Phase Monitoring Centers

ACPO superstructure monitoring centers in the fifth phase remained identical to those of the fourth phase. The major center was the Consejo of bishops relative to the decision process, and the major center relative to the action process was the Junta. The one new monitoring center appearing in the fifth phase was the diocesan delegate with a staff relationship of the Consejo of bishops. The function of this delegate is

unspecified; however, it would appear to have been an environmental monitoring center rather than a project center, for its feedback content terminated outside the project.

In the fifth phase infrastructure, however, a number of new monitoring centers appeared with the regional and decentralized operations of ACPO. In the latter, the principal monitoring center would seem to have been the permanent center delegate appointed by the Center to supervise the operation of the decentralized Junta and the Comité. By reason the spans of supervision in the decision process, secondary monitoring operations can then be discerned in the Junta's monitoring of the Comité which it appoints, and in the Comité's monitoring of the gerente and the secretario who are decision-receivers. (Cf. Figure 3.15)

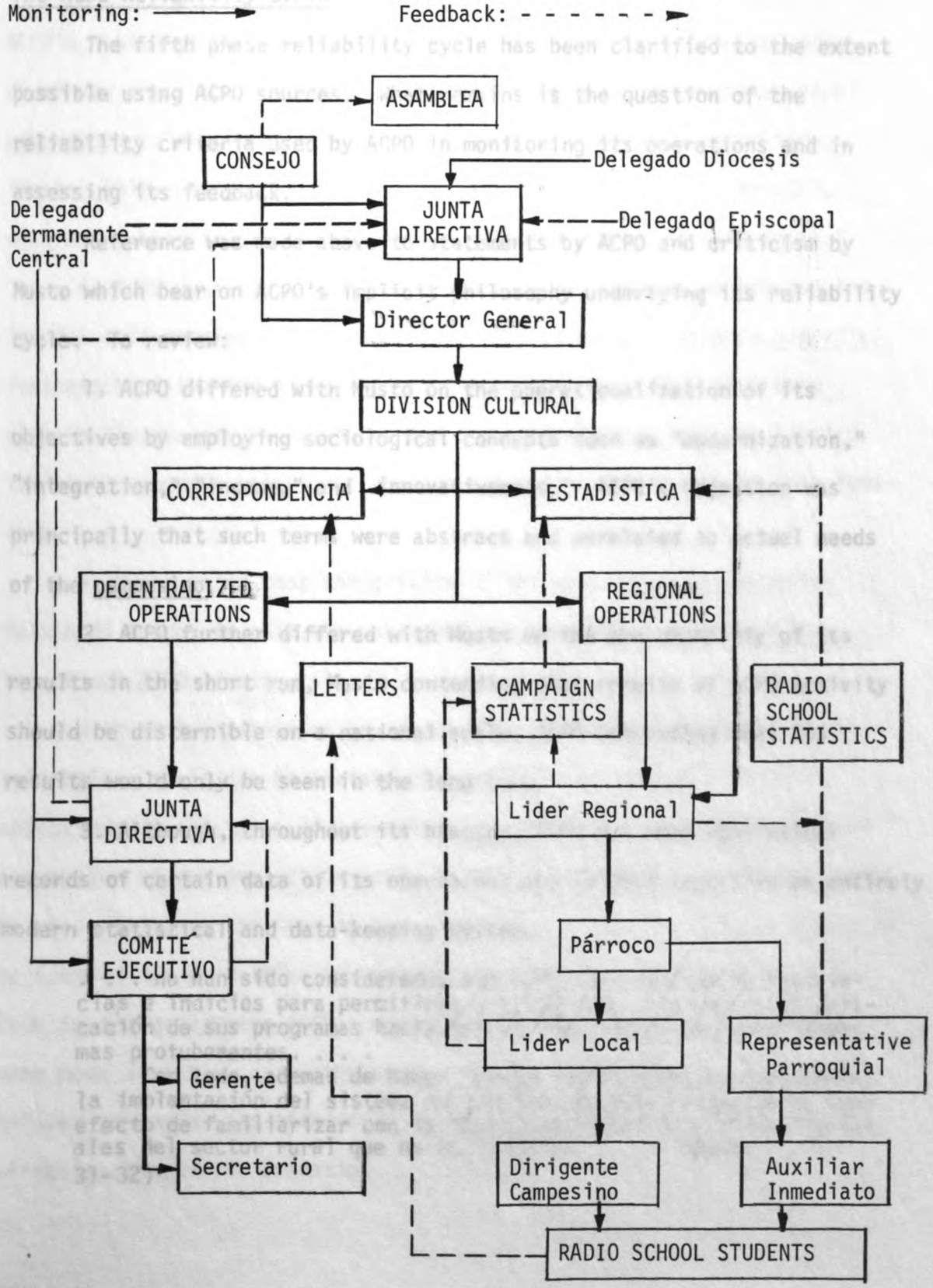
In the regional operation of ACPO during the fifth phase, the principal monitoring center appears to have been the delegado episcopal acting as liason with the center and the regional office. (Cf. Figure 3.17) The lider regional in turn was the principal monitoring center of lider local, the párroco, and the representante parroquial of the local operation. The relative importance, however, of the párroco vis-a-vis the lider and the representante is unspecified in Musto. There is evidence in Musto of the párroco's pivotal importance in the functioning of the radio schools (1971: 169) and of ACPO's relegating the organization of the schools to the lideres, but the division of monitoring responsibilities remains unclear.

eedback Process

k within the fifth phase superstructure was essentially
ourth phase. (Cf. Figure 3.13) Feedback in the decentral-
ns probably originated with the Junta and the center
terminated with the center Junta.
regional operations, feedback originated with the episcopal
with the lider regional and most likely terminated with
nta Directiva. (Cf. Musto, 1971: 75) At the local level,
source of feedback may have been the párroco who super-
io school operation, as well as the lider and the repre-
were in a quasi-staff relationship with the former.
.17 and Musto, 1971: 54)
ondence continued to form a major source of feedback in the
ith ACPO receiving between thirty-five and sixty-five
ers annusl1y. These letters ACPO claimed to assess system-
rding to sociological criteria. (Musto, 1971: 55)
tistics section within ACPO (Cf. Figure 3.14) continued
ta from either local or regional echelons or both regarding
students, results of campaigns, sales of radios, booklets
distributed, etc.
nase monitoring and feedback processes are illustrated in

ld be noted that decentralized operations have their own
ctures identical to the regional structure shown.

Figure 3.19. ACPO Fifth Phase Monitoring and Feedback



The ACPO Reliability Cycle

The fifth phase reliability cycle has been clarified to the extent possible using ACPO sources. What remains is the question of the reliability criteria used by ACPO in monitoring its operations and in assessing its feedback.

Reference was made above to statements by ACPO and criticism by Musto which bear on ACPO's implicit philosophy underlying its reliability cycle. To review:

1. ACPO differed with Musto on the operationalization of its objectives by employing sociological concepts such as "modernization," "integration," "income," and .innovativeness." ACPO's objection was principally that such terms were abstract and unrelated to actual needs of the campesino.

2. ACPO further differed with Musto on the measurability of its results in the short run, Musto contending that results of ACPO activity should be discernible on a national scale, ACPO contending that its results would only be seen in the long term.

3. Although, throughout its history, ACPO has kept statistical records of certain data of its operations and in 1970 installed an entirely modern statistical and data-keeping system,

> . . . no han sido considerados por ACPO sino como meras referencias e indicios para permitirle orientar sus proyectos y la aplicación de sus programas hacia la satisfacción de las necesidades mas protuberantes. . . .
>
> Con todo, ademas de haber servido como puntos de referencia, la implantación del sistema estadistico de ACPO ha tenido en buen efecto de familiarizar con la técnica estadistica a lideres naturales del sector rural que no lo conocían. . . . (Musto, 1971: 31-32)

Musto criticized ACPO's statistics as inflated (1971: 92). ACPO's reply was that any statistics derived from operations in underdeveloped areas are necessarily subject to the reluctance of xenophobic *campasinos* to divulge accurate information to outside investigators. (Musto, 1971: 32) Hence any investigator must be content, as ACPO, with using statistical information "como meras puntos de referencia."

4. ACPO considered even its statistics of innovations adopted and improvements carried out as a result of its campaigns, as only *potential* indicators of the implementation of its objectives. ACPO aims were principally changes in attitudes and thought patterns, and not particular socio-economic behavioral changes apart from the change in consciousness.

5. Musto noted that the critics of the newsweekly *El Campesino* felt ACPO tended to edit the published correspondence of *campesinos* to reflect ACPO ideology alone.

With such indications as these, the philosophy underlying ACPO's reliability cycle can be tentatively described as follows: ACPO's objections to the terms of operationalization employed by Musto and the assumption of the evaluation study that results of ACPO operations should be measurable, can be seen as the reluctance of a philosophical platonism to subject its principles of operation to experimental verification. Even in the area where ACPO's operations as well as its reliability cycle were most specific, viz., the campaigns to introduce innovations, ACPO refused to employ its statistics as empirically verifiable signs of the effectiveness of its operation.

This reluctance to relate empirically measurable phenomena to its objectives is not inconsistent with the type of objectives which ACPO employed, which were to make the campesinos "mas cultos y dignos," (Musto, 1971: 107) and "humanística," "progresiva," "dinámica," "responsable y libre," and "constante." (Bernal, 1971: 30-31) These objectives are not in themselves unmeasurable, but with ACPO's platonistic empirical philosophy they become so, insofar as ACPO held to the proposition that the results of its operations would be discernible only in the long term. This proposition effectively negates the possibility of a reliability cycle monitoring and feeding back to decision centers any kind of critical information during a period of, literally, years of a project's operation.

The question may well be asked, then, of exactly what kind of behavior did ACPO's reliability cycle monitor and what kind of information was fed back to decision centers. The only answer perhaps consistent with the present argument, is that ACPO's reliability cycle monitored and fed back information about its own organizational operations. In a project such as Acción Cultural Popular, once a proposition like "estamos seguros de la necesidad de neustro trabajo" (Musto, 1971: 19) takes hold of the base of planners' thinking, the functional objectives become the creation and the maintenance of an organizational structure, and the reliability cycle becomes confined to monitoring the behavior not of the environment, but of the decision and action processes of the organization.

Hence it is logical that ACPO used its own statistics only as points of reference to monitor the supply and demand of its own operations:

textbooks for its radio schools, leaders for its organization, booklets for its extension services, etc. The provision of delegados to link various echelons of the organization together bears the hypothesis out further. These monitoring positions in every instance are positioned to monitor not the environment but the organization. Similarly, the most abundant source of information from the environment, the tens of thousands of letters each year sent by campesinos to the central organization, were consistently edited, according to Musto, to reflect the ideology of the organization. Finally, the most influential body in the organization, the Consejo of bishops, which controlled both policy and budget, was at least three echelons removed from any source of primary data in the reliability cycle of ACPO.

There have been some recent signs of discomfort regarding this reliability cycle:

> . . . Salcedo . . . in su mensaje de año neuvo [1969] al personal de la institución, exhorta a sus colaboradores, en especial a los miembros del Departamento de Planeación de ACPO, a estudiar las tendencias del desarrollo rural in forma más intensa, de preferencia mediante la observación directa. (Musto, 1971: 151)

The effects of this restricted reliability cycle of the fifth phase forms the subject of the final category of analysis: modification.

8. PROJECT MODIFICATION

Introduction

The discussion of the fourth phase concluded with a challenge to ACPO for the 1960s formulated by Torres and Corredor:

> Por ello, y para majorar el nivel existente, será necessario que en la segunda etapa se dedique una atención preponderante, a la reforma absoluta de estructuras. De la forma y orientación que se dé a dicha reforma dependerá la suerte de la presente década. (1961: 54)

The conclusion of Musto's evaluation in turn suggests that the challenge of "la reforma absoluta de estructuras" failed to be accepted by ACPO during the decade of the fifth phase:

> ACPO no pudo cambiar las estructuras socio-económicas existentes en las áreas rurales, pero contribuyó sin duda a estimular la iniciativa personal y a mejorar las condiciones de vida del campesinado. (Musto, 1971: 203)
>
> . . . . . .
>
> . . . Aunque la institución no haya logrado cambiar las estructuras económicas y sociales vigentes, . . . el cambio estructural ya no es una finalidad lejana sino un hecho real. Esto implica, necesariamente, ciertos cambios en los programas de acción de todos aquellos que se propusieran a participar activamente en la promoción del desarrollo rural. Si ACPO atribuye una importancia más grande al desafío del futuro que a los éxitos del pasado, tiene que orientarse en los problemas de aquel proceso de desarrollo, cuya iniciación fue, por los menos en parte, su propia obra. (Musto, 1971: 201)

Both Torres and Corredor on the one hand, and Musto on the other, implicitly assumed that ACPO was an agency of socio-economic structural change. This concept ACPO continually associated with a marxist revolutionary ideology which ACPO categorically rejected. (Musto, 1971: 20) Thus ACPO considered its philosophy of action embodied in educación fundamental integral an ideology quite different from that of other organizations in the field of development. (Musto, 1971: 42)

ACPO's ideology has kept it independent of the problems of socio-economic structural change in Colombia in two ways. As a church organization it preserved a privileged status for itself by remaining steadfastly neutral and generally independent of politics. This posture both assured its survival amid sometimes violent political changes in Colombian politics, and kept it isolated from the problems of socio-economic changes which were the issues of the political changes.

The second way in which ACPO's ideology served to isolate it from socio-economic structural change was, according to the argument of this chapter, its use of a platonistic philosophy of empirical effects by which it created objectives that implicitly separated a "base" of human development (attitudes and thought patterns) from development itself (social, cultural, religious, and economic structures servinc real needs of people).

Thus, ACPO's ideology can be viewed as fundamentally derivative of the one major socio-cultural characteristic of its personnel, viz., that it is an organization operated by clerics of the Church. Its ideology served to preserve the vested interests of the "second estate" and at the same time kept its work in the field of development a safe distance from the revolutionary movements of atheistic marxism. The creation of objectives independent of socio-economic structural change has been argued to have been implicitly platonistic, a philosophical view close to the very heart of the humanistic, non-empirical, education prevalent in most Catholic seminaries for years past.

With such a philosophical view underpinning its ideology, ACPO planners could, with intellectual equanimity, declare the fundamental criticism of Torres and Corredor as well as Musto to be simply irrelevant to ACPO's view of human development and to the organizational operations implementing its ideology. However, the core of the criticism of both evaluations was that ACPO objectives were irrelevant to the concrete needs of Colombia's development, and the explication of this criticism forms the subject of the following discussion.

The General Results of Musto's Field Study

Musto summarizes his field study results as follows.

1. In the higher socio-economic echelons of the population investigated, ACPO radio school alumni showed higher levels of modernity, use of innovations, economic integration, but not income as compared with non-alumni radio listeners. (Cf. pp. 159 ff. for the use of these indicators by Musto).

2. In the lower socio-economic echelons, radio school alumni demonstrated superior levels of the use of innovations, economic integration, income, but not modernity, compared with non-alumni radio listeners.

3. In the lowest socio-economic echelon, radio school alumni demonstrated superior levels in modernity, innovations, integration, and income within this echelon, but inferior levels when compared with listeners of all higher socio-economic echelons who were uninfluenced by ACPO broadcasting.

From this data, Musto concluded that modernity was essentially related to the campesino's socio-economic level; that the use of innovations depended both on the socio-economic level and upon ACPO's influence; that economic integration had no relationship to the socio-economic level, but only to ACPO; and that both level of income and participation in ACPO activities varied directly: either participation in ACPO activities influenced income, or the level of the campesino's income influenced him to participate in ACPO activities. (Musto, 1971: 181)

Hence the profile of the typical radio school alumnus was that of a small land holder sufficiently poor and conservative to look for a release from his marginal existence through a Church institution, and

sufficiently established and dynamic to develop the initiative to better his own condition. Thus, he tended to be more modern, innovative, integrated, and better off generally than radio listeners uninfluenced by ACPO. (Musto, 1971: 187)

Specific Conclusions of the Investigation

Musto draws some specific conclusions relative to the operation of ACPO in the six regions investigated:

1. In regions where the Church was in favor, the radio school movement benefited greatly from the association of parish priests with the movement; in regions where the Church was unpopular, however, the same association retarded the movement.

2. The "theoretical" courses broadcast by ACPO produced changes only when accompanied by practical demonstration. Hence ACPO lideres should not be restricted to establishing schools but trained to provide such practical help.

3. ACPO broadcasting and publishing should engage competitively with the other radio stations and publications by adapting more to the specific tastes and needs of particular regions.

4. The true needs of the campesino increasingly are related to the techniques and organization of agricultural production and capital necessary to provide these. Hence, although it may not be ACPO's province to create cooperatives, medical facilities, etc., its part should be to inform campesinos about the means available to solve such specific problems more than ACPO has in the past.

5. According to Musto's survey, all persons interviewed declared that ACPO would gain substantially in efficiency by cooperating more closely with other organizations in the field of development.

Specific Criticisms of the Musto Study

Perhaps the most frequent criticism of the Musto study of ACPO was that its instruments of communication lacked sufficient local specificity to meet the concrete needs of the campesino. This criticism applied to programming, publishing, training of personnel, and objectives. (Cf. Musto, 1971: 82, 169)

ACPO's answer to this criticism was that its objectives in using the instruments of communication were to effect changes in a person's self-awareness and world-view to prepare the person to meet his own concrete needs. (Musto, 1971: 15ff.)

Thus, ACPO could claim that its objectives were quite as concrete and specific as those needs suggested by Musto such as improved techniques of production, socio-economic organizations, etc. Changes in attitudes and thought patterns are specific changes and, since they occur in the individual, are concrete. The ignoratio elenchi of both the critic and the criticized was the question of how intrinsically related and mutually necessary were the environmental needs considered pre-eminent by Musto and those needs considered pre-eminent by ACPO.

The remaining criticisms by Musto follow as corollaries from the above criticism and its ignoratio elenchi. Musto's study criticized ACPO as over-centralized because the investigation seemed to suggest that when ACPO decentralized in its Operation Antioquia, ACPO's instruments

of communication became more locally relevant. (Musto, 1971: 83)

To the suggestion that decentralization will move ACPO in the direction of meeting the more "concrete" needs of the campesino as Musto considered them, ACPO responded that its decentralization would never imply a deviation from its ideology or its objectives which, for Musto, were incapable of meeting the "concrete" needs of the campesino. (Cf. Musto, 1971: 28)

The Musto study further indicated ACPO for being reluctant to cooperate with other organizations engaged in the campesino's development. Such cooperation would draw ACPO into action programs which alone, in the view of Musto, provide for the concrete and specific needs of the campesino. (Cf. Musto, 1971: 140ff.)

ACPO's response to this was that its objective was not to replace other organizations but provide a base for them (Musto, 1971: 16, 41), that cooperation occurs when both organizations desire it effectively (which had not been the case), and that cooperation depends far more upon spontaneous interaction at the local level than upon higher echelon concordats of cooperation. (Musto, 1971: 40-41)

The final specific criticism related to a systematic analysis of ACPO was that the organization had lost contact with the campesino during the fifth phase when ACPO had been concentrating on enlarging its organization and its base of operations in the countryside. This criticism by Musto also falls under the shadow of an ignoratio elenchi. (Cf. Musto, 50, 73, 150) ACPO, in its response, was able to point to its expansion into the country side by establishing new transmitting stations, decentralized operations, its cadres of lideres staffing its local level

operations, and the thousands of letters written spontaneously by campesinos. (Musto, 1971: 23ff.) In this case the precise ignoratio elenchi is that the needs of the campesino Musto claimed ACPO had lost contact with, were not the same needs that, during the fifth phase, ACPO had expanded to meet.

Furthermore, the criteria of the reliability cycle employed by Musto's investigation (monitoring questionnaire data and feeding it back for evaluation) were not identical with the criteria used in ACPO's reliability cycle.

As long as Musto or ACPO failed to argue the basic validity of their effectiveness criteria, any criticism or defense of ACPO's effectiveness necessarily remained an ignoratio elenchi.

ACPO's Modification Process

The most fundamental criticism by Musto with which he concludes his study, was that ACPO had failed to recognize the profoundly significant changes that had taken place in Colombia during the fifth phase. It was an environment in which numerous organizations had been created to engage in the development of the campesinado (Musto, 1971: 131); an environment whose violence moved the campesinos increasingly out of their former isolation into nuclear settlements; and an environment in which the national government was projecting plans for overall and integrated development of all sectors of the population through agricultural planning, rural electrification, etc. (Musto, 1971: 199) The decade of the sixties also saw a vastly improved rural primary school system, a multiplication of radio transmitting stations, and a proliferation of community action projects. (Musto, 1971: 199-200)

In the same decade, instead of recognizing the changes in the environment, ACPO retained its ideology and methods and continued to carry out a simple arithmetic expansion of its services. Thus, in the view of Musto, many of the major operations of ACPO had lost their importance in the 1960s. The problem of illiteracy was being increasingly met by rural primary schools; the problem of the campesino's restricted community-consciousness was being met by the invasion of the campesinado by community organizations; and modernization was being advanced by the spread of innovations. (Musto, 1971: 200)

Thus, Musto claimed basically that ACPO failed to recognize the profound changes in the environment and adapt its methods accordingly. It would seem, however, that ACPO's reliability cycle did, in fact, not fail to recognize the changes. The planners of ACPO were undoubtedly far more cognizant of the Colombian environment than the investigators of the Musto study could have become in the two or three months of their investigation. That ACPO did not change its methods to conform to these changes is the one major observation upon which both sides could agree.

However, in actuality, the crucial issue underlying the debate was not the recognition of environmental changes, but the assessment of the significance of the changes. The objectives of ACPO were dictated by its assessment of the significance or non-significance of the environmental changes of the 1960s, and the assessment was dictated by its ideological view of the human person faced with the problem of development. This ideological view, it has been argued throughout the course of this chapter, in turn derived from ACPO's platonist philosophy of empirical effects. Because Musto brought a different philosophy of empirical

effects to his investigation, he tended to assess the significance of the environmental changes differently, implicitly suggested a different set of objectives for ACPO, and found its organizational operations incapable of implementing the suggested objectives.

Hence, the point at issue throughout Musto's investigation was the hierarchization of environmental needs deriving from differing philosophies of empirical effects. ACPO found no reason to modify either its decision or its action process not because it failed to recognize changes in the environment but because it continued to employ a certain philosophy of human development and empirical effects to assess the significance of environmental changes and to hierarchize environmental needs.

CONCLUSION

The study of the operation of Acción Cultural Popular can be instructive for a number of reasons. It can illustrate how insightful planning can begin without being formally systematic, as the early phases of Radio Sutatenza have shown. It can also demonstrate how effective ideologically similar opinion leaders can be in the promotion and expansion of a project, such as took place during the fourth phase.

However, the study has, perhaps, been most instructive in the problem of maintaining the relevance of any project once the rigid weight of an organizational superstructure has taken up a settled position in a changing environment. It is at this point that the formal need for the systematic reiteration of the eight operations of systematic planning most

asserts itself. The argument of systems analysis is simply that while any project may not seem to require the systematic use of the eight operations for its creation, it will soon become obvious that a project requires their use for its continuance.

CHAPTER IV

THE RADIO RURAL FORUMS OF INDIA

INTRODUCTION

Rural broadcasting in India dates from the middle 1930s. The present account will describe four phases in their historical order and will use systems analysis in the second and the fourth.

The first phase is an account of rural broadcasting efforts in India from the middle thirties under the British regime to the middle fifties under the Government of India.

The second phase will be an account of the jointly sponsored UNESCO-Government of India experiment in radio rural forums carried out in 1955-1956.

The third phase will detail the aftermath of the experimental project, an interim period from mid-1956 to mid-1959 during which time radio rural forums were somewhat quiescent.

The fourth phase will document the efforts by the Government of India beginning in 1959 to expand the radio rural forums into a national scheme.

THE FIRST PHASE: RURAL BROADCASTING 1935-1955

EARLY RURAL BROADCASTING

The Provincial Governments of the Northwest Frontier in 1935 and the Punjab in 1936 began subsidizing the broadcasting of digests of pamphlets on agricultural subjects. These early efforts in rural broadcasting were of limited success and eventually All India Radio (AIR) assumed responsibility for rural broadcasting. By 1939, six of the principal stations of AIR were broadcasting thirty to sixty minutes of programs aimed at the rural listener each week. (Mathur and Neurath, 1959: 16)

Following independence from Britain in 1947, All India Radio began establishing short and medium wave stations in the major language regions. However, for years to come, the principal radio audience resided in towns and cities. (Mathur and Neurath, 1959: 16) By 1954, official AIR coverage of communities of a thousand or more was 40% and in 1958 was 64%. Yet, for the population as a whole, All India Radio coverage in the latter sixties was only 55% (Mathur and Neurath, 1959: 17)--this for a population 80% of which lived in a countryside of 560,000 villages. (Schramm, 1967b: 106)

The statistics which focus the problem of rural broadcasting, however, are those citing the number of community-owned radios. In 1948, there were 2,000 community-owned receivers; in 1954, 7,000, and by approximately 1958, 30,000 communities of over one thousand (out of some 72,000 such communities) owned their own radio receivers. The marked increase in community-owned receivers between 1954 and 1958 came from

a decision by the Central Government to provide 50% of the cost of a receiver whenever the State Government and the village matched this amount. (Mathur and Neurath, 1959: 17) The problem of providing radio receivers for any given group of twenty villagers wanting to establish a rural forum may not appear until it is remembered that the above figures mean that a community of one thousand or more supposedly had access to but a single receiver.

THE BEGINNINGS OF RURAL FORUMS

All India Radio, perhaps inspired by BBC discussion groups of the thirties or Canadian broadcasting's farm forums of the forties, officially began transmitting programs for rural listeners thrice weekly in September, 1949. These programs supported the drive to increase food production during the first Five Year Plan. (Kumar, 1967: 58) This effort in forum broadcasting was insufficiently organized and supported, and through the early fifties the listenership remained small.

The forum programs were essentially the responsibility of one person at All India Radio and there was no co-ordination of AIR and any adult education agencies. Around Delhi itself there were supposedly 35 forum centers with only one field worker and one rural program supervisor. The latter's responsibility was to supervise post-broadcast discussions after one of the three programs each week in all 35 forum centers. The report for 1949-1950 of the Ministry of Information and Broadcasting (MIB), carried a description of its forum broadcasting activity--which at the time of writing could have been only an ideal and a hope--in these terms:

> The Forum at each village meets once a week and consists of enthusiastic rural listeners under the leadership of an intelligent and educated person. AIR's representative is present at these meetings to help in follow-up discussions and to answer questions. . . . Though the immediate purpose of these Forums is to stimulate food production, there is every possibility of these developing into a nucleus for the general welfare and reconstruction of villages. (Kumar, 1967: 58-9)

The forums are described as actual and functioning well, and yet, in the light of later insights into the critical needs of forums for adequate infrastructural support, these forums could hardly have functioned as effectively as the report implied.

The broadcasts were, according to Kumar, impractical (scientific agricultural reports) or irrelevant (reports of Government-sponsored model farms), and there was no feedback system in the AIR plan. Moreover, the MIB reports stated that there were 51 forums at the end of 1949, 137 at the end of 1951--and after that, the reports are silent regarding the statistics of forums. (Kumar, 1967: 58-9)

By 1955, according to Mathur, about 200 villager "listening clubs" (forums) were supposedly in existence. The AIR programming for these listening clubs was of a general nature, and consisted of news, weather, marketing information, along with talks, discussions, folk music, interviews with krishi pandits (winners of State agricultural awards), and broadcasts of visits to model farms. But, as Mathur notes, "no special programmes were being directed towards the forums, nor had they been organized with the definite purpose that informed the new project." (Mathur and Neurath, 1959: 15)

The "new project" which was jointly sponsored by UNESCO and the Government of India is the subject of the second phase in the history of All India Radio rural broadcasting.

THE SECOND PHASE: THE POONA-UNESCO PROJECT

INTRODUCTION

The first truly serious effort by All India Radio to organize both broadcasting and discussion groups for rural listeners originated with an offer by UNESCO to sponsor an experimental radio forum project in the State of Bombay. This experiment will be termed the Poona-UNESCO Project.

1. THE ENVIRONMENTAL NEED

The literature of the Poona-UNESCO Project contains no evidence of a prior, systematic study of environmental needs. The knowledge of the environment apparently was presumed to have been present implicitly in the expertise of the planners and the personnel loaned by Indian Government departments to implement the experiment.

Therefore, with no formal investigation of the Indian environment to draw upon, the consideration of the environmental needs in this second phase will depend upon inferences from the statements of the experiment's objectives and statistical references contained in the literature.

The Rural Educational Needs

The Poona-UNESCO Project was carried out in an area of approximately 25,000 sq. miles, comprised of five districts in the hinterland of Bombay: Nasik, Ahmednagar, Poona, Satara, and Kolhapur. The recorded literacy rate for this area at the time of the project was 30.1% male, 9.4% female, with the average being 20.7%. (Mathur and Neurath, 1959: 24) Given low literacy, therefore, the need for

teaching through an aural medium such as radio was clear.

A second educational need was to create lines of communication between experts and persons needing expert information. The project created these lines not only by the broadcasts disseminating expert knowledge but also--to the surprise of the planners--through the forum structure itself. It was found during observed forum discussions that the latent expert knowledge of particular villagers surfaced and became a shared expertise benefitting all the discussants. (Mathur and Neurath, 1959: 100)

A third need was for relevant and practical knowledge about everyday village problems, given in an acceptable language and broadcast during the proper season.

A fourth need, discernible from previous AIR attempts, was for the reinforcement of disseminated practical knowledge since mere broadcasting coupled with mere placement of a community receiver seemed to have little beneficial effect. The discussion of a topic seems to create reinforcement since insights can there be repeated and discussed.

A fifth need derived from the socio-cultural milieu of the Indian rural setting. In such a setting, new ideas need authority for acceptance. The forums provided an arena wherein opinion leaders could emerge and exert a beneficial influence. (Cassirer, 1959-60: 532) This aspect of the forums reinforced the socio-cultural structure.

A sixth need was the general educational one of doing one's own critical thinking. The forum discussions created a climate where questioning became legitimate, where youth could question their elders, where authority had to justify itself, where opposing viewpoints were

encountered and conservative immobility had to defend itself. Here the forums challenged the socio-cultural structure.

Psycho-socio-cultural Needs

Two groups in the Indian population have traditionally been under discrimination: women of any caste within the caste, and the so-called "untouchable" castes as a group. If the experiment in radio forums was to have complete validity, these two groups would need to be included in the experiment. However, participation in the experiment was determined by a selection of volunteers, and because women and untouchables were significantly reluctant to volunteer, the socio-cultural need for these two groups to participate in village life on an equal footing with other groups was a need that went largely unmet in the experiment.

A second socio-cultural need was touched upon in the educational needs. A description of this need could start, perhaps, with terms such as "narrowness", "provincialism" and "psycho-socio-cultural rigidity". One characteristic of the traditional values of rural people seems to be an implicit belief that acceptable values come only from authorized sources. Traditionally these sources have been extremely limited; hence the need to break the narrowness, confining insulation, and the rigidity. The rural India village--like rural settings elsewhere--needed multiple sources of value input. These sources could then create alternatives to the rigid caste and status structure and permit the Indian villager a psycho-socio-cultural mobility not generally available to him.

A third need associated with this mobility can be described as the need for self-motivated action. It is the basic need for thinking and deciding for oneself, and completing some activity on one's own. Psychically this is the need to create; socially, it is the need for competence and the status that competence brings. Philosophically, this is the need to be "at home" in a material universe; economically, this is the need for entrepreneurship; and politically, it is the need for a participating and responsible citizenry.

The political and economic structure of India tended to deny the above needs. Following the Aryan invasions, what was possibly only a cultural picture of the occupational relationships of priests, warriors, agriculturalists, laborers (those who had been conquered), became in time a religiously sanctioned caste system. Brahmins, at the top of the system, constituted the sources and discriminators of theological and philosophical values which in turn controlled social and cultural values. Change of any kind initiated by the individual required a kind of "authorization from above"--which was consistently denied.

In a later period of Indian history--the Mogul invasions in the north--it could be argued that the situation remained unchanged: the invaders constituted the ruling power and this new power structure denied self-motivated activity and the mobility it could bring. Moreover, India's has been a history of kingdoms, where whatever happened, happened at the pleasure of the rajah. The British brought a new but structurally familiar regime where the discriminators of certain values and the gate-keepers of mobility were "somewhere up there on the top" of the system.

The vast bureaucracy of post-independence India did little to remove the inhibitions upon personal mobility. Yet the forums would represent, with the evidence of villagers coming to their own decisions to implement their own action projects, socio-culturally, a new direction.

2. OBJECTIVES

Initial Decision-makers

In 1951, the three sponsors of the Canadian Farm Radio Forums--the Canadian Broadcasting Corporation, the Canadian Federation of Agriculture, and the Canadian Association for Adult Education--invited UNESCO "to co-operate in carrying out an evaluation of the programme and its effectiveness as an instrument of adult education." (Mathur and Neurath, 1959: 7) UNESCO published the results of this study in 1954. (Cf. Nicol et al., 1954)

The Eighth General Conference of UNESCO in 1955 made the decision to attempt to apply the lessons learned in the Canadian study "in a Member State in a fundamental education area, probably in South Asia." (Mathur and Neurath, 1959: 20)

UNESCO's offer to the Government of India came in a communique from the Director-General:

> Because of the work accomplished by India in the field of fundamental education and of the existence in your country of a well developed broadcasting service, I believe that the project would yield the most fruitful results if it were carried out in India, and more specifically in the areas of Bombay, where the Social Education Committee is already interested in using broadcasting in its work and had equipped a number of its centres with community receiving sets. (Mathur and Neurath, 1959: 20)

UNESCO offered to collaborate in the production of special programs and the establishment of communication channels between the broadcasters and rural communities. The Government of India accepted the offer and a formal agreement followed in latter 1955. (Mathur and Neurath, 1959: 20)

The Poona-UNESCO Project began, therefore, with the collaboration of these two organizations with the objective of testing "the validity of these [Canadian] conclusions by applying and adapting them to the needs and circumstances of a Member State in Asia." (Mathur and Neurath, 1959: 20) The main adaptations of the conclusions from the Canadian forums in their application to India were to be a larger technical support system since the Indian villager had no way of maintaining a radio receiver; and an increased preparation of the illiterate villager for formal discussion. (Neurath, 1962: 276)

General Objectives of the Poona-UNESCO Forums

According to the UNESCO report of the Project, these were the objectives:

> The rural programmes of All India Radio have been designed, then, to (a) carry information to villagers on various aspects of rural life and work which will be of practical use to them; (b) to widen their knowledge of national ideals and undertakings and international events; and (c) provide wholesome entertainment after the hard day's labour.
>
> . . . . . .
>
> The policy adopted for the programmes was to place emphasis on the practical aspects of rural life, and stimulate lively discussion among the listeners without raising controversial political issues. (Mathur and Neurath, 1959: 15,22)

A third objective was more one of communication: "to bypass the bottleneck" caused by the lack of teachers and experts to talk to villagers directly. (Mathur and Neurath, 1959: 89)

Operationalization of Objectives

The first objective cited has a number of flaws if it purports to generate actual planning:

1. The statement, "to carry information to villagers on various aspects of rural life and work" is not operationalized, not so much because the word "carry" (assumed to be broadcasting, in fact) is not further specified by operations specific persons will perform to "carry information", but more because the central figure, "the villager", is left undescribed by those operations which will demonstrate that in actual fact he has been "informed" by the "information carried".

2. Further, the "various aspects of rural life and work" only seem to have an effective criterion for choosing programming content--in the phrase "which have a practical use". Unspecified are the behaviors of villagers which will be evidence that the "informed" villager has actually acted upon or put into practice the information carried.

3. "to widen their knowledge" falls under the same criticism: the behaviors implicit in "widen" and those of the central figure, the villager, are left to the imagination of those implementing the scheme.

The second definition of forum objectives contains the phrase "to stimulate lively discussion". Exactly what a leader of a discussion should do to stimulate "lively" behavior is unspecified. Nor does the word "lively" describe testable operations which would demonstrate that the villager was in fact becoming informed.

Objectives of the Evaluation Study of the Project

The evaluation of the Poona-UNESCO Project was the responsibility of the Tata Institute of the Social Sciences, Bombay.

1. The first objective of the evaluation was "to examine whether radio farm forum could be used to transmit new knowledge." To this end, the survey design provided for pre- and post-tests of villages with and without radios, and of those with radio, with and without forums. The answer hinged on the change in levels of knowledge of villagers before and after the experiment. (Mathur and Neurath, 1959: 62)

The above formulation of the first objective, however, seems inexact. The survey design actually tested radio as a means of transmitting knowledge (radio villages were compared with non-radio villages), and radio forum discussions as a means (forum villages compared with non-forum villages).

2. The second objective was "to study group discussion as a means of transmitting knowledge," to be accomplished by interview and observation of forum members. (Mathur and Neurath, 1959: 62-3) The second objective refines the first objective by specifying forums as a means of the transmission of knowledge as contrasted with radio broadcasting alone as a means.

Using the actual survey design, these two major objectives cited directly from the study could perhaps be more accurately formulated as follows:

1. To study knowledge transmission in villages without radio.

2. To study knowledge transmission in villages having a community radio.

3. To study knowledge transmission in villages with a radio and a forum.

During the survey itself some additional sub-objectives suggested themselves:

4. To study the radio forum as "a tool for community development and change. . . ." (Neurath, 1962: 276)

5. To study the reaction of forum members to the institution of the forum as a whole.

6. To study the reactions of forum members to individual programs broadcast during the project. (Mathur and Neurath, 1959: 63)

Correlation of Objectives with Needs

The need for an aural medium of transmitting knowledge to illiterate villagers was met by using radio. Radio also created lines of communication between experts and persons needing expert knowledge. The need for practical knowledge was complemented by establishing a Program Planning Committee which included ten experienced farmers. The need for the reinforcement of an input of knowledge was met by experimenting with discussion groups meeting for approximately forty-five minutes on the topic.

The need in the Indian milieu for an authoritative source to reinforce the validity of knowledge was met by selecting some opinion leaders as members of each forum. The more general need to encourage critical thinking and judging was met by the objective of open discussion of opposing views within the forum. The need for breaking out of one's isolation was met by radio broadcasting itself, where from some distant source a new environment of knowledge was introduced into the village. The creative "entrepreneurial" need found some implementation in the

encouragement of villagers by the organizers to use their new knowledge in some action project.

3. CONSTRAINTS

Constraints are those factors limiting the choice of alternatives being considered to implement objectives which decision-makers have formulated.

A first and obvious constraint is money. In the case of the present project, UNESCO provided a sum of $19,000 to be used toward the support of advisors, research staff, materials, and radio receivers. (Mathur and Neurath, 1959: 20) Within this financial limit the project was planned for ten weeks in a restricted area of India with limited staff and a limited number of villages.

A second constraint derived from the project need for skilled management and expertise. The only pool of personnel considered available was that of the bureaucracy of the already existing Bombay State Government. This group provided able personnel, although of only one type.

A third constraint was a limitation upon time. The memorandum establishing the organizational structure was written in mid-December, 1955, and allowed only five weeks for the memorandum to be implemented before the first broadcast. (Mathur and Neurath, 1959: 21,26) The desirability of completing the ten weeks of broadcasting before the hot season was probably a factor here. The limited time schedule of the project also severely curtailed the training period scheduled for lower echelon organizers. (Schramm, 1967b: 111)

In the project there was also a kind of space-constraint. If forums were to be organized efficiently for the numbers involved and if the research team was to be able to observe and interview forum members, it was decided that no forum would be organized in a village more than three miles from a bus stop. (Mathur and Neurath, 1959: 84)

A fifth constraint was the necessity of broadcasting in only one language. Hence the project area had to be within range of one radio station which would be centered in an area of one language group.

A sixth constraint was technical. The project could not seriously include action projects as criteria of radio forum effectiveness because the Government structure could not guarantee the provision of the necessary materials such as seeds, fertilizers, etc., which would be needed for every forum deciding to carry out some project.

A seventh constraint was that the personnel of the project were to be <u>loaned</u> by Governmental Departments. While this might be taken as an example of interdepartmental cooperation, it was in fact a constraint because of the possible conflict between the existing priorities of a department and the priority required for an experimental project.

The Central Executive Committee of the project created this constraint by its administrative agreements. Nonetheless, personnel by being loaned can create a "temporary" environment for a project which can affect motivation, the amount of time and energy available to personnel, and so on.

An eighth constraint was the political calm required for the effective functioning of forums. Apparently, where internal political

unrest prevailed in a village, forum discussion tended to become partisan debate. (Mathur and Neurath, 1959: 110)

4-5. ALTERNATIVES AND THE SELECTION OF A MEANS

As noted previously, the literature of the UNESCO Project contains no evidence of a prior study of environmental needs. The knowledge of the environment was apparently presumed to have been present implicitly in the expertise of the planners and the personnel loaned by Government departments. In somewhat similar fashion, the need to explore other alternatives besides radio forums was apparently presumed to have been unnecessary. The unconditional acceptance by the Government of India of the UNESCO offer to sponsor only a radio forum experiment effectively eliminated a wider exploration of alternatives.

In a sense, the experimental groups in the project design could be considered alternatives explored by the project, in that each experimental group had the potential of proving to be more effective than other groups relative to the transmission of knowledge.

Yet the experiment was designed around the decision to test radio forums and only radio forums, and hence the UNESCO Project planners in fact limited their exploration to one alternative and in so doing, in effect, selected the means. Therefore, with the alternative already decided, the only other alternatives considered were the subsidiary ways in which the decided alternative could be implemented. Hence, the purpose of the entire project was to see whether the alternative designated by the original agreement was a viable alternative or not.

Given the unexpectedly good results of the Poona-UNESCO Project, it might seem academic to argue that alternatives might have been more

thoroughly explored and the project designed to test more than this one project design. But it will be seen in phase three and the aftermath of the project with its rather sudden return to the status quo, that there were variables of the Hawthorne type operative in the project, These variables might well be considered sufficiently critical to warrant questioning whether the design of the Poona-UNESCO Project, with its particular superstructural design, was the only practical and unique alternative. The conclusion of this chapter will suggest at least one other such alternative.

Basically, then, the project was the implementation of a prior selection of the alternative called "radio forum." The superstructure provided both the broadcasting of selected topics programmed to fit village taste, as well as the organization by government officers of the discussion groups themselves. Yet there are conceivable alternatives to each element in this description, and the project left these alternatives essentially unexplored.

6. IMPLEMENTATION OF THE PROJECT

The Decision Process: Superstructure

The Poona-UNESCO Project got underway with Shri P. M. Lad--the Secretary of the Ministry of Information and Broadcasting--"holding discussions" within the Ministry in October, 1955. These discussions led to the following decisions:

1. The UNESCO offer would be implemented in one compact area having one regional language which was Marathi.

2. The project would be evaluated by a body independent of All India Radio's Audience Research Unit, viz., the Tata Institute of Social Sciences, Bombay. (Mathur and Neurath, 1959: 20-1)

The Director-General of All India Radio would assume general responsibility for the project. Realizing that the Government of Bombay State would have to be connnected intimately with All India Radio during the project, early in December, 1955, the Director-General of AIR developed a "comprehensive memorandum covering the administrative system" of the project in discussions with representatives of the Bombay State Departments of Agriculture, Education, Information, and Community Development. The memorandum contained five sections:

1. A Central Executive Committee.

2. A Field Organization Committee.

3. A Program Planning Committee.

4. An Evaluation Program.

5. A Project Staff Committee. (Mathur and Neurath, 1959: 21; Schramm, 1967b: 111)

The Central Executive Committee

The Director-General of AIR chaired this committee composed of representatives of Bombay State Departments of Community Development, Publicity, Education, Agriculture, and Health, and two non-government representatives along with the heads of the AIR radio stations in Bombay and Poona. This committee never met formally, but "its main utility lay in getting various authorities to agree to certain administrative steps", (Mathur and Neurath, 1959: 21) viz., to have these departments lend

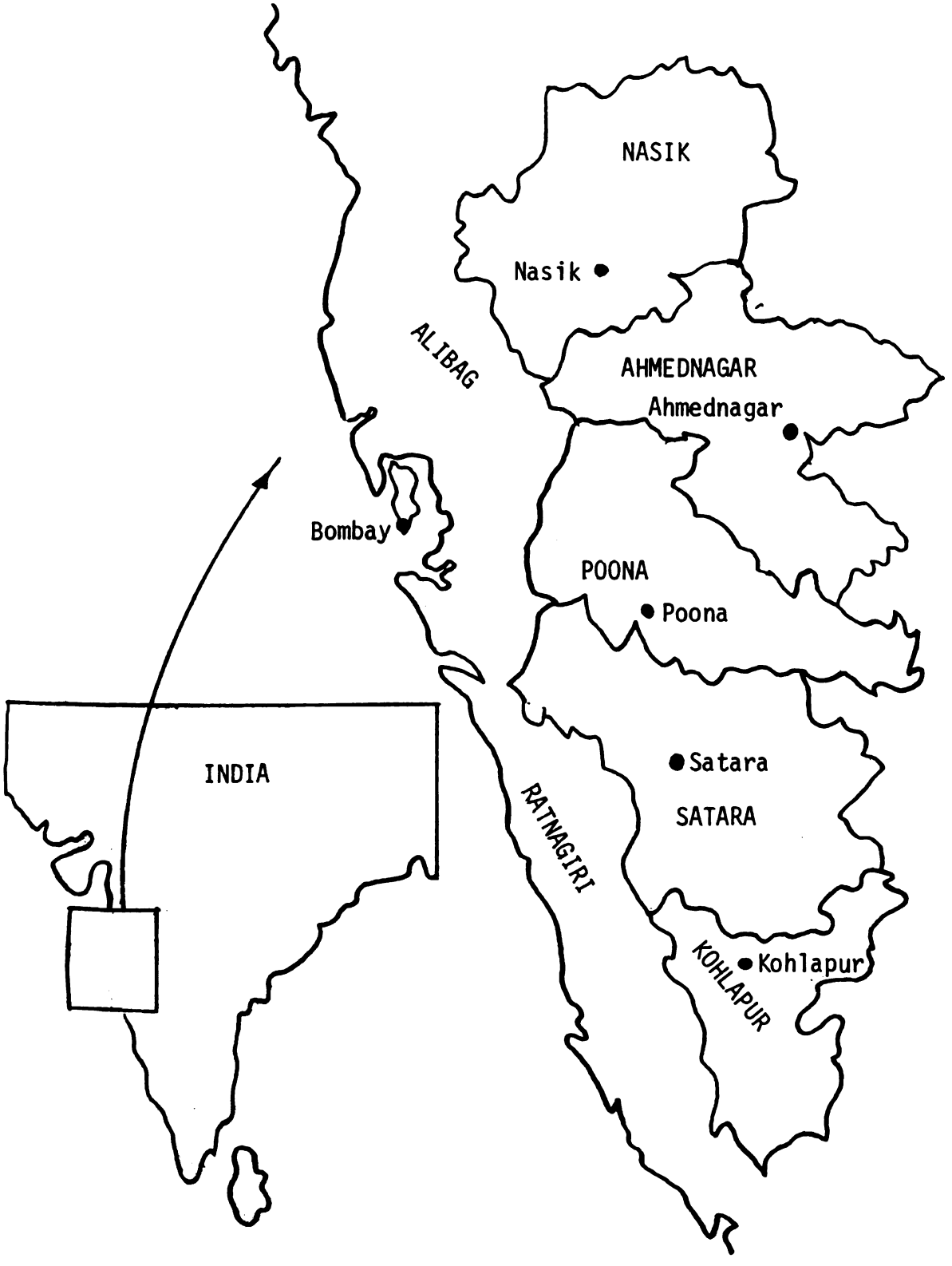
organizers, provide a certain amount of subsidy for incidental forum expenses at the local level, and lend personnel for certain kinds of supervision. (Schramm, 1967b: 101)

This Central Executive Committee made the decision to carry out the project in five Marathi-speaking districts centered around the city of Poona. (Cf. Figure 4.1) The project plan initially was to organize 150 farm forums, half of the number within areas organized by the Community Development and National Extension Service, and half outside these areas. (Mathur and Neurath, 1959: 21) Eventually, the distribution settled upon was 75 forums within areas so organized and 70 forums outside the organized areas. (Mathur and Neurath, 1959: 26)

The Field Organization Committee

Created by the Central Executive Committee, this Committee included the Directors of the Departments of Education, Agriculture, Publicity, the Deputy Commissioner of Community Development, and the heads of the Bombay and Poona AIR stations. Its decisions were the selection of the organizational staff of the Project Staff Committee of Chief, District, and part-time organizers, the precise selection of the experimental and control villages, and the drafting of instructions to the organizers and the Program Advisory Committee. (Schramm, 1967b: 111) On December 7, 1955, the field committee selected a certain Shri Jadhav from the Community Project Administration as Chief Organizer, borrowed five officers from Publicity, Education, Agriculture, and Community Development to serve as district organizers, and provided for 40 part-time organizers to be arranged for through various Departments. (Mathur and Neurath, 1959: 27) This Committee met rather regularly, determined the district

Figure 4.1. The five districts of the Poona-UNESCO project (adapted from Mathur and Neurath).



administrative centers, and drafted general instructions. (Mathur and Neurath, 1959: 20)

The Project Staff Committee

The Field Organization Committee selected the Assistant Director of the AIR station at Poona to head this Committee composed of the Chief Organizer, the five District Organizers, and the forty part-time organizers. This Committee organized the forums in the field.

The Program Planning Committee

This committee was composed of the two sub-committees: the Subjects Committee which included ten experienced farmers along with experts on village life, development plans, agriculture, education, health and other areas of village programs (Mathur and Neurath, 1959: 33); and the Program Presentation Committee composed of one producer each from the Bombay and Poona AIR stations and the Assistant Producer of rural programs at AIR Poona. (Mathur and Neurath, 1959: 22)

The Evaluation Committee

This committee was composed of personnel of the Tata Institute of Social Sciences, Bombay, and was headed by Shri A. R. Wadia, the Director of the Department of Social Research. Two visiting professors of the Institute, Drs. A. M. Lorenzo and P. Neurath, worked out the overall plan of the project, the evaluation survey design, the village samples, and the questionnaires, forms, and procedures of data collection. (Mathur and Neurath, 1959: 61) Dr. Lorenzo left the Institute in May, 1956, and the work of completing the data collection, supervising the analysis,

and drafting the final report was left to Dr. Neurath. (Schramm, 1967b: 113)

Conclusion

The organizational relationships of decision-making personnel and the various governmental departments contributing these personnel are given in Figure 4.2.

The Decision Process

Project and Survey Design

The geographical area of the project and its survey had a population estimated at seven million, with 107 towns averaging 16,000 persons and 6,547 villages averaging 850 persons. The percentage of rural population for the five districts ranged from Poona with 57.2% to Satara with 86.4%. (Mathur and Neurath, 1959: 23)

Since the five districts of Nasik, Ahmednagar, Poona, Satara, and Kohlapur composed a varied range of agricultural and climatic conditions, the villages containing the variables to be tested were selected to introduce this range into the project design.

The pairs of variables in the project design were:

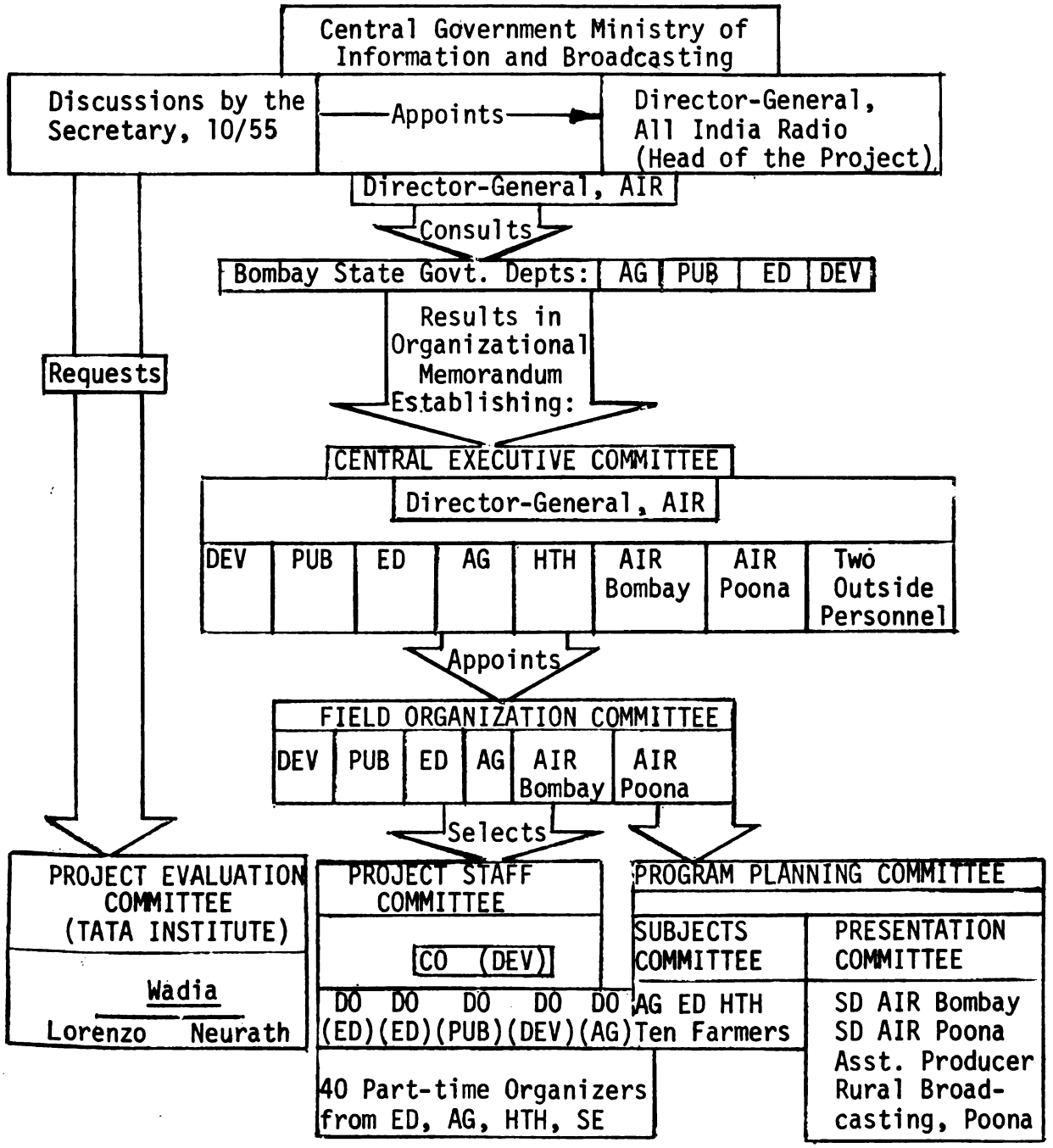
1. Villages with community receivers vs. villages without community receivers.

2. Radio villages with discussion forums vs. radio villages without forums.

3. Radio forum villages with a community receiver for at least a year vs. radio forum villages with a radio installed only on the occasion of the project.

Figure 4.2. Personnel loans and genesis of the organizational structure.

Key:
BS = Bombay State Government
AIR = All India Radio
ED = BS Dept. of Education
AG = BS Dept. of Agriculture
PUB = BS Dept. of Information and Publicity
SD = Station Director
DO = District Organizer
CO = Chief Organizer
SE = BS Dept. of Social Ed.
DEV = BS Dept. of Community Projects & Development
HTH = BS Dept. of Health



4. Villages outside those areas of intensive development by the Department of Community Development (called "Blocks") vs. villages within these Community Development Blocks. (Mathur and Neurath, 1959: 64)

These four pairs of variables give the eight categories of villages tested in the project and are indicated in Table 1 from Schramm, 1967b: 113)

Table 4.1. UNESCO Project Village Categories

	Villages with forums	Villages without forums
Inside development blocks	Old radio New radio	Old radio No radio
Outside development blocks	Old radio New radio	Old radio No radio

As Schramm notes,

> Ideally, of course, the design might have included a "new radio" group of villages without forums, but radios being in short supply, it was considered too wasteful to install village radios for that purpose. (1967b: 113)

The project was originally scheduled to begin on Republic Day, January 26, 1956, but the project design had not been completed by this time. Hence the revised timetable became:

1. Pre-broadcast questionnaires: Feb. 1-19, 1956.

2. Observation of forums during 20 broadcasts of one-half hour on Sundays and Thursdays at 6:30 PM: Feb. 10-Apr. 26, 1956.

3. Post-broadcast questionnaires and interviews: May and early June, 1956. (Mathur and Neurath, 1959: 26)

Information Flow

The memorandum initiating the project organization called for the Chief Organizer to begin training the District and Part-time Organizers in early January, 1956, but he was unable to report until January 31st. The last District Organizer was freed by his department only on February 11th, one week before broadcasting began. Prior to the arrival of the Chief Organizer, the most that was done was some briefing of the available District Organizers by the Assistant Director of AIR, Poona. (Mathur and Neurath, 1959: 26-7)

Upon his arrival, the Chief Organizer drew up detailed instructions for District Organizers about the establishing of forums and the selection of members, and instructions in the conduct of the forums for the Secretary-Convenors. However, the original information process had to be modified:

> Because of shortness of time, it was found necessary to cut back on the planned training programme. Instead of holding central classes for the district and part-time organizers, and for the forum officers, the chief organizer talked individually with the district organizers, and the district organizers talked with the part-time organizers, forum chairmen, and convenors. (Schramm, 1967b: 111)

For basically the same reason--shortness of time--information flow (and as a result, motivation for the project) was severely reduced in the case of the Part-time Organizers, and this weakened the effectiveness of the entire action process.

The Action Process: Experiment Preliminaries

Superstructure Organization

> Originally it was intended that the task of setting up the forums should be performed by the part-time local organizers and the district organizers should supervise their work. In practice, however, it was the district organizers who visited the villages and set up the forums because the part-time organizers began functioning late, and even when they were available, they were not effective. (Mathur and Neurath, 1959: 28)

These part-time organizers were for the most part headmasters of local schools who were paid five rupees per month for their services in the project and were largely ineffective throughout the project, probably because they were enlisted, often enough, too late. (Mathur and Neurath, 1959: 29)

The District Organizers, therefore, became pivotal in the project. As soon as each Organizer could arrive in his district, he began touring the district to contact the approximately 20-40 villages designated by the Field Organization Committee for the establishment of forums.

Entering a village the District Organizer would present himself to the village elders, explain the project, and ask their assistance in forming a list of candidates for forum participation from which a selection would be made. Often enough the initial approach included contacting the administrative officer of the district school board to allow headmasters to become part-time organizers, contacting the assistant deputy educational inspectors to have them visit the forums in the course of their tours. The District Organizer also contacted the president and executive officers of the district panchayats to allow secretaries of the local panchayats to function as convenors of forums in areas where Community Development and National Extension Service blocks did not yet exist,

and to allow the premises of the local panchayat to be used for the forum, and so on. (Mathur and Neurath, 1959: 28)

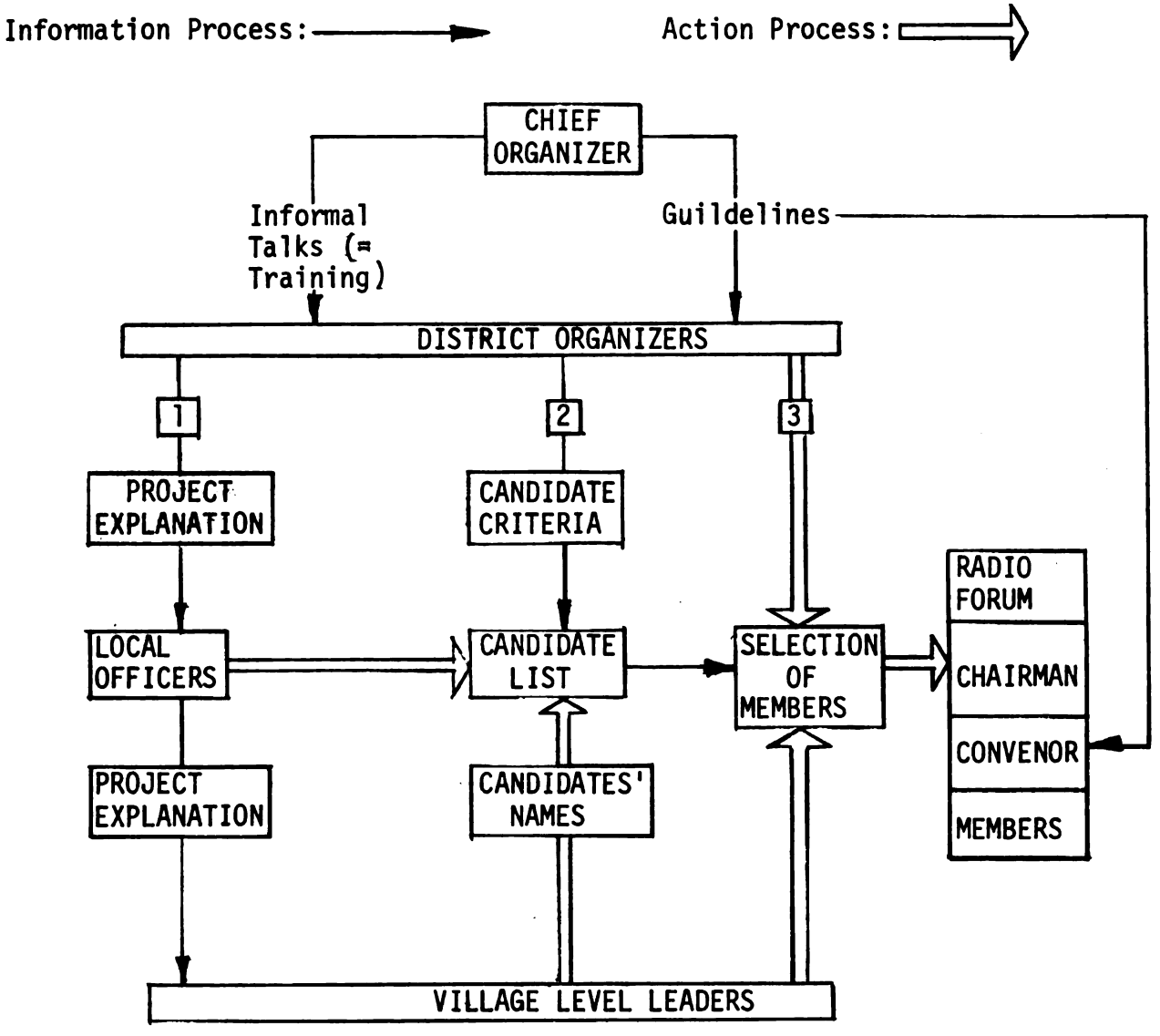
The District Organizer would then meet with the village council chairman and the village headman, the head of the local farmers union, and school teachers to compose a list of candidates for the forum. There was an effort to enlist members of different castes, both men and women, but generally this effort failed: the urgent deadlines did not allow the time needed to persuade women and untouchables--as well as village leaders--for these two groups to be included to any significant extent. Such inclusion ran counter to tradition. (Mathur and Neurath, 1959: 102)

Being a forum chairman was an honor, and this position usually fell to the village council president while familiarity with record-keeping made the council secretary or a school teacher the usual candidate for the position of secretary-convenor.of the forum. (Mathur and Neurath, 1959: 103)

Prior to actual enrollment in the forum, the candidates had explained to them the aims of the forum and that enrollment meant they were to listen to each semi-weekly broadcast, participate in a discussion of the topic for about 45 minutes, state their views, and if interested, decide and initiate whatever action project they would think feasible. (Mathur and Neurath, 1959: 30)

Figure 4.3 gives a composite of the information and action processes used to set up the forums.

Fig. 4.3. Information and action processes in the establishment of forums of the Poona-UNESCO Project.



Technical Inputs

Although the actual number of forums organized and functioning throughout the project numbered 145, the original design called for 150 forums with 100 radio receivers previously provided by Bombay Government schemes, 25 newly provided by the Ministry of Information and Broadcasting, and 25 provided by UNESCO funds for the project. (Mathur and Neurath, 1959: 21; Schramm, 1967b: 110)

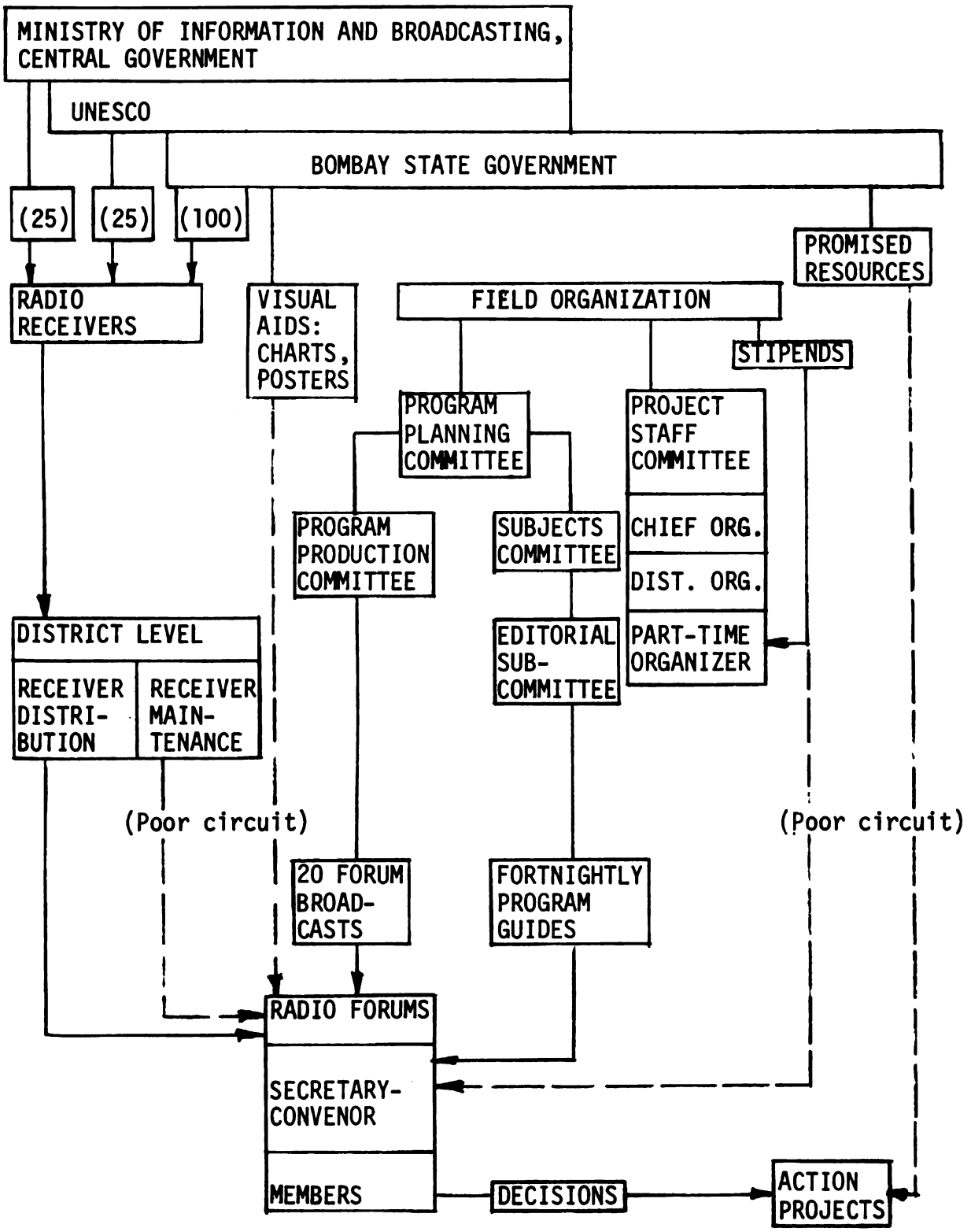
In order to maintain the receivers in working order, each District Organizer had to contact the technical assistant in charge of rural broadcasting who also had the responsibility of providing the sets. The provision of receivers apparently encountered no difficulty, but throughout the project their maintenance remained inconsistent as no central system of maintenance was in existence nor established. (Mathur and Neurath, 1959: 28,31)

At the beginning of the project:

> It was also agreed that if, as a result of forum activity, some constructive work of village welfare was taken up by any forum, it would receive assistance from the administration. (Mathur and Neurath, 1959: 22)

In actual fact, AIR--for all the administrative agreements of the Central Executive Committee--was unable to command the personnel and materiel required to complement the action-project decisions taken by forums. The feedback data showed numerous decisions recorded by forums, but the number of projects implementing these decisions was much fewer for want of the resources promised by the administrators of the project. (Schramm, 1967b: 132) (For technical, financial and softwave inputs, cf. Figure 4.4.)

Figure 4.4. Poona-UNESCO project forum inputs.



Minor Financial Inputs

Two groups of 40 persons, the part-time organizers and the secretary-convenors, were provided with small subsidies during the project by the state government. The former were largely ineffective, perhaps because they were late in being brought into the project and were paid only "a few rupees per month." (Schramm, 1967b: 111) The latter were paid five rupees per month to cover their stationary and mailing expenses of the reports back to AIR. (Mathur and Neurath, 1959: 31)

Printed Materials

Printed material provided by the superstructure was to have taken two forms: literature and visual aids such as charts and posters, which were to be provided by the Departments of Agriculture, Education, and Public Health of Bombay State. Again this circuit was weak and little of this promised input reached the forums. (Mathur and Neurath, 1959: 22,26)

More constant were the fortnightly program guides cyclostyled by AIR, Poona, and mailed to the secretary-convenors ahead of broadcasts. These guides gave details of coming programs, general background information for understanding the topics, hints to convenors, and questions to aid discussion, and were produced by a small editorial committee within the Program Planning Committee. (Mathur and Neurath, 1959: 22)

Program Planning

The Subjects Sub-committee of Program Planning was composed of officers of the Departments of Education, Community Development, Agriculture, and Public Health as well as ten other members "some of whom were

experience [sic] farmers." (Mathur and Neurath, 1959: 33) (Cf. Table 4.2)

Table 4.2. Broadcast Topics

1. The democratic process and village.
2. Fruit growing.
3. Poultry farming.
4. Cattle improvement.
5. Cowdung as manure.
6. Dry farming methods.
7. Methods of gur (raw sugar) production.
8. Budgeting and planning for the family.
9. Adult education and libraries.
10. Reading habits.
11. Education for rural children.
12. Pre-primary education for children.
13. Rat control.
14. Water shortage solutions.
15. Monsoon precautions.
16. Co-operative marketing.
17. Quack doctors.
18. Community Project aims.

Some topics covered two broadcasts, and the list and the order of programs was decided by two meetings of the Subjects Sub-committee. Production followed immediately. (Mathur and Neurath, 1959: 33)

Program Production

The Program Production Committee included one program producer each from AIR, Bombay, and AIR, Poona, as well as the Assistant Producer in charge of Rural Programs, Poona. (Mathur and Neurath, 1959: 32)

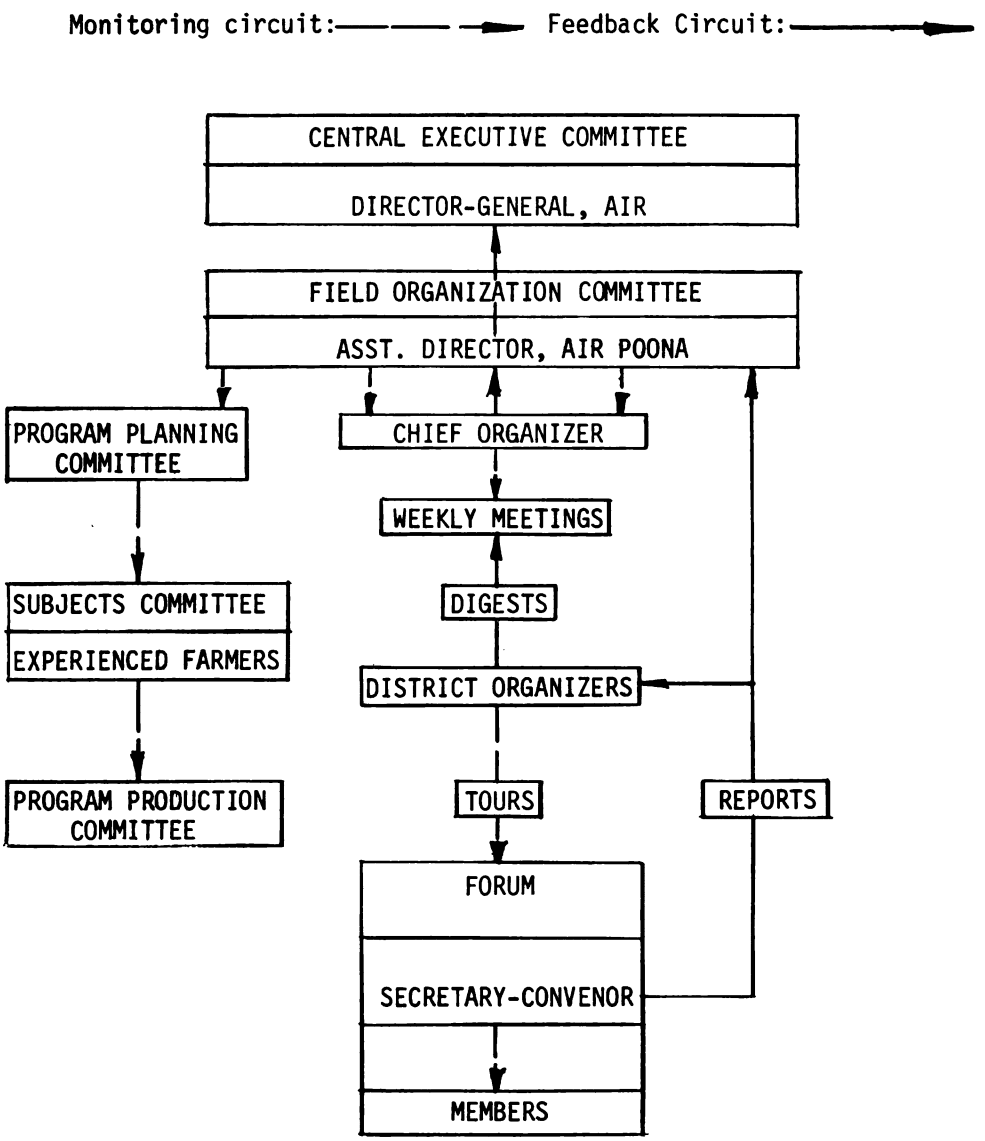
These three officers produced at AIR, Poona, the series of 20 half-hour broadcasts with a pattern of first presenting the topic via a play, talk, or panel discussion, and then answering questions sent in by the forums. (Mathur and Neurath, 1959: 33) These were then broadcast every Sunday and Thursday evenings at 6:30 P.M. for the ten weeks between February 19 and April 26, 1956.

Figure 4.5 illustrates the multiple inputs from the superstructure to the forums.

The Action Process: Formal Forum Operation

The key official in the operation of a forum was the Secretary-Convenor. It was he who would publicize the forum meetings in the village on the days of the broadcasts, arrange the physical setting of the meeting-place, and was charged with insuring the radio receiver was in working order prior to the broadcast. He would take attendance of every meeting, and make notes of the opinions voiced during the discussion and decisions taken regarding action projects and conclusions reached. He would turn on the radio to begin the broadcast and turn it off to begin the discussion--a simple procedure, but one insuring the requisite organized atmosphere of the forums. (Mathur and Neurath, 1959: 31)

Figure 4.5. Monitoring and feedback circuits.



The forum members were recommended to sit in a somewhat horseshoe pattern with the chairman and the convenor seated at the ends. This was designed to promote an atmosphere of equality needed for discussion, with the chairman and the convenor being first among equals. (Mathur and Neurath, 1959: 31)

The chairman usually would lead the discussion, the convenor taking notes. Having a recognized village leader as chairman lent authority to the forum and impetus to action projects. Having a two-member tandem conducting the forum insured its reasonably efficient functioning, for when the case would arise where the chairman might be less skilled in leading a discussion, the convenor was able to be of assistance. (Mathur and Neurath, 1959: 103)

The forums were voluntary and without a clearly defined group interest. This factor could have promoted group discussion. Yet membership was an honor, and existing opinion leaders could be represented and village approval could be to a great extent guaranteed. (Neurath, 1962: 280)

The Radio Farm Forum, therefore:

> . . . became an institution able to unify the village around common decisions and common actions. At best it widened the influence of the gram panchayat [village council] and its action. In other places it was intermediate between a panchayat meeting and a town meeting: less binding in its decisions than the former, and more flexible in its deliberations than the latter. (Mathur and Neurath, 1959: 101)

The position of the Radio Rural Forum vis-a-vis both the village council and a town meeting would be worth sociological exploration; the Forum's "widening the influence of the gram panchayat" leaves still unanswered the question of the possible conflict between a functioning

forum carrying out action projects which, on occasion, the gram panchayat might well have considered its province.

The Action Process: Non-formal Forum Operation

A number of factors of the non-formal type appear in the data as contributing to the success of the radio forum.

1. The forum structure of giving the position of chairman to an existing leader amounted to an honor for the person chosen and proved to be a stabilizing factor for the forum. Giving the position of secretary to a person of competence seems to have had a similar effect in stabilizing a forum's operation.

2. Making the forum voluntary diminished the self-interest of established groups and produced an atmosphere of freedom required for unbiased discussion and unfettered decision-making regarding action projects.

3. This atmosphere of free discussion permitted viewpoints to emerge and gain a legitimacy hitherto denied which set the stage for freely-given approval by forum members. As Neurath notes, when each forum member "is assured that a change in methods has the approval of his neighbors, and when the group decides on community projects . . . outside advice is accepted wholeheartedly by the villagers." (Cassirer, 1959-60: 532)

4. The personal influence of the District Organizer had a catalytic effect when he took care in helping to select forum members, when he inspected records with interest, when he understood village problems, could give explanations and offer suggestions, and when he acted as a friend and not merely an official. (Mathur and Neurath, 1959: 104)

5. Action projects depended not merely upon the availability of resources but equally upon the enthusiasm of the members--a non-formal factor which planning design can abet but cannot produce.

6. Group discussion by participants as equals was a new experience for the villagers:

> It was only after the first two or three meetings that the age-old convention was broken of allowing only the elders and so-called respectable persons to participate in discussions. This was achieved not through the assertion of rights but as a result of the stimulating atmosphere of the forum; there was sympathy on the side of the elders and accommodation on the part of the younger members. (Mathur and Neurath, 1959: 39)

This factor is related to group discussion results which will be discussed later.

7. Finally, in more than one instance, a factor of the Hawthorne type contributed to forum operation. In general the villagers felt it an honor to be included in a scheme sponsored by the Central Government and an international organization such as UNESCO. Sometimes it was only after such an explanation that the forum was able to be established. (Mathur and Neurath, 1959: 30)

We turn now to the final categories in the analysis: (1) monitoring, (2) feedback, and (3) modification.

7. MONITORING AND FEEDBACK PROCESSES

Monitoring Centers

1. During the Project the Chief Organizer was in continual contact with his five District Organizers who in turn were continually touring their districts to oversee forum operations. All the organizers were engaged in monitoring the project; at times the Chief Organizer had to

move below the echelon of the District Organizers to solve, at the village level, political problems connected with organizing a forum in a particular village, and cultural problems connected with village suspicions of the outside investigators doing the Tata Institute evaluation study. (Mathur and Neurath, 1959: 28)

2. A second monitoring center can be found, in the Subjects Subcommittee of the Program Planning group. This committee included ten experienced farmers who, although they did not perform formal monitoring during the project, can be said to have monitored the content of the programming by comparing it with their experience.

3. Monitoring at the village level of the operation was formally the work of the Secretary-Convenor who was present at each forum meeting. His monitoring was the basis of his regular reports back to AIR at Poona.

Since the project had a formal evaluation study, there were actually two systems of monitoring and feedback operating during the project. The one described above was part of the design within the project itself. The monitoring and feedback circuits of the evaluation study will be treated in a separate section.

Feedback

1. The District Organizers were required to keep a diary of visits to their forums. This diary formed the basis of feedback to the Chief Organizer at weekly meetings. Further, the District Organizers compiled a fortnightly digest of the conclusions and discussions of their forums based on the reports of each forum meeting sent them by the Secretary-

Convenors. This digest undoubtedly constituted feedback from the District to the Chief Organizer. (Mathur and Neurath, 1959: 28)

2. The Chief Organizer, then, on the basis of the reports of the District Organizers, reported to the Director-General of All India Radio who headed the Central Executive Committee. (Krishnamurthy and Bhatt, 1965: 18) Although the available sources do not mention this, the Chief Organizer most likely reported also to the Field Organization Committee.

3. The Secretary-Convenor of each forum was required not only to register forum members and record their attendance, but also to fill out report forms giving an account of the main points of the broadcast as understood by the forum, salient points of the discussion and comments on the topic, unanswered questions which arose during discussion, and decisions regarding action projects. He was then to write up three copies of this report: one for his own village record, one to be sent to the Assistant Station Director of AIR, Poona, and one to be sent to the District Organizer. (Mathur and Neurath, 1959: 31)

Figure 4.6 describes the monitoring and feedback circuit to the extent it appears in the sources available.

8. PROJECT MODIFICATION

Since the Poona-UNESCO Project was basically an experiment to test a specific system-strategy, modifications of the system came subsequently: in Phases Three and Four in the history of forums in India.

There were some "modifications" during the course of the project, but they were not influenced by monitoring and feedback circuits, but

Figure 4.6. Survey Design of the Tata Evaluation Study

Key: NA = Nasik District
AH = Ahmednagar District
PO = Poona District
SA = Satara District
KO = Kohlapur District

COM DEV = Community Development Block

EXPERIMENTAL GROUP				CONTROL GROUP			
20 FORUM VILLAGES				20 NON-FORUM VILLAGES			
10 OLD RADIO VILLAGES		10 NEW RADIO VILLAGES		10 RADIO VILLAGES		10 NON-RADIO VILLAGES	
5 COM DEV:	5 NON-COM DEV:	5 COM DEV.	5 NON-COM DEV:	5 COM DEV:	5 NON-COM DEV:	5 COM DEV:	5 NON-COM DEV:
NA-1	NA-1	NA-1	NA-1	NA-1	NA-1	NA-1	NA-1
AH-1	AH-1	AH-1	AH-1	AH-1	AH-1	AH-1	AH-1
PO-1	PO-1	PO-1	PO-1	PO-1	PO-1	PO-1	PO-1
SA-1	SA-1	SA-1	SA-1	SA-1	SA-1	SA-1	SA-1
KO-1	KO-1	KO-1	KO-1	KO-1	KO-1	KO-1	KO-1

TOTAL: 40 survey villages, one village in each of eight categories in each of the five districts.

were the result of breakdowns in project implementation: the dispensing with formal training for organizers, and the insufficient financial and informational input at the part-time organizer level which resulted in a general ineffectiveness of this echelon.

THE TATA INSTITUTE EVALUATION STUDY

Introduction

The fundamental objective of the Poona-UNESCO Project was the evaluation of the Indian version of the Canadian farm forums. It has been necessary to refer to certain components of this evaluation study above: its personnel, its objectives, the project design and the population to be studied, and the project timetable which was closely connected with that of the evaluation.

This section will analyze how the objectives of the evaluation were carried out by the investigators, the methodological parameters, and the general results of the study.

The Investigation

Survey Personnel

Under A. R. Wadia of the Tata Institute, A. M. Lorenzo and P. Neurath designed the project. Their staff consisted of a field supervisor with a research assistant and typist, and five men and five women interviewers. Data tabulation was performed by a chief tabulator, five tabulators, two research assistants and a typist. Between November, 1956 and May 1957, P. Neurath wrote the final report. (Mathur and Neurath, 1959: 61,62)

Survey Design

Five districts in the State of Bombay were studied: Nasik, Ahmednagar, Poona, Satara, and Kohlapur. Financial limitations restricted the Tata Institute survey to only 20 of the 145 radio forums established by the Poona-UNESCO Project. These twenty forum villages formed the experimental group and were then paired with twenty non-forum villages forming a control group.

Ten of the control group were villages having a community radio in advance of the project, and ten had no radio. For reasons of experimental design, the ten villages having no radio should have been "new radio" villages, i.e., villages receiving a radio on the occasion of the project, but as noted above, for reasons of budget, this part of the design was not implemented. To form the membership of the control group, Tata Institute investigators went to the twenty non-forum villages and selected twenty members in each village according to the same methods and criteria used in selecting the membership of the 145 radio forums of the project. (Mathur and Neurath, 1959: 65)

The survey design is given in Figure 4.6.

The Investigator Teams

Each of the five districts contained four experimental forum villages and four control non-forum villages. These eight villages in each district were surveyed by a pair of investigators during the time period of the Poona-UNESCO Project according to the following procedure.

The survey of the control group consisted of two questionnaires with interview administered to the twenty villagers in each non-forum

village prior to and following the ten weeks of radio forum broadcasts.

The survey of the experimental group consisted of the same two questionnaires with interview administered to the twenty villagers in each forum village. In addition to administering these pre- and post-broadcast period questionnaires, each pair of investigators observed their four forum villages during the course of four different broadcasts and discussions during the ten weeks of the project.

Regarding the pre-broadcasting period questionnaire, 406 forum villagers and 401 non-forum villagers participated. However, since only 382 forum and 361 non-forum villagers of the original number were available for the post-broadcast period questionnaire, the official results of the evaluation study were based only upon the data of villagers available for the post-broadcast period questionanire (Mathur and Neurath, 1959: 65)

During the time of the project, the field supervisor of the evaluation team toured all five districts, and set up the investigators' forum-observation schedules so that the teams in all five districts were observing forum operations of villages of the same category during the same broadcast. (Mathur and Neurath, 1959: 64-65)

Investigator Bias

To describe the characteristics of the investigators of the project, the Poona UNESCO report does little more than cite the five men and five women by name. (Mathur and Neurath, 1959: 62) There is evidence, however, that those conducting the survey were aware of investigator bias in the administration of the questionnaires. At one point in the

he results of a certain question put to villagers in the
district were eliminated because of the extreme uniformity of
The reason for the elimination was the probability of undue
e of the investigator administering the question. (Cf. Mathur
ath, 1959: 86, note 1)

ATIONALE, OBJECTIVES, AND METHODOLOGY

rvey Objective: Transmission of Knowledge

on

e first survey objective was to test whether radio broadcasting
orum discussion could transmit new knowledge. This objective
en down into sub-objectives which were reflected in the project
(Cf. Figure 4.6) Not only was radio forum examined, but also
thout forum, and village without radio. Thus radio as a means,
o forum as a means were the principal parts of the first objec-
Mathur and Neurath, 1959: 62)

e

major assumption underlying the first objective greatly simpli-
project design and the methodology of investigation: viz.,
iven input of knwoledge in a society, some knowledge remains on
ace and some goes deeper to produce change in attitudes and be-
With this assumption in mind, Neurath could claim:

> Thus, all that we really needed to find out was whether the
> :al level of knowledge, as distinguished from the individual
> :ms that served to define it, had been raised sufficiently to
> rant the conclusion that the ordinary learning process had been
> in motion--whatever that might then entail as to how deep some
> ts of the new information went, or how many of the members
> rned with or without understanding, or not at all. If we found

> that ineeed the level had been raised by a large amount, then it was perhaps not unreasonable to assume that a good number of people had learned a good amount of the new with understanding--there is nothing that lets us believe that villagers as a group would be less capable than other people of retaining and using new information that they had acquired.
>
> To that end, we had to define levels of knowledge that, while based on answers to individual questions, made final judgment somewhat independent of the individual items. This was done by combining in a set of quantitative expressions the most varied types of topics. (Mathur and Neurath, 1959: 89-90)

The topics were the subjects both of the broadcasts and the questionnaires.

The basic rationale, therefore, was the assumption that knowledge input will always be retained at graduated depths in a group and that the only concern is to insure that the input was of sufficient amount.

A second part of the assumption was that any group with a sufficient input of knowledge will not only retain but "use the new information that they had acquired".

A third part was that the final judgment that the amount of knowledge retained would set the learning process in motion was a judgment of the survey designers.

Commentary

The first and third parts of the assumption are understandable, but the second suggests a curious problem for the future of radio forums.

The study tested the retention of knowledge and its degree. It used a quantified scale which permitted the designers to judge if the amount of retained knowledge sufficed to set the ordinary learning process in motion. The second part of the assumption presumes that retained knowledge will be used, that is, will result in attitudinal and behavioral

changes. This part of the rationale implicitly eliminates the more overt types of behavior--such as decisions for action projects and projects carried out--as a criterion of the effective transmission (through radio forums) of effective knowledge. Retention alone was monitored; future use of knowledge was presumed. Assumed was not that knowledge precedes action (which is fairly safe to assume) but that sufficient amounts of knowledge will produce action in the long run (which should be open to question).

Here it should be questioned whether action, that is, overt behavioral change, was not in reality the unstated but most general objective of the entire project. The sponsorship by UNESCO of a project in a developing country would seem to indicate an interest in village modernization, and not merely a change in the level of village knowledge.

Further, it is of some interest that during the operation of the project, Neurath introduced a third objective into the project which the original design had not incorporated explicitly. During the project it became increasingly clear that forums were making decisions on action projects and often carrying them through. To raise this phenomenon to the level of a project objective, Neurath resorted to "analysis of the written data" of the discussions and decisions sent to AIR by forum convenors. The third objective, therefore, after the study of radio forum and group discussion, became the study of the radio forum as "a tool for community development and change". (Neurath, 1962: 276; Mathur and Neurath, 1959: 63)

The design of the Poona-UNESCO Project makes it clear that action decisions and projects were not to be considered criteria of forum

performance. Yet the function of the radio forum as an action tool was inserted as a third, post factum objective of the study, and both Mathur and Neurath in their report acknowledge action projects as an extrinsic validation of radio forum success. Mathur ends his report by stating:

> These [action projects] in the main were only modest attempts and did not necessarily mean the opening of a new chapter in the life of the villages. They nevertheless showed the power of the mind awakened through the process of education by radio. (Mathur and Neurath, 1959: 40-41) (Italics added)

Neurath, for his part, states that the project's

> . . . less formal but much more impressive expression is found in what we saw when we visited the villages themselves and were shown with pride what they had already done, and then told with the same pride what they were about to do. (Neurath, 1962: 280) (Italics added)

If action projects are the "much more impressive expression" of the effect of radio forums; if action projects suggest radio forums as a tool for community development and if they "show the power" of radio forums; if UNESCO sponsorship was really aimed at actual village modernization and change and if action projects became a post factum objective of the project, then perhaps the Poona-UNESCO Project which formally tested only the increase and retention of knowledge can not be taken as a sufficiently complete prototype on which to base future planning. Yet as will be seen, this project was taken as the model for national expansion in India.

The Results

The total amount of knowledge required of villagers answering the questionnaires was arrayed on an eighteen point scale. These gains in knowledge are given in Table 4.3.

Table 4.3. Results of the First Objective

Group	Pre-broadcast	Post-broadcast	
Experimental (400) Forum Members	6.4	12.1	Averages
Control (200) Radio, Non-forum	5.5	7.0	
Control (200) Non-radio, Non-forum	3.9	4.6	

The experimental group began with higher initial knowledge of the topics, perhaps because this group was 86% literate as opposed to 75% for the control group. It should be noted that both these literacy figures are far above the average literacy level of 15-20% for the five districts. Thus the sample of the survey was not to be considered representative of the population as a whole. (Mathur and Neurath, 1959: 68)

The increase in knowledge of the experimental group from 6.4 to 12.1 was considered by the survey designers to have set the "learning process in motion". This particular measure was considered by the evaluators as indicative of the essential success of the experiment.

The increase of knowledge from 5.5 to 7.0 in radio, non-forum members was considered to have been partially the effect of the radio forum broadcasts since this group knew of the broadcasts and could have listened sporadically although without any follow-up discussion. Another factor in the control group's gain in knowledge may have been the fact that the investigators had to explain the pre-broadcast period

questionnaire in some detail and this may have affected the post-broadcast period test. This may explain the non-radio, non-forum group's increase in knowledge from a factor of 3.9 to a factor of 4.6.

When the increase in knowledge of the radio forum group was examined according to sub-groups such as leader-non-leader, literate-non-literate, low caste-high-caste, it was found, surprisingly, that all forum members, no matter what their group or what their original base, had gained in knowledge by almost exactly identical increments. Since each radio forum sub-group had increased identically and substantially (their knowledge had nearly doubled), the investigators were able to bypass the question regarding for whom did the knowledge go deeper and for whom did it remain on the surface. There would be no reason to assume that all the identical gains in knowledge remained on the surface for all subgroups. Rather,

> . . . it would seem safer to assume that this simply means that the process of learning had been set in motion in all these sub-groups, and that the usual number of cases had occurred of learning with and learning without understanding, and not learning at all. (Mathur and Neurath, 1959: 90)

Thus the project was considered a success regarding its first objective, viz., the transmission of knowledge in sufficient amounts to assume that the process of learning had begun for each sub-group in a radio forum.

The Second Survey Objective: The Discussion Group

Methodology

The investigators used interview and observation to study group discussion as a means of transmitting knowledge. Each of the forum

members was observed during four different broadcasts and post-broadcast discussions and were then interviewed the following mornings. The forum members were rated on their degree of participation in the discussion and interviewed for their reactions to the broadcasts and discussions. The observers then formally recorded their own impressions of the various behaviors of the chairmen, secretary-convenors, members and non-members who may have been present, as well as their impressions of the forum "atmosphere" such as physical arrangements, etc. Finally, in a free-form diary, each observer set down his general impressions. (Mathur and Neurath, 1959: 62-3)

Results

A forum member's degree of participation in discussion was rated along a five-point scale. The total participation-level of any forum during a given discussion period was expressed as the average of the participation-ratings of all members of that forum. The general results of the participation-analysis were that for the ten weeks of the project, no systematic increase was registered in the average participation-levels of the experimental group of forums of the survey. The one noticeable trend was that as the project progressed, the participation ratings of individual forum members moved closer to the mean.

Specifically, the average participation for all twenty experimental forums during the four observed discussions was 2.6 on a five-point scale. For the project as a whole, 2.6 remained the average participation level of the experimental group of forums during the four observed discussions. Those forums that increased their participation-levels as

the project progressed were counterbalanced by forums that decreased their participation-levels from the first to the fourth observed discussion. The only trend noticed was that as the weekly discussions progressed, individual participation changed: members who dominated early discussions became less dominant, and quieter members began to participate more. (Mathur and Neurath, 1959: 72-74)

Some indication of the value of the post-broadcast discussions can be seen in one of the many examples cited in the literature. In answer to a specific question about the source of malaria, radio forum members increased their average accuracy in answering from 41% in the pre-broadcast period questionnaire to 65% in the post-broadcast period questionnaire. The average accuracy of the non-forum control group in answering this question was 35% in the pre-broadcast period questionnaire and only 46% in the post-broadcast period questionnaire. (Neurath, 1962: 279) The rest of the statistics comparing answers of forum members with non-forum participants generally reflected similar increases in accuracy.

Methodological Limitations

One limitation of the survey design relative to the second objective was that radio villages without an officially organized forum were still able to have had informal discussions which could have aided the transmission of knowledge coming through the broadcasts. Hence, relative to the second objective of assessing the value of discussion, the investigators could not presume a total absence of discussion in the non-forum radio villages with which to compare group discussion in the radio forum villages.

A more significant limitation, however, appears in a reflection by Neurath:

> In the language most useful for decisions about the future spread of radio farm forum, one might say: we are comparing radio farm forum as a whole setup of organizers, records, contact with the radio station, group listening, and group discussion with the method of placing a radio set in a village and leaving the villagers more or less to their own devices to make the best use they can of it. (Mathur and Neurath, 1959: 100)

Neurath's statement would seem to imply that the Tata Institute investigators were able to identify but unable to isolate the independent variables comprising the method of the Poona-UNESCO Project. Neurath contrasts who methods: that of leaving a radio receiver in a village without providing various supporting subsystems, and the method of the Poona-UNESCO Project, viz., organizers, record-keeping, contact with the radio station, group listening and discussion. According to the Tata Institute survey, the former method did not result in significant increases of knowledge, whereas the latter method did produce significant increases.

In this citation, Neurath claims implicitly that it would be useful for decision-makers concerned with the future spread of radio farm forums to note that the Poona-UNESCO Project produced its results by means of a "whole setup of organizers, records, contact with the radio station, group listening and group discussion." The Tata Institute survey, however, necessarily had to consider the various components of the Poona-UNESCO method used in the project as independent variables. Neither the project nor the Tata Institute survey placed the method itself in an experimental design in order to determine whether the significant increases in knowledge were dependent upon all or only some of the

components in the system used in the project.

Thus, although the Tata Institute survey was able to establish a dependent relationship between certain significant increases in knowledge and the method of the Poona-UNESCO Project as a whole, the survey did not establish any dependent relationships between the increases in knowledge and specific components of the method. Hence, decision-makers using the Tata Institute survey of the Poona-UNESCO Project would have little choice except to use the project's method in its entirety in establishing radio farm forums in the future.

Summary of Results of the Tata Institute Survey

1. The project met with general approval on the part of villagers who were interviewed. To the question of their general impression of the whole project, only 3 of 309 villagers replied unfavorably. Criticisms of the project concerned only lesser details such as the specific hour of the broadcasts. (Mathur and Neurath, 1959: 88)

2. Forum members generally rated group discussions successful and wanted this feature to remain a permanent part of future broadcasting activity. They also felt they had learned how to conduct orderly discussions. (Mathur and Neurath, 1959: 106)

3. Forum members considered the system of selecting forum members, the forum structure and its organization, to have been excellent. (Mathur and Neurath, 1959: 107)

4. Forum discussions seemed to have succeeded in presenting alternative viewpoints to villagers and helped a large number of forum members to change their views on specific topics. (Mathur and Neurath, 1959: 38)

. The evaluation survey showed that forum members freely criti-
nd approved the programming and offered suggestions for improve-
The fact that villagers were interested enough to criticize the
and the fact that they desired the project to continue sug-
according to Neurath, "that the Radio Farm Forum had become
ng they considered their own institution, rather than something
s foisted upon them from on high." (Neurath, 1962: 281)
inally, to determine the consistency of these findings in the
villages as compared with other forum villages in the experiment
side the survey, Neurath informally toured the latter, inter-
forum members and inspecting action projects. This tour led
to conclude that the survey results were valid for the whole
. (Mathur and Neurath, 1959: 63)

ion

lthough the Poona-UNESCO Project officially ended in May, 1957
e completion of the report of the Tata Institute survey, the
ceased functioning officially in villages with the final broad-
April 26, 1956. The three-year period following the final
;t represents the third phase in the history of radio farm forums
.

PHASE THREE: THE INTERIM PERIOD 1956-1959

TION

e period between the end of the Poona-UNESCO Project in April,
d the inauguration of the National Radio Rural Forum Scheme in
, 1959 saw several factors appear which were implicit in the

environment of the Poona-UNESCO Project but had gone somewhat unnoticed. These factors inhibited the growth of the forum movement and the present section treats their weakening influence and the steps taken to correct them.

HISTORICAL EVENTS

1. Between April, 1956 and January, 1957, the only forum activity carried on was in the area of radio programming. All India Radio, at Poona, continued forum broadcasting, using the Poona-UNESCO Project format in weekly broadcasts directed at the forums remaining after the project.

2. Within a year, two other states, Bihar and Madras, had begun some sort of forum activity. (Neurath, 1962: 281)

3. All Poona-UNESCO Project personnel, including the Field Organization Committee, the Project Staff Committee, and the Program Planning Committee, were withdrawn. The single exception explicit in the sources was Jadhav, the Project Chief Organizer, who became the Chief Organizer of radio rural forums for Bombay State. Presumably, the continuing broadcasts of forum programs became the responsibility of the Assistant Producer of Rural Programs at AIR, Poona.

4. All radios newly supplied for the Pilot Project were withdrawn. Presumably these would have been the 25 supplied by the Ministry of Information and Broadcasting and the 25 supplied by UNESCO. (Cf. Figure 4.4)

5. Some gram panchayats (village councils) had ceased to exist in some villages, and with them the radio forums lost their chairmen and secretary-convenors.

6. Although Jadhav was retained as Chief Organizer for Bombay State, he seems not to have been able to begin the work of consolidation and reorganization until January, 1957, when the original number of 144 forums had dwindled to 70. (Krishnamurthy and Bhatt, 1965: 8)

CAUSAL FACTORS

Thus the aftermath of the Poona-UNESCO Project was a quiescent period for the forum movement and the factors which produced such a situation require some analysis. These factors are: (1) the need for a specific type of organizational structure peculiar to the Indian forums; (2) the latent variables of the Hawthorne type implicit in the experimental environment; and (3) the necessity of consistent technical support for forums.

The Need for Organizational Superstructure

The reason for the withdrawal of personnel after the project was that they were only on loan from different departments of the State Government. (Cf. Figure 4.2) No personnel were assigned to fill the vacancies and many forums immediately ceased to exist. Given the design of the Poona-UNESCO Project, superstructure personnel were clearly needed: a forum did not begin until an organizer entered a village; an organizer did not enter a village until he was sent by a higher echelon of the organization, and this echelon did not have the organizer available until he was released by some higher echelon.

This amount of organizational structure was presumed to be required in order to assemble villagers into a group to listen to forum broadcasts. At no point in the Poona-UNESCO Project planning, apparently,

was a clear alternative to such an organizational superstructure ever considered.

The Central Government of India accepted the UNESCO offer, the Bombay Government agreed to supply personnel, and the organizers began setting up forums in villages. This specific design required that no forum begin to operate until certain conditions of superstructural organization had been fulfilled adequately. No other method of informing villagers about the idea of a radio forum and teaching them how to go about establishing and operating one was ever considered as an objective of the UNESCO Project.

The decision-making, information, and action processes of the Poona-UNESCO Project as previously outlined show clearly the absence of complementarity in the design. (Cf. Figures 4.2 and 4.3) The only decision-making permitted the villagers was that of helping an organizer to select forum members from a mutally composed list. Virtually every other decision in the project originated in the project superstructure.

Hawthorne Effects

In the previous section certain obvious influences of the Hawthorne type were cited: the Chief Organizer at times had to motivate doubtful villagers to permit forums to be established by informing them that the project was a special one, internationally sponsored and government-approved.

Two points may be noted. To the degree that the organization of the subsequent forums could not claim significance and value similar to the experimental project, the design of subsequent forums would have to

instill motivation via other sources. If the experimental project's performance can be argued to have depended upon its having had the unique status of an experiment, it would then seem that some similar status would have to be designed into subsequent operations or else the Poona-UNESCO Project could not be used as a valid model.

Furthermore, personnel in experimental projects may tend to be somewhat "self-conscious" and usually extraordinarily motivated to make the project "work". There was some evidence of this in the UNESCO Project when, in the press of time, the Chief Organizer worked hard to establish the operation within the less than three weeks available. The District Organizers also plunged into the work of setting up forums when it became evident the part-time organizers would not be able to do this. However, once the bureaucracy legitimizes a bright idea by distributing guidelines and responsibilities among personnel, individuals cannot be expected to step across lines of responsibility into operational breaches to keep a project operating.

Another factor of the Hawthorne type in the Poona-UNESCO Project was the existence of the survey team itself. The mere fact that the project was to be closely monitored and evaluated could easily have had a stimulating effect upon project operations.

Once Hawthorne factors are seen as inevitable in an experimental project, one of two conclusions might be drawn. Either the experimental project is to be considered invalid and its results unreliable, or else subsequent planning can attempt to design factors into a project which will substitute for a Hawthorne type of effect. If the first conclusion is drawn it would mean that experimental projects will demonstrate

little that can be used as a valid model for later planning. The Poona-UNESCO Project tested the retention of knowledge in villagers; it did not test the necessity of its own organizational structure and enhanced motivation for the survival of radio forums in the "real-life" environment of India which included a governmental bureaucracy and political variability.

If the second conclusion is drawn, then perhaps project planners can simulate the uniqueness of an experimental project by having upper echelons in the organization communicate effectively to lower echelons the value and significance of the project. Similarly, planners might be able to simulate the effect of an evaluation survey upon the pilot project by establishing strategic monitoring and feedback centers to be maintained constantly during the life of the project. Perhaps, most important of all, there might be established a kind of "ombudsman" monitoring center to insure that all communication and monitoring centers are kept functioning.

The Need for Technical Support

In the interim period, radio receivers were withdrawn from established forums. Further, there is no evidence to show that the Program Planning and Production Committees remained intact after the Project to continue broadcasting--here too, personnel were on loan. During the project the radio receiver maintenance subsystem was poorly established as was the subsystem which promised resources for forum action projects. When the necessary technical support was withdrawn, the forums tended to disintegrate. The Poona-UNESCO project was conspicuous for the strength

of its superstructural organization and its evaluation structure, and the weakness of some of its technical subsystem. The question arises whether forums might not have continued more or less on their own if the technical subsystem had remained intact after April, 1956, even when some of the organizational superstructure--assumed to be so important--might have been removed. This would be a plan of an alternate design which--because alternatives were not thoroughly explored--went untested in the Poona-UNESCO Project.

The Need for Political Stability

A third forum requirement in the interim period appeared from the fact that in some villages, forums ceased operation when the village council ceased functioning. This phenomenon suggests a close dependence of radio rural forum leadership upon the status conferred by membership in the village council, from which, in many instances, forum leadership was drawn.

Throughout the literature the non-political nature of radio forums is adduced as an asset. The design of the Poona-UNESCO Project, however, in no way addressed itself to the problem of maintaining radio forums in a variable political climate. Instead, the design relied in most instances, upon an established political environment to provide for the forums authority in the person of the sarpanch or patel as chairman, and competence in the person of the secretary-convenor. Perhaps radio forums will always need a specific political environment for survival, but this factor, which made its appearance only after the project, was not a variable tested in the project. However, the interim period showed how

necessary a supportive political environment became for the survival of radio forums organized according to the Poona-UNESCO model.

THE RENAISSANCE

Phase Four, the expansion of the Poona-UNESCO model into a National Scheme, grew out of the efforts of the Bombay State Government to keep forum activity alive after April, 1956. The basic decision of the State Government was to make the organization of forums the responsibility of the Development Commissioner in charge of Community Development Projects in liason with the Chief Organizer from All India Radio. The Community Development Projects Department thus provided the personnel for organization at the regional and local levels. The Community Development Block (100 villages, approximately 70,000 persons) became the basic unit, and the Block Development Officer the pivotal officer along with his Social Education Officer of the Block. The Block organization thus provided a structure close to the village level which could enable a regional broadcasting station to make its programming better fit the locale. (Neurath, 1962: 281)

By late 1958, the renaissance had gained momentum with All India Radio consulting the Divisional Commissioner of Development of Bombay State and organizing three courses for these Social Education Organizers in February and April, 1959. These officers were drawn from the five Poona-UNESCO districts and two new ones. A target was set for four to six forums to be organized in each block for a total of 200 forums. Upon their return from training, these organizers sent village dossiers and proposals for forums to the Chief Organizer, stationed at AIR, Poona, and

the Divisional Commissioner of Development. (Krishnamurthy and Bhatt, 1965: 8)

It was this activity which awakened interest in radio rural forums on the national level and which led to its spread to other Indian States. This national expansion will be termed Phase Four. The disintegration and re-organization of the forum movement in Bombay State during the period 1956-59 is illustrated in Figures 4.7 and 4.8.

PHASE FOUR: THE NATIONAL SCHEME

DECISION-MAKERS

The expansion of the Poona-UNESCO Project into a nationwide project took place some time in early 1959 with the Minister of Information and Broadcasting of the Central Government of India suggesting to the Chief Secretaries of the Indian States that radio rural forums be organized in every State. The MIB memorandum contained this tentative plan:

1. The Community Development Block structure might be utilized for the organization of at least one radio forum per Development Block.

2. The organizers should work with the village political structure by accepting help from village councils in setting up forums.

3. Block Development Officers and their Social Education Organizers should be instrumental and should be directly concerned with forum organizations.

4. Each State should try to have a full-time Chief Organizer for the State.

5. All India Radio should organize training courses for the new Chief Organizers. (Krishnamurthy and Bhatt, 1965: 13)

Figure 4.7. Post-project disintegration of forum structure: May, 1956-January, 1957.

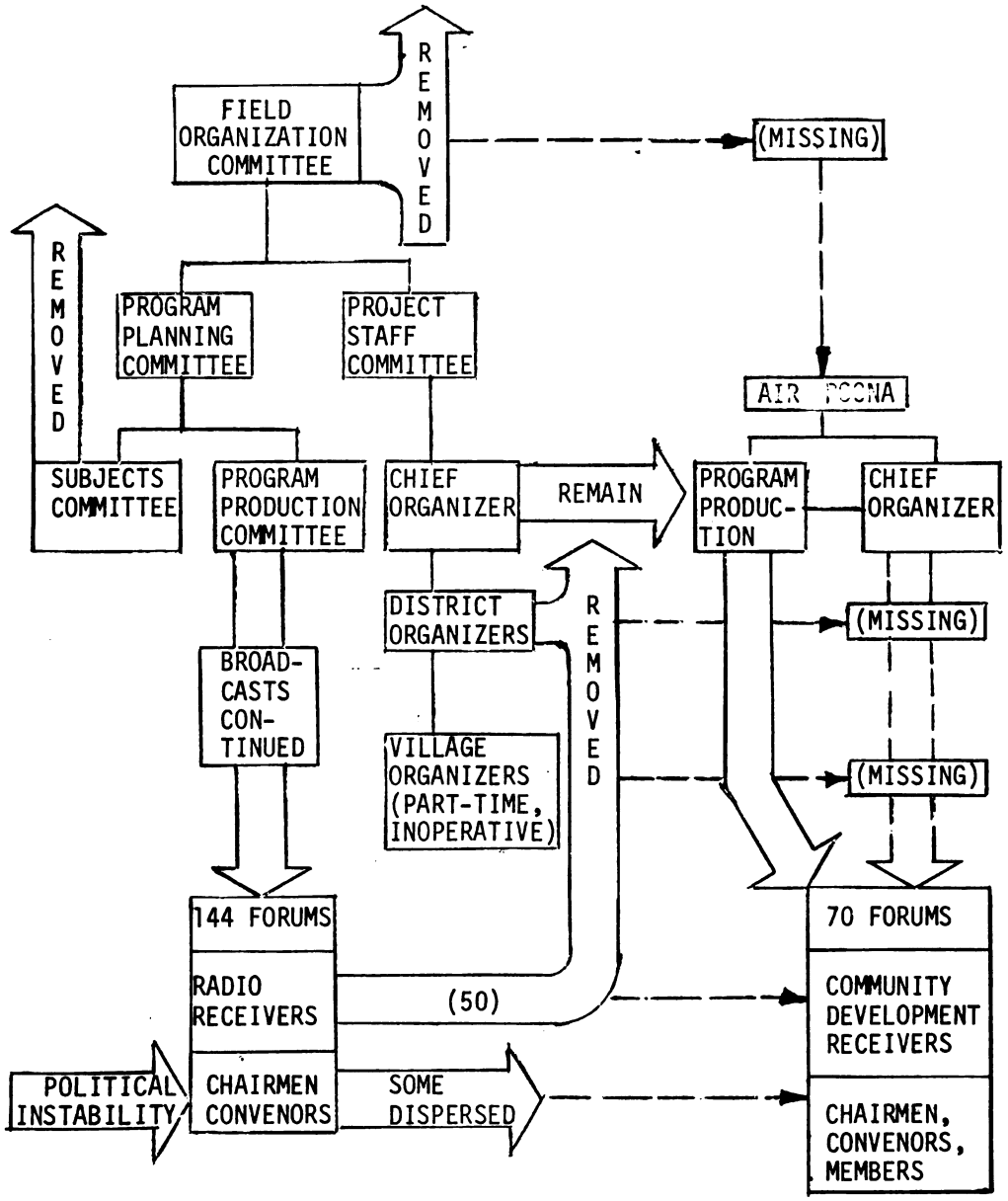
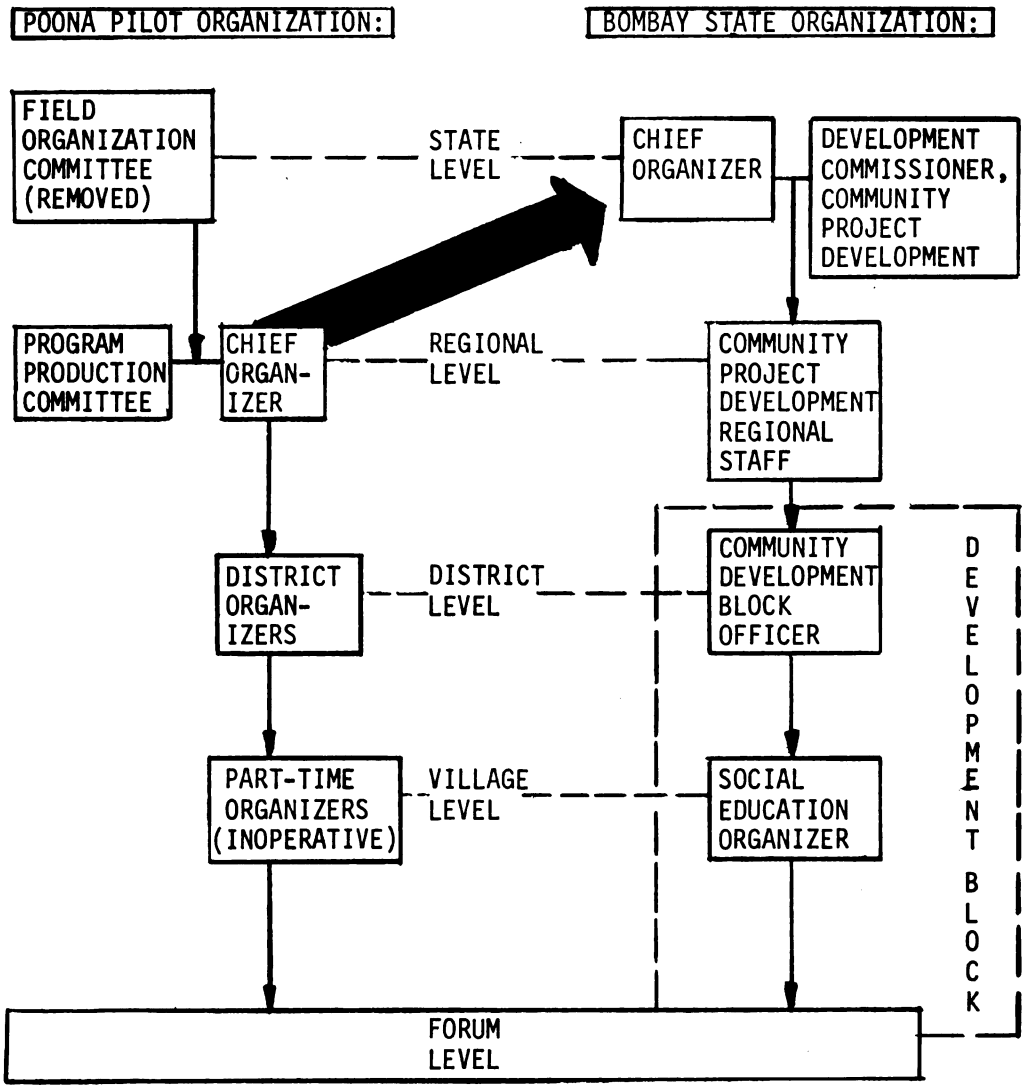


Figure 4.8. Re-organization of forum superstructure: Bombay State government, 1958.



1. THE ENVIRONMENTAL NEED

The national radio rural forum scheme was essentially the adoption of the Poona-UNESCO Project as a model for nationwide expansion. The findings of the Tata Institute survey appear to have been taken by Central Government officials of the MIB and the Directorate-General of AIR as the formal study of environmental needs relative to the establishment of radio rural forums. These findings of the Poona-UNESCO Project served as the basis of a set of guidelines contained in a comprehensive "guide for field organization" published by the AIR Directorate-General for the organization of radio rural forums. The guidelines were implicitly a description of the radio rural forum environment as a population of people:

1. fairly compacted into villages;

2. relatively free of political or other conflict;

3. within broadcasting range of only a single AIR station (in order to facilitate relevant programming in a single language);

4. fairly homogeneous, having some common binding interest but a varied economic background;

5. of adults not beyond middle-age (because extremes of age in a discussion group were considered a constraint upon the free exchange of opinions);

6. without skeptical views on development and without political ambition;

7. somewhat removed from urban centers but more concentrated than nomadic tribal populations;

8. who, if educated or part of the political structure, should not be of the domineering type. (Mathur and Neurath, 1959: 110; Krishnamurthy and Bhatt, 1965: 14)

Thus the environment of a radio forum was a restricted one. The fact that the National Scheme adopted the conclusions of the Poona-UNESCO Project as its definition of the forum environment would seem proof that the project was assumed to be a valid model, that no fresh examination of the problem of transmitting information to villagers was undertaken, and that the variables of the interim period which threatened continued forum operation in Bombay State were disregarded.

The complex objective of action projects inserted into the Poona-UNESCO Project was disregarded by eliminating action projects from the design of the National Scheme. The problem of effectively transmitting information to politically unstable areas was disregarded by eliminating those areas from consideration in establishing forums. The problem of communicating with young and old opinion leaders was eliminated by excluding them from consideration in selecting forum members under the National Scheme.

The requirement of technical support necessary for forum operation, however, was faced as realistically as possible. The provision of radio receivers would show improvement but maintenance of the receivers would continue to be a critical problem in the National Scheme.

The fact that the village forum environment was the only environment explicitly considered reflected the attitude of the Poona-UNESCO Project planners. The National Scheme was launched as a structure outlined in the Guide for Field Organization of Radio Rural Forums.

The question of whether and to what degree an organizational superstructure was required to transmit effective knowledge to all villagers who can assimilate this and translate it into effective behavior, was never seriously put to the Indian environment as a whole, including government departments and bureaucracies. As has been noted previously, the superstructure of the project and its conditions were part of the environment of the operation of the project just as much as those more obvious socio-cultural conditions affecting the potential members of a radio forum. If a project has both a superstructure and an infrastructure of human personnel, then both these parts of a project design are socio-culturally conditioned, and therefore both bureaucratic dynamics and village dynamics form part of the real environment of formal and non-formal needs out of which alone a complete set of objectives can be derived. We shall see that the National Scheme, in doing as little as the Poona-UNESCO Project did in bringing its own organization under examination, left essential problems unsolved.

2. OBJECTIVES

By the time the Minister of Information and Broadcasting had invited the co-operation of the Secretaries of all the States in the nation-wide scheme, All India Radio had published a comprehensive Guide for the Field Organization of Radio Rural Forums detailing not only superstructure personnel and their relationships, but also functions and guidelines for each member of the organization. Forums were now described as "rural" and not merely "farm" forums, and with the new term came a slightly different general objective:

> For the first time, the term "Radio Rural Forum" was substituted for "Farm Radio Forum", in order to make it explicit that the programmes were to be comprehensive and to cater to the entire rural population and not merely to the farmers. The programmes were to be designed to contribute to the all-round personal development of all persons living in rural areas. (Krishnamurthy and Bhatt, 1965: 14)

Apart from this one distinction, the National Scheme had objectives identical with forum objectives in the Poona-UNESCO Project: (1) to organize villagers (2) to listen to selected radio programs as a starting point for (3) group discussion so as (4) to increase their knowledge and (5) "if possible, to put into practice some of the things that they had learnt through this process." (Krishnamurthy and Bhatt, 1965: 14)

The Poona-UNESCO and the National Scheme objectives were further identical in that they were unoperationalized in their most operative terms: "development", "personal", and "all-round". It is also clear that action projects were not integrated into the objectives of the National Scheme, for villagers were to "put into practice some of the things they have learnt" only "if possible."

3. CONSTRAINTS

1. The National Scheme had no outside financing such as that provided for the Poona-UNESCO Project. Funding was to come from the budget of each State, which meant that the National Scheme, as a new scheme, would have to compete for a re-allocation of current or expected sources of revenue.

2. Unlike the Poona-UNESCO Project with its loaned personnel, the National Scheme was to be implemented through an existing structure, the personnel of the Community Development Block.

While this design provided the National Scheme with an existing
of personnel, it also demanded that the existing personnel such as
lock Development Officer, the Social Education Organizer, the
ge Level Worker, as well as the Regional Staff, take on as an added
nment the organization of radio forums.

3. The constraint of time which affected the organization of the
-UNESCO Project, does not appear to have caused the National Scheme
nalogous compromises.

4. The "space" constraint of the UNESCO Project, viz., that, for
ke of the organizers and the evaluation teams, no forum was to be
zed more than three miles from a bus stop, appears in a different
n the National Scheme. Here, for the sake of tighter organization,
onal target was set of establishing one forum per Block; this was
d to one forum in every three Blocks; and this target was changed
further to allow up to three forums to be established in a single
out of a group of nine Blocks (only nominally keeping to the ratio
forum in three Blocks) if space and time limitations made this
ary. (Krishnamurthy and Bhatt, 1965: 13)

5. The necessity of broadcasting in only one language during the
UNESCO Project was virtually eliminated in the National Scheme as
anded to include all States of the Union and therefore all major
ges.

5. The weakness of the technical subsystem of the Poona-UNESCO
t re-appeared as a constraint in the National Scheme. Despite
cratic promises radio rural forum members could not expect a
nt source of material for the implementation of action projects;

the number of radio receivers available to villagers to establish forums continued to fall short of nationally established targets; and the maintenance of community receivers by each State's technical staff varied greatly from State to State. (Krishnamurthy and Bhatt, 1965: 26; Schramm, 1967b: 119-20)

7. The constraint of loaned personnel in the Poona-UNESCO Project underwent the mutation of the assigned personnel of the National Scheme receiving an additional assignment, as was noted above. It will be seen that in the National Scheme, virtually no personnel were full-time forum personnel.

4-5. ALTERNATIVES

There has already been some discussion of the degree to which alternative strategies were ignored in the National Scheme expansion of the Poona-UNESCO Project. Just as the latter was largely a design adapted from the Canadian Farm Forums, so the National Scheme was largely a project using the Poona-UNESCO Project as a model. Since the National Scheme planners carried out no fresh examination of the environment, they discovered no new or more fundamental needs which might suggest more comprehensive objectives. The explicit objectives were to set up Poona-UNESCO-type forums on a national scale; the implicit general objectives were also similar to those of the former project: to use a certain type of superstructure to set up the forums; nor did the planning design of either project contain any noticeable complementarity in the super- and infra-structure decision process.

6. IMPLEMENTATION OF THE SYSTEM-STRATEGY

The Establishment of the National Scheme

Training of Organizers

The implementation of the National Scheme began with the Directorate-General of All India Radio offering a training seminar for Chief Organizers in the summer of 1959. By the middle of 1959, many States had appointed Chief Organizers of radio rural forums who were subsequently sent to AIR's training seminar held from July 27th to August 1st.

Thirty-four government officers and rural programme officers of AIR attended the seminar which brought to light individual problems faced in the various States. (Krishnamurthy and Bhatt, 1965: 13) Presumably, the seminar initiated the Chief Organizers into forum organization through the Guide for Field Organization published earlier by AIR and translated into all the major languages. (Krishnamurthy and Bhatt, 1965: 13)

Timetable and Targets

Following the July training seminar, a timetable for launching the National Scheme was drawn up, projecting an inauguration date for November, 1959, to be preceded by three-day training seminars in September for Block Development Officers and Social Education Organizers to be drawn from Blocks in States where the newly-trained Chief Organizers would be beginning their State Radio Rural Forum campaigns.

Immediately after the September seminars, the Block officers were to return to their States and begin organizing at least one forum in

every three Community Development Blocks, while the Chief Organizers were to schedule their tours of the State so as to be able to inagurate these forums.

The final preparation for the inauguration of the National Scheme occurred in October, 1959, when the Rural Advisory Committees of various regional AIR stations met to decide the subjects to be treated in the initial three-month period of the Scheme. After these decisions, the stations were to begin production and pre-recording of the weekly program in their respective languages. (Krishnamurthy and Bhatt, 1965: 13)

The National Scheme was officially inaugurated on November 17, 1959, by S. K. Dey, the Minister of Community Development and Co-operation. (Krishnamurthy and Bhatt, 1965: 8)

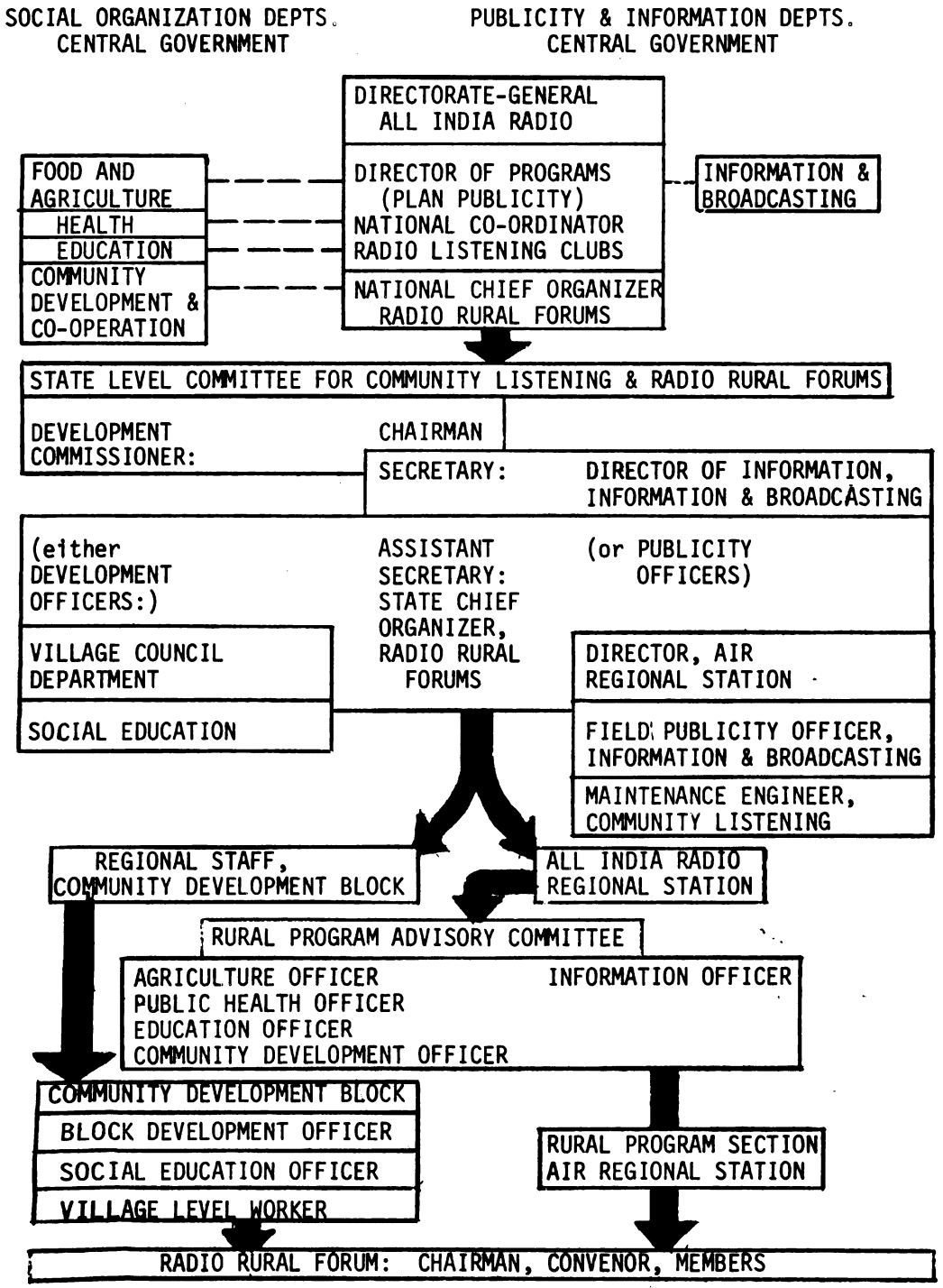
The National Scheme Decision Process

Personnel Sources

The National Scheme had only two full-time personnel positions, the National and the State level Chief Organizers of radio rural forums. The central position of these two roles is illustrated in Figure 4.9 which to some extent is a modification of the diagram contained in the UNESCO report of the National Scheme. (Cf. Krishnamurthy and Bhatt, 1965: 11)

The majority of personnel connected with the National Scheme were not on loan as in the UNESCO Project, but neither were they full-time personnel. The organization of radio rural forums for most of the personnel was an added assignment.

Figure 4.9. Superstructure personnel and decision-flow.



The organization of radio rural forums may in fact not have required more than the two full-time positions of the Chief Organizers. The insertion of the National radio rural forum scheme into the existing structure of the Community Development Department had clear advantages in terms of expertise and economy, yet the non-formal problem of motivating personnel having numerous assignments seems to have remained a constant in the structure. This seems to show the weakness of a project design relying so heavily on a multitude of personnel in order to assemble villagers for radio listening and discussion.

The four major echelons of superstructure; national, state, regional, and local, are illustrated in Figure 4.9. In addition, the superstructure is divided into two columns of committed personnel: on the left those drawn from the social organization departments, and on the right, those drawn from the publicity and information departments.

Decision-Transmission

The decision process controls both the information and action processes as well as the monitoring-feedback and modification processes. Because some of the difficulties encountered in the latter processes in the National Scheme can be traced to weaknesses in the decision process, these difficulties will be analyzed within the discussion of the decision process.

According to Figure 4.9, decision-transmission seems straightforward: from a National Co-ordinator and Chief Organizer within All India Radio's Directorate-General, decisions flow to the State Committees for Community Listening down through the regional organizational and

broadcasting level to the local level of the Community Development Block.

Decision-making power, however, was weaker than the diagram would suggest. The National Co-ordinator within AIR could influence the State Committees for Community Listening only by offering "suggestions and comments", and could influence the State Governments only by "corresponding with them on organizational matters." The State Chief Organizer toured the States "assisting them with advice and guidance on forum organization and upkeep." (Krishnamurthy and Bhatt, 1965: 21) Advice and suggestions do not seem to indicate a strong decision-transmission from the first to the second echelon.

The State-level Committee, however, would seem to have had power to implement decisions, for the Committee was a co-ordinating body which included the Development Commissioner who was directly over the regional and Block organizational staff, the Director of Information of the State Ministry of Information and Broadcasting, as well as the Director of the regional All India Radio station. Decision-transmission would seem to have been strong from the State echelon to the regional and local echelons because the lower echelons had direct-line superiors as members of the State-level Committee.

Formal Factors Inhibiting Decision Transmission

Three factors would seem to be suggested by Figure 4.9 which could have inhibited sound decision-making and transmission in the National Scheme. The first factor is the potential competition between the social organization column and the publicity and information column of

personnel involved in Radio Rural Forums. A second factor is the scarcity of full-time personnel in positions of decision-making power, and a third factor is the wide spans of supervision of personnel with sufficient decision-power.

1. It will be noticed that the National Scheme attempted a co-ordination of two different interest groups: those departments concerned with social organization and education, and those connected with publicity and information. Whenever the question of providing full-time personnel for Radio Rural Forums might have arisen, it might have been foreseen that neither of the interest groups would readily incapacitate itself by such a contribution. Here the weak relationship between the first and the second echelon becomes significant for decision-transmission. If the Central Government echelon had at its command strong decision-power relative to the State-level echelon, it could conceivably create a strong co-ordination of the two interest groups at the State-level which, as has been noted held--with its constitutive members--real decision-power. Yet the National Scheme was not entirely at fault, for the Central Government of India itself does not have at its command such power over State activities.

The difficulty lay in the "co-ordinating" character of the State-level Committee. The Committee members were relatively autonomous decision-makers within their own interest groups. This Committee could function decisively and effectively, therefore, only if its members could forge an effective co-ordination of the two competing interest groups.

The literature of the mid-sixties indicates that the National Scheme indeed felt these organizational weaknesses in the decision-

process. By the mid-sixties, some States still had not followed first-echelon recommendations that each State appoint a Chief Organizer of Radio Rural Forums. Also, at the State-level, it was still being argued whether radio rural forums were primarily a Community Development operation or whether they were basically a Community Listening scheme under the Information and Broadcasting Ministry. The Annual Conference of State Ministers of Information in 1964 again had to urge the States to appoint full-time Chief Organizers if the National Scheme were to prove effective. (Krishnamurthy and Bhatt, 1965: 18-19; 29)

2. In addition to the difficulty of co-ordinating personnel contributed by competing departments within a bureaucracy, another source of difficulty in decision-transmission efficiency is suggested by the fact that among all the personnel of the National Scheme, only one was completely full-time, the Chief Organizer at the national level. The State-level Chief Organizers through the mid-sixties were full-time in a few States, part-time in a few, non-appointed in some States, and appointed and then abolished in others. (Krishnamurthy and Bhatt, 1965: 18,29) From Figure 4.9 it can be seen that the one guaranteed full-time officer, the National Chief Organizer, is in the first echelon which had only limited decision-power with respect to the second echelon. Further, the State-level Chief Organizer, even where he was a full-time officer, was in the position not of chairman, but assistant secretary, below the two officers from opposing interest groups.

Given his position, and given the fact that the State-level Committee met at most twice yearly, the State-level Chief Organizer would have to have been appointed, and appointed full-time if the National Scheme

was to have at least one person in an echelon of real decision-power (the State-level Committee) whose only concern was the radio rural forums. Without a full-time Chief Organizer in the State-level Committee, it is difficult to discern how an officer in third position, meeting at most twice yearly with senior officers, could command sufficient informal authority to effect the necessary co-operation for the National Scheme to have functioned well at the State-level.

Apart from the State-level Chief Organizers, all other National Scheme personnel were part-time. The National Co-ordinator was mainly a publicity officer concerned not merely with rural listening, but also Women's, Children's, and Industrial Listener's Forums. (Krishnamurthy and Bhatt, 1965: 21) The personnel of the State Committee were, as a Radio Rural Forum Committee, part-time, since the Committee met at most, twice-yearly--"hopefully" twice yearly. (Krishnamurthy and Bhatt, 1965: 22) The first two echelons of the National Scheme were clearly composed of personnel already burdened with prior and more comprehensive commitments.

According to Figure 4.9 at the regional and local levels the commitment to radio rural forums was more complete, although the commitment still remained a part-time one. On the broadcasting side, the Rural Program Advisory Committee met quarterly to designate topics for the forum broadcasts. This Committee was directly concerned with rural programming and was tightly integrated into the decision-structure of the regional AIR station.

On the organizational side of the regional level, however, the commitment to Radio Rural Forums was more diffuse, for the National

Scheme explicitly made the establishment of forums the responsibility of a lower echelon, the local Community Development Block.

At the Community Development Block level, the National Scheme "suggests" that the Block Development Officer "assign" to the Social Education Officer the responsibility of organizing and maintaining Forums at the Block level. (Krishnamurthy and Bhatt, 1965: 15) Competing assignments, however, and competing departments took their toll of the Social Education Organizer in some States. The UNESCO report of the National Scheme illustrates how such competition weakened the decision and action processes:

> . . . unfortunately, some time ago, several States abolished the post of social education organizers and this has been a severe blow to the radio rural forum scheme. Social education has become a part-time job of either the village council (panchayat) extension officer or the education extension officer at the block level. (Krishnamurthy and Bhatt, 1965: 16)

An even later report on the Indian Radio Rural Forums points to the same organizational weakness: forums will not run themselves, and the radio forum movement still suffered from inadequate organizing and supervisory staff, and a lack of interest and involvement on the part of the staff in the field. (Schramm, 1967b: 132)

3. This lack of interest and involvement suggests the third factor inhibiting decision transmission: the wide spans of supervision. In Figure 4.9 it must be remembered that only the top and bottom echelons, the Directorate-General and the Radio Forum itself are represented with numerical accuracy. There is but one Directorate-General and it oversees each single forum. However, there are numerous States in India, each supposedly having a State Committee for Community listening. Each State

had numerous regional Block Development staffs and below these, numerous Development Blocks. Therefore, given the geographic and demographic size of India, the task of effective supervision may have been insurmountable. Each echelon could have had such a large number of units to supervise and transmit decisions to, that direct personal contact and involvement with the supervised echelon may have been impossible.

In addition to a potentially ineffective span of supervision, it should also be noted that in the decision-structure of the National Scheme, at only one point does one person function in two different echelons, linking one echelon to another. This one person was the Director of the regional AIR station who was also a member of the State Committee. All other personnel are, officially at least, confined to the echelon in which they appear. This lack of inter-echelon linking (cf. Likert's linking-pin model of organization; Carzo and Yanouzas, 1967: 520 ff.) by personnel who function simultaneously in two related echelons may have been a further reason for the continuing mention in the literature on the National Scheme of the lack of interest and involvement by officers at every level relative to the field organization. (Schramm, 1967b: 120,132)

When such a linking-pin organizational design is missing, the various echelons can "float" free of each other, and when this condition is mated to a wide span of supervision, inter-echelon involvement and commitment become rare and decision-transmission can weaken measurably.

The National Scheme Information Process

Information flow took the following forms in the National Scheme: the continued training of personnel for the field organization; and

communication of information along staff and advisory lines within and between project echelons.

Training

In 1962, a combined assessment seminar and training course for new personnel was held in Hyderabad, Andhra Pradesh. All India Radio at the time was pressing the States to hold adequate training courses for personnel and some States had responded:

> In Kerala State . . . 108 training courses for about 2,160 officers have been held. In addition, some 101 training courses for convenors were attended by about 1,208 trainees. In Maharastra . . . some 120 social education officers, men and women, participated in three training courses and 1,700 convenors attended get-together-cum-training courses at 176 block headquarters. In Madhya Pradesh, Mysore, Orissa, Andhra and many other States, hundreds of organizers and convenors were similarly trained. (Krishnamurthy and Bhatt, 1965: 19)

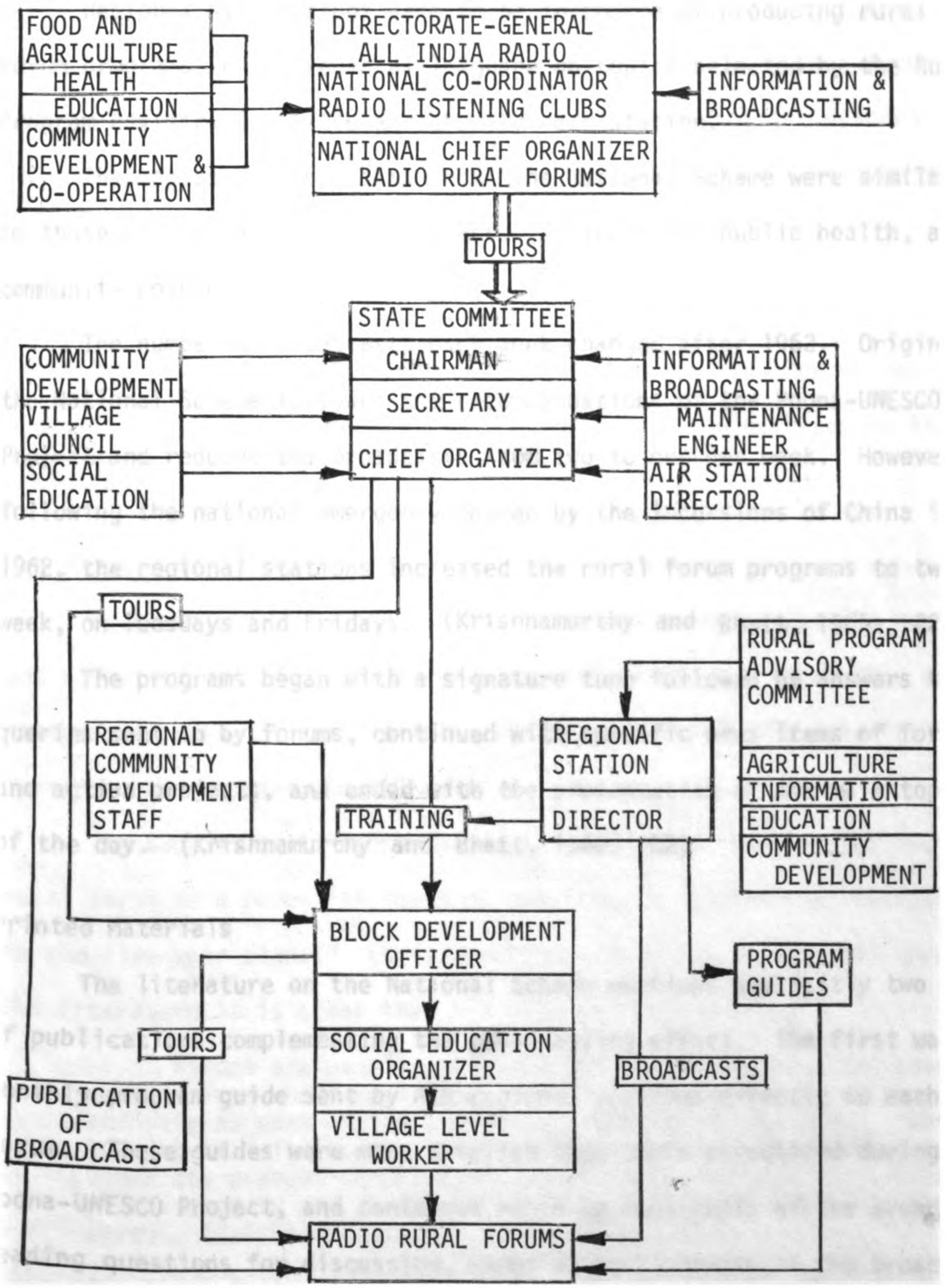
Information Flow within the National Scheme

Communication and direction were implemented through superior officers touring and guiding the echelons below them and those echelons filing regular reports to echelons above. Figure 4.10 illustrates the formal lines of communication within the National Scheme. However, the comments above regarding lack of involvement of superior officers in the field should condition any literal interpretation.

Superstructure Action Process

The upper two echelons of the superstructure are principally advisory and administrative. Most of what is properly called "action process" occurred at the regional level of the broadcasting operation, and at the Block level of the organizational operation.

Figure 4.10. National Scheme information process.



Program Broadcasting

Regional AIR stations were to be in charge of producing rural forum programs in the regional language on topics selected by the Rural Program Advisory Committee attached to each station.

The topics of broadcasts under the National Scheme were similar to those of the Poona-UNESCO Project: agriculture, public health, and community co-operation.

The number of broadcasts each week changed after 1962. Originally the National Scheme followed the recommendations of the Poona-UNESCO Project and reduced the broadcasts from two to one per week. However, following the national emergency caused by the incursions of China in 1962, the regional stations increased the rural forum programs to two per week, on Tuesdays and Fridays. (Krishnamurthy and Bhatt, 1965: 22)

The programs began with a signature tune followed by answers to queries sent in by forums, continued with specific news items of forums and action projects, and ended with the presentation of the main topic of the day. (Krishnamurthy and Bhatt, 1965: 22)

Printed Materials

The literature on the National Scheme mentions explicitly two kinds of publications complementing the broadcasting effort. The first was a monthly program guide sent by AIR regional stations directly to each forum. These guides were more detailed than those circulated during the Poona-UNESCO Project, and contained notes on each topic of the broadcasts, leading questions for discussion, names of participants in the broadcasts, and technical words occurring in the broadcasts which villagers may not have understood. (Krishnamurthy and Bhatt, 1965: 24)

A second publication was designated as the work of the Chief Organizer in each State who was supposed to publish talks and discussions of broadcasts thought to be of permanent interest to villagers. Some States had published these as pamphlets which were planned as the nucleus of a future technical library for the village. (Krishnamurthy and Bhatt, 1965: 18,24)

Organization of Forums

The Block Development Officer was the pivotal officer in the action process on the organizational side, and he was to be assisted by his Social Education Organizer.

The Block Development Officer

This officer had rather extensive powers in co-ordinating agencies and activities broadly termed "development" within the geographic and demographic unit of approximately 100 villages and 70,000 inhabitants termed a "Development Block".

The BDO, as he is abbreviated, is instructed "to view the radio rural forum as a potential means of ensuring the people's participation in the five-year plans." (Krishnamurthy and Bhatt, 1965: 14) From the literature it is clear that his role was critical:

> Forums are usually alive and active where the block development officer shows keen interest and considers the forum's activity as part of the overall development of the block. Where his interest is lacking, forums wither for want of encouragement. Under the present development system, this officer has considerable authority and in fact is the kingpin of the system at his level. (Krishnamurthy and Bhatt, 1965: 15)

All India Radio tried to keep in close touch with these officers and to feature them in its publicity because of their critical role in the

success of the forums. (Krishnamurthy and Bhatt, 1965: 15)

This officer's role was to oversee the forums by first assigning his Social Education Organizer to the task of establishing forums, and then providing all the technical requirements needed for forum operation through his role as co-ordinator of development agencies within his Block. What these technical needs were and how the BDO monitored these needs will be taken up in separate sections.

The Social Education Organizer

The Social Education Organizer (SEO) in the National Scheme functioned as the part-time organizers were supposed to function and as the District Organizers actually functioned in the Poona-UNESCO Project. The SEO first of all would fill out a Village Information Sheet provided by AIR and then, in consultation with the BDO, would select a village and draw from a list of potential forum members a forum chairman, a convenor, and those selected as members.

The SEO's maintenance role was to insure that the technical requirements of the forum operation provided by the BDO actually reached the local forum. (Krishnamurthy and Bhatt, 1965: 15)

Technical Inputs

By 1957 there were approximately 30,000 community listening radio receivers in villages in India with the target of slightly less than 100,000 receivers to be reached by the end of the Second Five-Year Plan in 1961. (Mathur and Neurath, 1959: 17)

According to Krishnamurthy and Bhatt the target of 100,000 community receivers was postponed and re-set as a target of the Third Five-Year

Plan which ended in March, 1966. With such a target in mind, the National Scheme planners set a goal of 25,000 rural forums by 1966, a ratio of one forum to every four community receivers. (Krishnamurthy and Bhatt, 1965: 9)

By 1965 the National Scheme had re-set its sights at 15,000 Radio Rural Forums by 1966, and at the time of writing, late 1965, the actual number of Radio Rural Forums stood at 12,776. (Schramm, 1967b: 132)

Such setting and lowering of targets gives some hint of the difficulty the National Scheme had in dealing with the problem of obtaining and placing community receivers and organizing forums to use them efficiently.

Besides the radio receiver itself, another set of technical inputs was to come from departments such as the State Ministries of Information and Broadcasting, Food and Agriculture, Health, Social Education, and Community Development. These departments published and maintained with varying availability, visual aids such as posters, filmstrips, and films.

A third set of technical inputs was the materiel needed for the implementation of action projects. This continued to be of limited and varying availability.

A fourth set of technical inputs required for the National Scheme was organizers, a variable repeatedly cited as critical for Chief Organizers who often had to rely on lower echelon Block Development Officers for its provision. In the National Scheme, the lack of transport could severely limit an organizer's range and effectiveness. (Schramm, 1967b: 132)

Financial Inputs

The one financial input whose necessity for continuing effective motivation of any forum was the small honorarium to be paid each forum convenor to cover stationery, postage, and miscellaneous expenses. The Block Development Officer was responsible for insuring its payment.

Forum Operation

The most successful forums in the National Scheme operated as well as the Poona-UNESCO forums did, but there was a wider range of operational efficiency under the Scheme as the following comparison between Maharashtra (formerly Bombay State) and Bihar illustrates:

> . . . Maharashtra has three full time organizers, trains its social education organizers in running rural forums, and maintains the interest of its village-level workers in forums. Moreover, Maharashtra has an excellent field organization for maintaining sets; the village council pays sixty rupees a year, and for that gets continuing maintenance and replacement of batteries. The state is careful to pay a small honorarium to the convenors of forums, and furnishes printed registers and meeting records on which reports can be made. . . .
>
> Bihar, on the other hand, has only one chief organizer, and until recently he has been able to devote only part of his time to the forums. Many of the social education officers have been amalgamated with other positions, and have not been trained in organizing or supervising forums. Moreover the system for maintaining sets has been very weak. Convenors have not been paid; they are expected to work and report voluntarily. There has been no printed material to supplement the discussion. (Schramm, 1967b: 107)

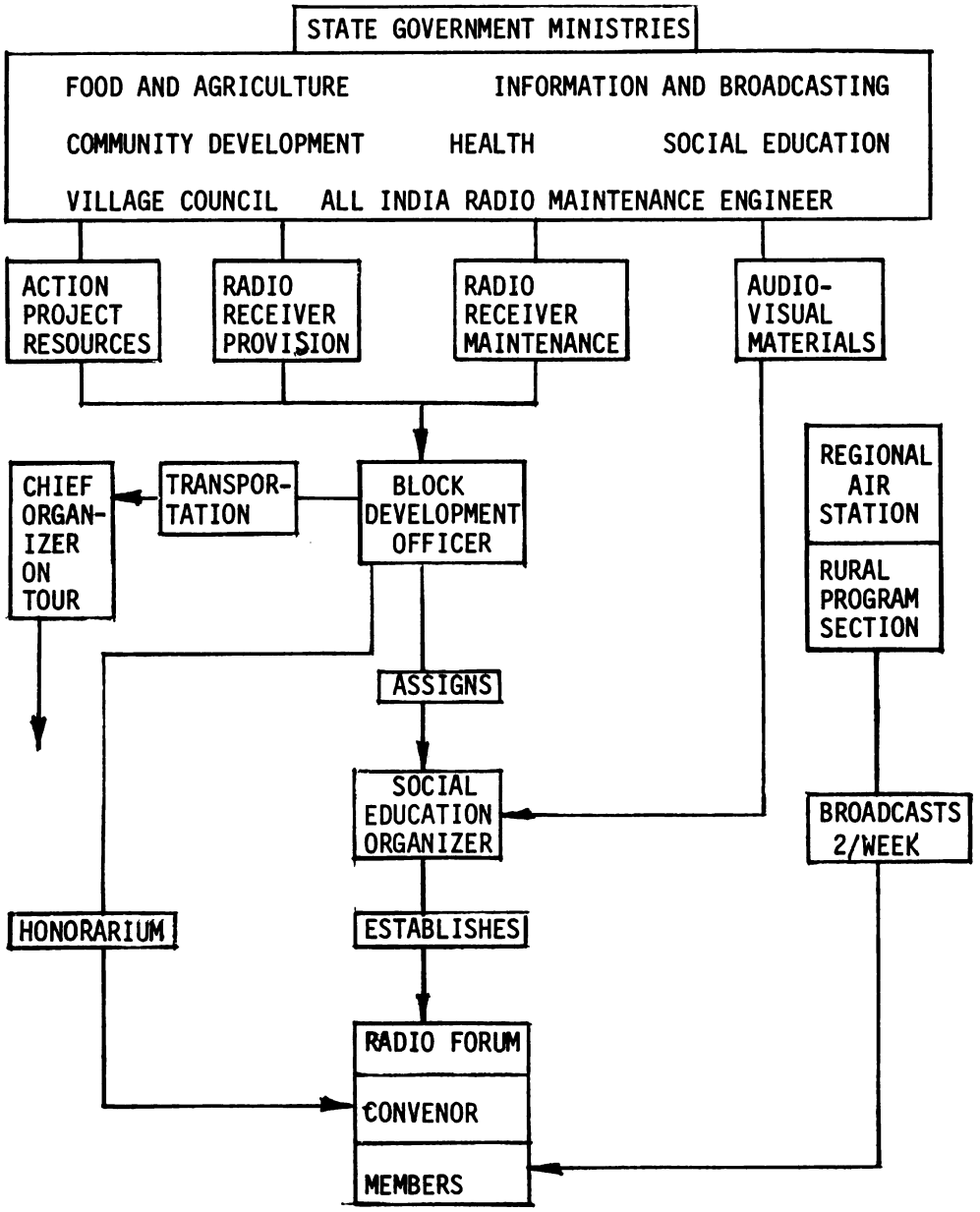
From this extended citation it is clear how heavily the National Scheme depended on a multitude of steady inputs. Maharashtra provided sufficient field organization personnel and trained them; Bihar barely could provide a part-time Chief Organizer. Maharashtra provided personnel and transportation for the maintenance of radio receivers and

amortized costs by having the forum's village council provide sixty rupees per year; Bihar had an inadequate system of set maintenance and expected convenors either to pay forum expenses themselves or expected the forums to operate without expenses. Although the comparison is not precise in that Maharashtra is one of the most, and Bihar one of the least, developed States in India, it does demonstrate the degree of input required to make the National rural forum scheme function.

The composite of inputs ideally required in the action process is given in Figure 4.11. It is clear how completely dependent each forum is upon the two Block officers for all technical inputs apart from the radio broadcasts themselves. Their crucial positions as sources of all technical and organizational inputs emphasizes again the continual necessity in the National Scheme for motivating personnel who are in effect part-time personnel. If the effectiveness of either of these two officers is deficient (recall the total removal of the Social Education Organizers in some States), any given Indian village with an actual or potential radio forum becomes left with absolutely no resources necessary to organize or operate such a forum. In this design, therefore, there are no circuits containing the necessary technical inputs flowing in parallel which could safeguard the total system from breakdown in the event of the failure of one input or one of the personnel.

The action process of the National Scheme thus has a low reliability factor: except for the broadcasts, all organization and technical flow effectively depend upon one person: the Block Development Officer. The criticality of this one officer regarding the technical inputs required for radio forum operation, coupled with the distinct impossibility

Figure 4.11. Technical inputs of the action process.



of villagers organizing their own radio forums without the aid of an official organizer, may have made the system-design of the National Scheme a high risk wherever it was attempted.

7. MONITORING AND FEEDBACK PROCESSES

The monitoring of forum operations in the National Scheme was carried out by the scheduled tours of officers in their areas of supervision. The feedback of information about forum operations took the form of written reports submitted to higher echelons at regular intervals. These processes are illustrated in Figure 4.12. (Krishnamurthy and Bhatt, 1965: 15-16,18,21-23)

Monitoring Centers

Most of the monitoring centers have already been identified: the National Chief Organizer toured the States both at the level of the State Committee and the individual Development Blocks; the State Chief Organizer toured the Development Blocks and the individual Radio Forums; the Block Development Officer carried out tours within his Block; and the Social Education Organizer toured the villages with forums. All these are monitoring operations. In addition, the Convenor of the forum monitored the forum discussion.

Figure 4.13 isolates the touring procedure of the various officers in the National Scheme which ideally was to provide the monitoring of all echelons of the project. According to the National Scheme design, the upper two echelons were linked not only with the echelon immediately below but with the second echelon below: the National Chief Organizer was supposed to tour not only the State but the Block level as well.

Figure 4.12. National Scheme monitoring and feedback.

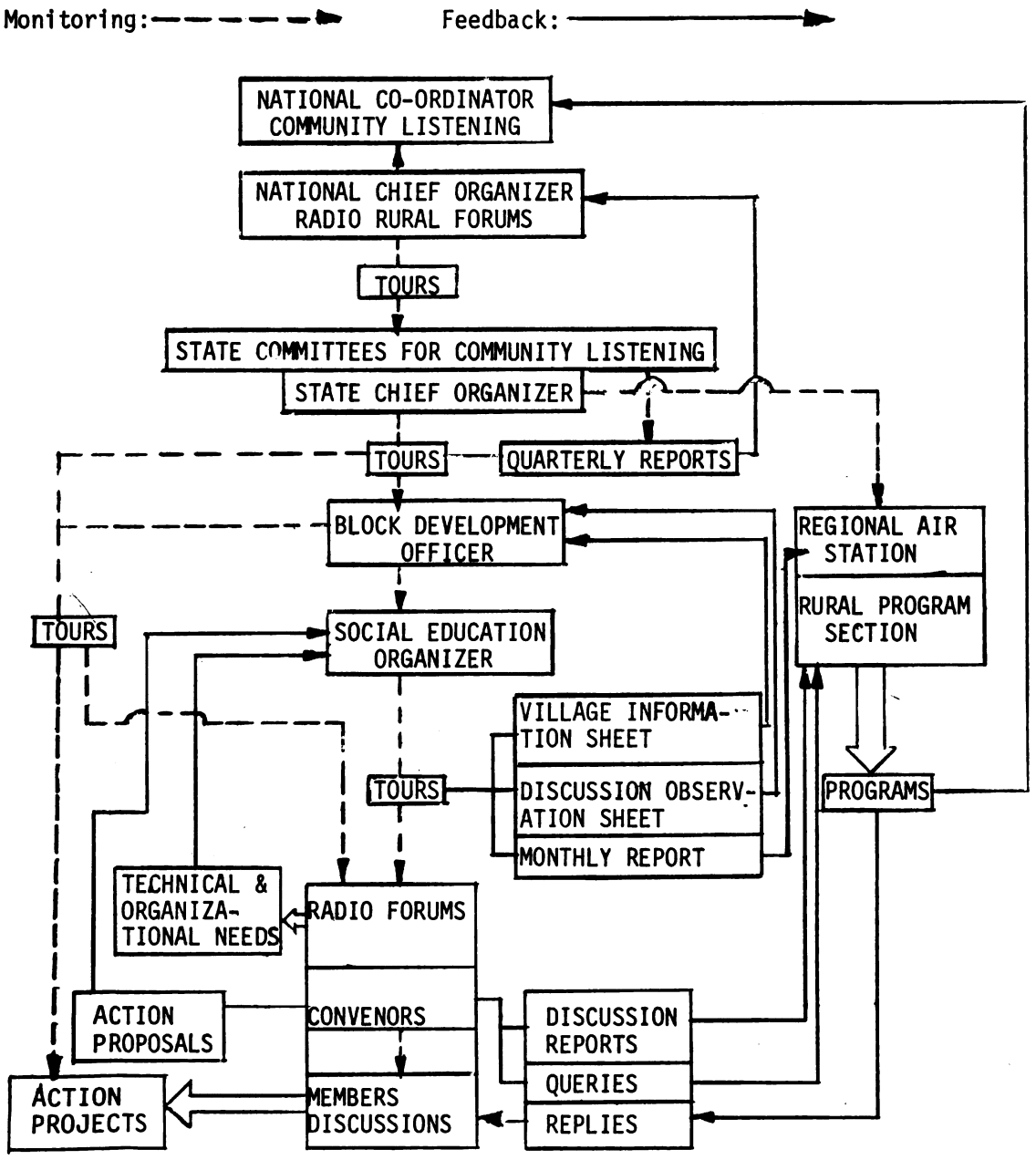
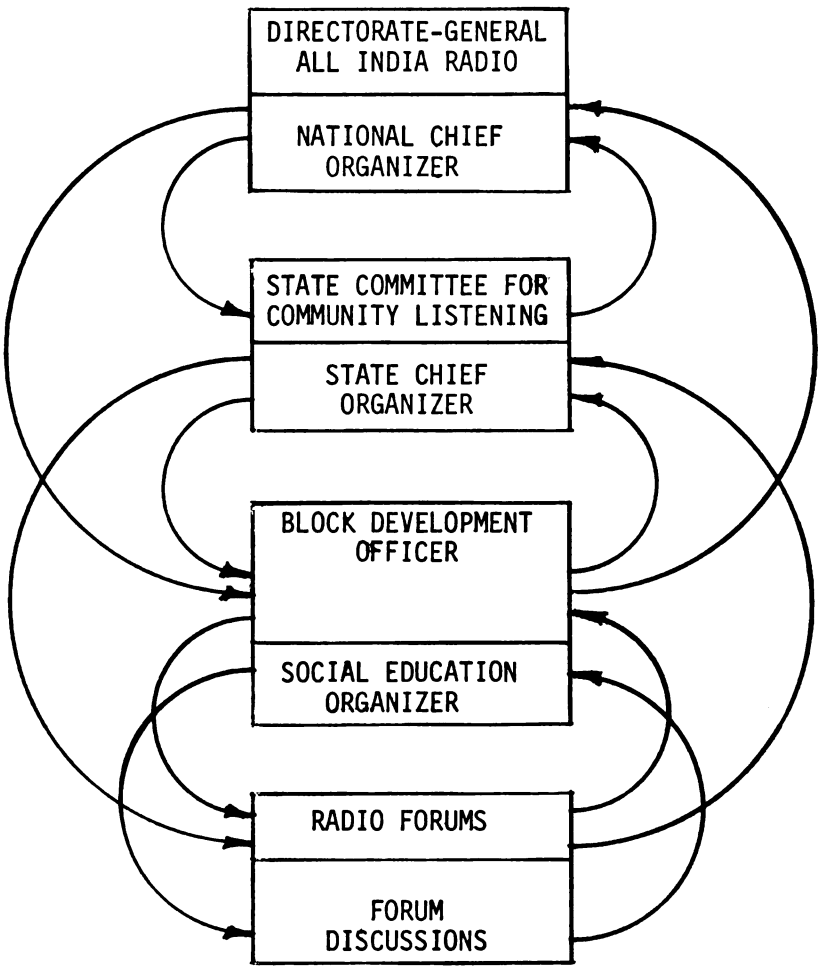


Figure 4.13. Officer's touring as a linking procedure.



The State Chief Organizer toured not only the Block level but the forum level also.

The monitoring design constituted by the touring procedure of various officers in the National Scheme would seem to have been adequate. If breakdowns in monitoring occurred, they may have derived from impractical spans of supervision. That is, it may have been impractical for one National Chief Organizer to monitor effectively the Committees for Community Listening in every State; for one State Chief Organizer to monitor every Block in his State; and for each Block Development Officer to monitor every forum in his Block, given the National Scheme's limitations on personnel and their lack of freedom from competing assignments.

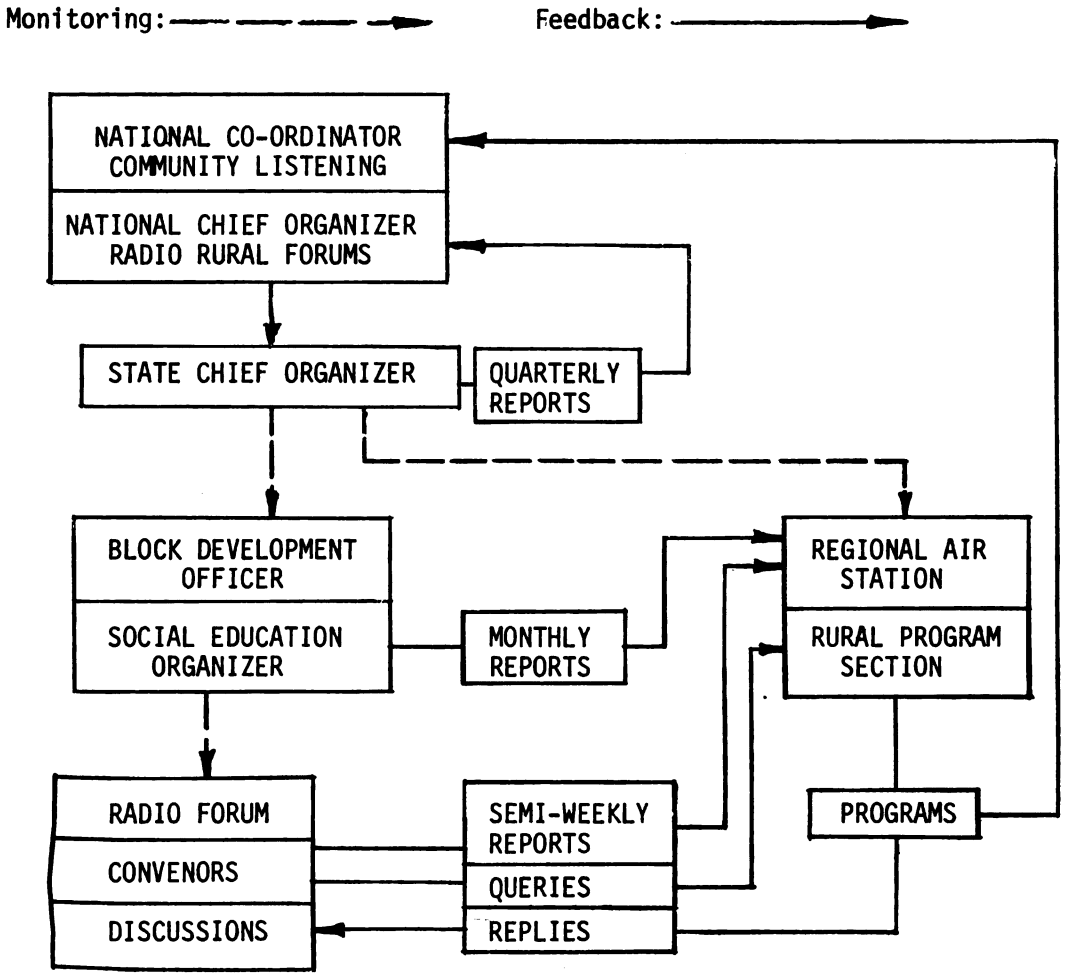
Feedback

In Figure 4.14 it will be seen that the National Scheme was designed to provide continual feedback of the content of its monitoring circuit: lower echelons report on their operations to higher echelons at reasonable and regular intervals. Again, if the design operated inefficiently, the reasons may have to be sought in the technical and personnel structures used to implement the monitoring and feedback processes.

8. PROJECT MODIFICATION

The account of the monitoring and feedback processes has shown that the design of the National Scheme had an adequate reliability cycle to maintain and modify the project if necessary. It has been suggested, however, that in actuality the National Scheme may have had a low reliability factor because (1) the Central Government had no effective formal

Figure 4.14. Echelon-outline of monitoring and feedback.



authority to implement the National Scheme at the State level; (2) the technical inputs required for forum operation depended almost entirely upon one officer with assignments other than radio rural forums; and (3) the decision structure of the National Scheme made it impossible for villagers to establish forums on their own.

Studies of the Indian radio rural forums have indicated that the National Scheme had indeed a low reliability relative to the maintenance and modification of its system. Schramm lists six major and minor evaluations and concludes that:

> . . . all of them indicate that the forum programme is not doing as well as it should, and certainly not as well as the Poona experiments seemed to promise. (1967b: 122)

Kumar also, in a New Delhi publication of 1967, notes the general ineffectiveness of the National Scheme radio forums:

> The overall listening situation has not much improved. This is quite evident from the fact that in 1965, when it was felt that radio should be effectively utilised to boost agricultural production and to give active communication support to the Intensive Agricultural programmes of the Government of India and the States, a new Farm and Home Broadcasting cell had to be set up with more or less similar [to the National Scheme's] objectives in view. . . . A close look at the planning, production, and organizational machinery would reveal that for financial and other reasons, the [sic] specia] set-up evolved: planning committees, special officers for conducting the follow-up activities, and technical manpower to ensure quality [had] ceased to exist. (1967: 61)

The report by Schramm lists the following factors as inhibiting the National Scheme:

1. lack of full-time Chief and part-time regional organizers;

2. insufficient training of organizers (which seemed to contribute to lower morale regarding the Scheme);

3. persistance of technical difficulties: insufficient receiver

maintenance, transportation for touring officers, resources for action projects, and delays in the honorariums paid to Convenors;

4. insufficient feedback of queries to regional stations contributing to local irrelevance in regional programming (although the composition or activity of the Rural Program Advisory Committees may have been at fault here). (1967b: 120,132)

In addition to the above, the following factors might also be considered related to the difficulties experienced by the National Scheme.

1. The National Scheme, like the Poona-UNESCO Project, employed only one of many possible organizational structures. A top-heavy bureaucratic superstructure was considered to be the only feasible way radio forums could be organized. Alternatives to this project-design were excluded.

2. The National Scheme relied heavily upon personnel with numerous assignments.

3. The Scheme was National, not regional, and the decision-structure at the national-level-State-level interface was decidedly too weak to implement national decisions at the state level.

4. The assumption that a heavy superstructure was the unquestionable solution produced a design of almost no super-infra-structure complementarity. Almost no decision-making was done by any village in which a forum existed.

5. This same assumption eliminated the superstructure with its personnel composition and decision-design from any self-examination as a possible critical variable in the environment required for successful forum operation.

6. The lack of complementarity in the decision-structure left an Indian village with no decision-power and no alternative to such a decision structure. If a village was able and willing to establish a forum, there was every chance that they would be unable to do so because the superstructure depended so completely upon organizing personnel.

These are some--but not a summary--of the factors possibly hobbling the National Scheme. They are factors which certainly can inhibit any scheme from operating efficiently and monitoring and modifying its operations so as to maximize the use of its resources. The report by Schramm suggests that:

> Perhaps one of the more important lessons to be learned from this experience is that the task of expanding from a pilot project to a state-wide or nation-wide activity is itself a challenge to development planning. It will introduce new problems not encountered in the pilot project, and will require a major effort of management and leadership. (1967b: 122)

CONCLUSION

One might inquire if there is an alternative to the project-design of the National Scheme. From the present analysis it would be impossible to assert that there is a more effective alternative since the analysis has drawn principally upon secondary sources and not upon a field study. In lieu of conclusions, however, a systems analyst might offer some suggestions such as the following.

The objective of a radio forum project should be to produce measureable changes in the behavior of the project's beneficiaries: changes in knowledge, changes in decision-patterns and leadership-patterns, socio-cultural, socio-economic changes, etc. Unless and until the objectives

of the project are operationalized and the behavior changes specified, project personnel cannot be accurately assigned to roles, nor can reliability personnel determine if the project is operating with any effectiveness. Thus, a project can be foredoomed to fail if the behaviors implied by its objectives remain unspecified.

However, even after a project's objectives have been operationalized, project planners must ask themselves in how many ways the desired behavioral changes can be produced. This question cannot be avoided if the use of scarce resources is to be maximized. The Poona-UNESCO Project demonstrated that within a certain environment a radio rural forum could produce certain changes. The numerous variables constituting that environment, however, were never subjected to further experimentation and testing. The National Scheme planners evidently considered the organizational structure of the Poona-UNESCO Project to have been indispensible to the success of radio rural forums. Yet the difficulties encountered in the National Scheme demonstrate that this organizational structure should have been subjected to experiment in order to determine its latent dependent variables. Such experimentation could have led to the consideration of alternative organizational designs only one of which may have resembled an existing government bureaucratic structure.

The heavy reliance of the National Scheme upon part-time personnel who were only officers in certain echelons concerned with radio rural forums, made the National Scheme critically dependent upon each officer channeling the flow of inputs required for radio forum operation. The National Scheme had no "fail-safe" circuits through which radio forums

could receive the necessary inputs in the event of failure on the part of one of these critical personnel.

An alternative to the National Scheme system-design might have been the communication of the idea of the radio rural forum not through the training of organizers and their transportation to villages, but through the medium of radio itself. Information might have been broadcast within regular forum programming to communicate to villagers how they might establish forums in their own villages without the aid of an official organizer. Such a system-design might have had the effect of directing motivational efforts not toward the superstructural personnel who do not benefit from radio rural forums but toward the villagers who do. Communicating an organizational strategy directly to villagers would also have re-allocated decision-making power and provided Indian villagers with a more available and reliable method of establishing radio rural forums. In this system-design, the provision of technical resources both for the operation of the forum and for action projects would remain as critical as in the National Scheme, yet some such alternative design could have reduced the overload in the technical-materiel circuit of the National Scheme which was burdened with the technical demands of its own superstructure.

CHAPTER V

THE INSTRUCTIONAL TELEVISION PROJECT OF AMERICAN (EASTERN) SAMOA

INTRODUCTION

The television project established by Americans in the United States territory of Eastern Samoa forms an interesting study in cross-cultural relationships. Planners of the project not only had the task of integrating American and Samoan personnel in an educational enterprise of considerable size, but also of meshing the enterprise with an environment of considerably different not only Samoan but American value systems.

The project was established and maintained by American personnel with Samoan personnel under training. American maintenance and Samoan support personnel constituted a first cultural interface.

A second cultural interface appeared where television as a modern medium entered Samoa with its subsistence economy and traditional culture.

A third cultural interface appeared where the project, as an instructional television enterprise carrying the major portion of all elementary and high school curricula, met the differing value systems of both the American and the Samoan educators already established in Samoa.

A fourth interface appeared, only after the project was well established, and this was the political-educational interface. The smooth relationship between the Governor of Samoa and the educational planners who established the television project eventually deteriorated when a Governor was appointed who evaluated the project in a different light than the project planners.

Of the three projects under study, the Samoa project offers in its literature the most complete evidence of a serious investigation of the environment and its needs prior to the implementation of the project. For this reason, the treatment of the environmental need, its assessment by different persons, and the objectives set by those assessors, will be necessarily extensive.

1. THE ENVIRONMENT

Introduction

In the literature a number of sources depict the Samoan environment. The first is a sub-committee composed of United States Senators Long of Hawaii and Gruening of Alaska and sent in 1960 by the United States Senate Committee on Interior and Insular Affairs to investigate economic and other conditions in American Samoa.

A second source is the Governor of Samoa, H. Rex Lee, who assumed office in May, 1961, and whose animadversions on the situation of Samoa upon his arrival are scattered throughout the literature of the project.

A third source is the report and recommendations of a four-man team headed by Vernon Bronson of the National Association of Educational Broadcasters enlisted by Governor Lee to assess the feasibility of television for educational purposes.

The analysis of the environmental needs of American Samoa will be drawn both from descriptions of the actual environment and from recommendations provided by the sources which implicitly describe the needs of the environment.

The Physical Environment

Eastern (American) Samoa lies in the south Pacific, approximately 2,300 miles southwest of Hawaii and 1,600 miles northeast of New Zealand, 14 degrees south of the equator. (Cf. Figure 5.1) The seven islands comprising this United States Territory are of volcanic origin, mountainous, and have a tropical climate of 200 inches of rainfall annually, most of this occurring between December and March. The land area totals 76 square miles, 70% of this being the island named Tutuila which holds 85% of a population estimated in 1966 to be 26,000. Pago Pago, the capital, is located on Tutuila within a harbor considered to be one of the finest in the Pacific. (Long and Gruening, 1961: 21; Schramm, 1967: 12) (Cf. Figure 5.2)

The Economic Environment

Economic Sectors

The economy of Eastern Samoa operates on three levels. The first level is a subsistence economy of extended families dependent upon their own land for food and housing. A second level is a trading economy of small shops and companies, and the third level is an extensive government sector which is the chief source of cash for the islands. The UNESCO case study by Schramm gives the following monetary picture:

Figure 5.1. Islands of Western and Eastern Samoa.

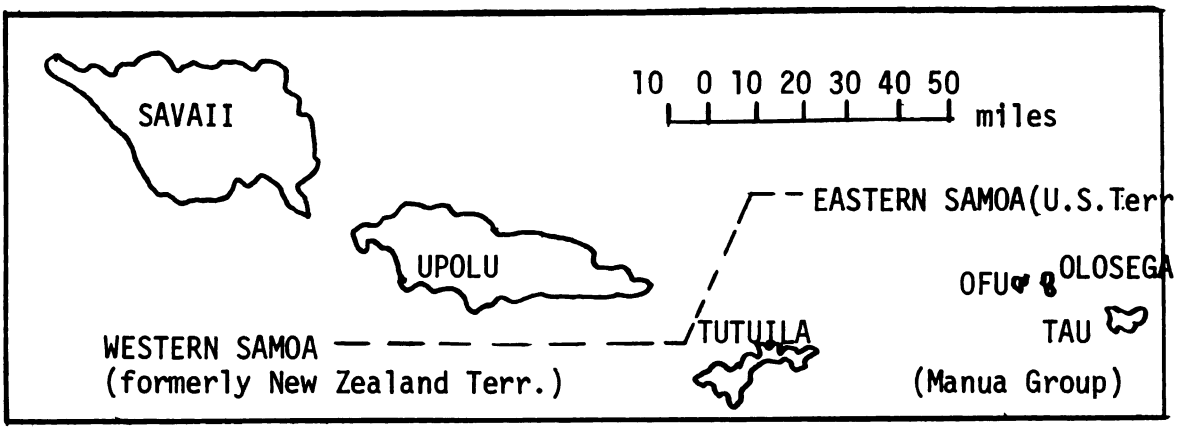
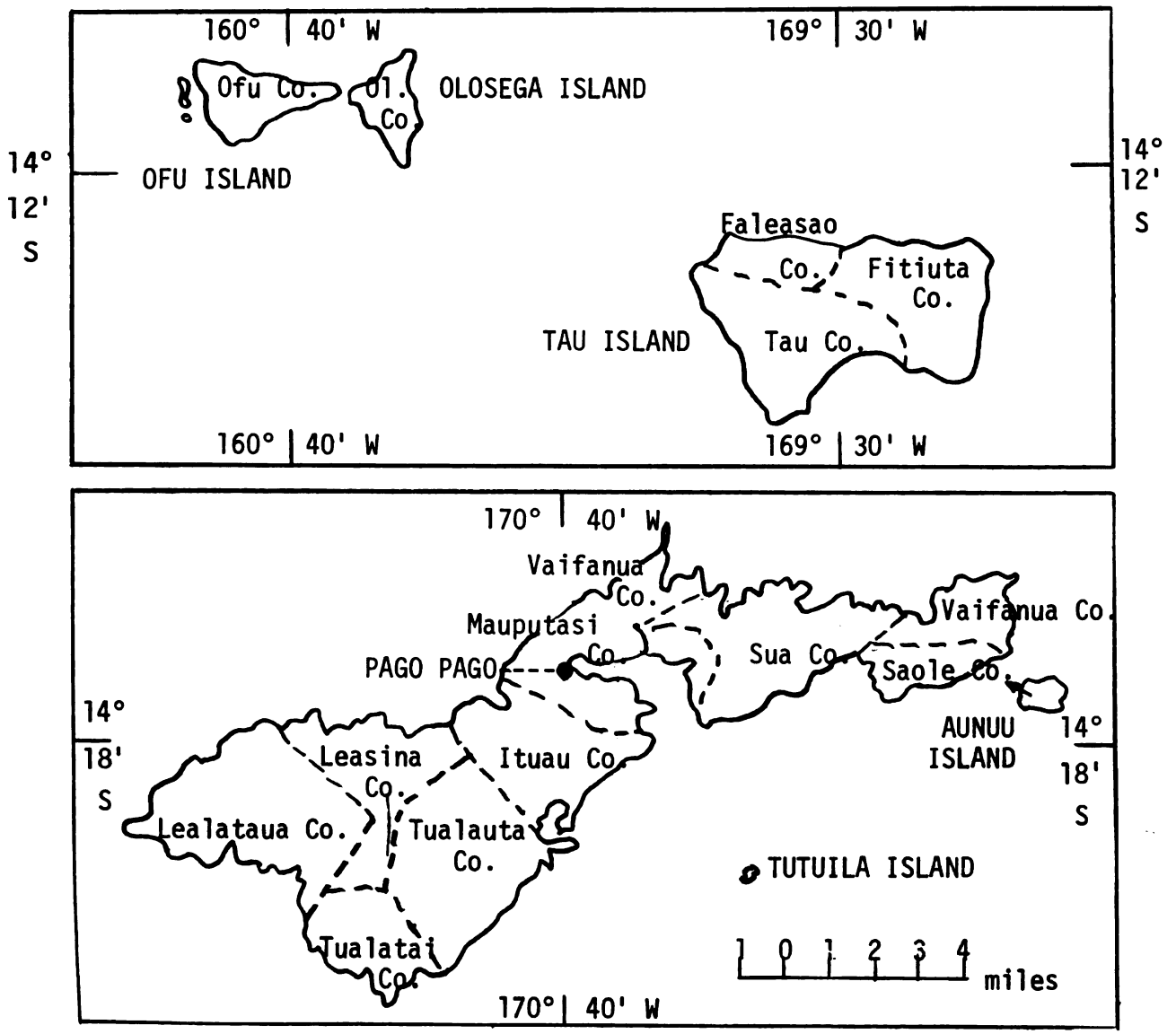


Figure 5.2. Islands of Eastern Samoa.



> . . . The subsistence sector is entirely Samoan, and may be estimated at about $6 million. The money income is about $9 million, of which about $6 million is paid to Samoans, the rest to pelagis (. . . referring to non-Samoans, chiefly to United States personnel). Thus, the over-all gross national product per capita is between $400 and $500, but for the subsistence sector it is less. Annual revenues are $7.7 million from taxation ($3 million) and sales of government services; $5.2 million from United States grants. (Schramm, 1967a: 12)

The three economic levels are to some extent linked by those Samoans who may draw wages in the government sector, spend a certain amount in the trading sector, and live in the subsistence sector. This monetary report is from the mid-sixties and therefore it may cautiously be assumed that the report includes the funding by the United States Government of the instructional television project under discussion.

Land Tenure

Ownership of land in Samoa is concentrated in a multitude of extended families. The system of land tenure which precludes the ownership of Samoan land by non-Samoans has been protected both by past United States policy as well as by the recently approved Samoan Constitution which reads in part: (Long and Gruening, 1961: 2)

> It shall be the policy of the Government of American Samoa to protect persons of Samoan ancestry against alienation of their lands and the destruction of the Samoan way of life. . . . (Article I, Section 3)

Any relaxing of this law of land tenure requires not only a two-thirds vote in both chambers of the Congress of Eastern Samoa, but requires such a vote in two successive legislative sessions. (Long and Gruening, 1961: 4) Such a law not only has economic significance for a project funded and created by non-Samoans on Samoan soil, but it also exhibits the economic dimension of a socio-cultural xenophobia.

Commerce and Agriculture

Long and Gruening depict Samoa as predominantly a subsistence economy with a small trading sector. Agriculture is poorly developed and this has contributed to the problems of pollution, disease, and malnutrition. They state:

> American Samoa . . . desperately needs to improve its agriculture and in many other ways improve living standards and bring other benefits to the rapidly increasing population. Unfortunately, however, the knowledge and skills needed to do all these things are sadly lacking. (1961: 103)

The small trading sector indicates a poorly developed commerce which is related to underdeveloped agriculture and undeveloped physical resources.

Summary of Economic Needs

A summary of economic needs can be drawn from the economic recommendations in the Study Mission Report of 1961. These needs form part of the context conditioning the educational objectives of the television project as well as its implementation.

1. American Samoa needed a study of its physical resources.

2. Samoa needed to develop from a subsistence to a growth economy.

3. Samoa needed a business administration agency to attract United States industry to the islands in order to expand its trading sector.

4. Samoa needed technical and scientific aid in developing its agriculture.

5. Samoa needed public health facilities.

6. Samoa also needed public utilities. (Long and Gruening, 1961: 12,19,103)

The Political Environment

Introduction

The political relationship of Eastern Samoa with the United States began in 1900 when some Samoan chieftains "voluntarily ceded" seven islands to the United States. (Long and Gruening, 1961: 4) The United States Navy was charged with administering the islands and it relied upon the existing hierarchy of chieftains for the execution of policy. The Navy maintained "a relatively effective public health service, kept law and order, dispensed justice, and inaugurated free, compulsory education." (Long and Gruening, 1961: 5) Under President Truman the administration of the islands was assigned to the United States Department of the Interior in 1951.

The Samoan Constitution

In 1960, Samoans ratified a Constitution drafted by a Samoan constitutional convention. Long and Gruening report:

> . . . As nearly as we can determine, this document for the most part is a product of the Samoans themselves, and it appears to have their acceptance and support. (1961: 5)

Sixty years, therefore, after Samoans had voluntarily placed themselves under the administration of the United States, they had moved to a measure of self-determination by forging their own Constitution.

The Legislature

The legislative branch of the Samoan government has two chambers: a Senate of nine chieftains elected by county councils (cf. Figure 5.2) from local chiefs chosen "in the traditional way", and a House of Representatives elected by secret ballot and universal suffrage and drawn from

all strata of the social structure. The latter has twenty-four members representing the population proportionately with at least one member from each of the fifteen Samoan counties. (Long and Gruening, 1961: 4,8)

The Executive and the Judiciary

The executive and judicial branches of the Samoan administration, however, are unlike the Legislature in that they are dominated by non-Samoans. The United States President appoints the Secretary of the Interior who in turn appoints the Governor of Samoa as well as the Chief Justice. The Governor appoints the two Samoan associate justices of the high court and the presiding officers of the lower courts. There is no appeal from high court decisions and Long and Gruening found no recorded instance in which the two Samoan judges of the high court disagreed with the American Chief Justice, "so completely does the stateside chief judge dominate his relatively untrained native colleagues." 1961: 8)

Long and Gruening express their misgivings about this pattern of domination in the political environment:

> . . . However clearly the constitution and the civil government it creates are in conformity with the wishes and present political capabilities of the Samoan people as a whole, the fact remains that all executive, judicial, and legislative power is concentrated in the Secretary of the Interior through the President. Legally, the American Samoan Constitution is but an administrative order, subject to the will of the Executive in Washington. . . . The Secretary of the Interior appoints the Governor without the benefit of the advice and consent of the Senate; he appoints the Chief Justice of the High Court; the powers of the legislature are dependent upon his grant of legislative authority. (1961: 5)

The structure of both the executive and the judiciary in Samoa thus follows a pattern of foreign hegemony which is a factor latent in Samoa's environment and must be considered in assessing the dynamics of a television project of foreign origin.

Long and Gruening go on to note, however, that administration of the islands on the whole had been fair, had preserved Samoan traditions and the Samoan way of life, and that Samoans were not so much dissatisfied with the administration or its disenfranchising structure as with the lack of funds for social and economic growth and development. (1961: 6)

Citizenship and Representation

Long and Gruening found "no sentiment in any strata" of Samoan society for closer union with Western Samoa (later to become independent of New Zealand). While Samoan chiefs recorded an official petition for full United States citizenship (1961: 12), the authors of the Report found that:

> . . . many are gravely troubled as to whether the "equal protection of laws" doctrine implicit in citizenship would not conflict with the "Samoan land for Samoans" doctrine. . . . (1961: 9)

The Samoan hesitation to request United States citizenship was based on the possibility that once Samoans would become citizens, any United States citizen would be legally capable of acquiring Samoan land, thereby not only alienating Samoan land but also destroying the social system based on the extended family ownership of land. In Guam, such a restrictive protection of land was found unconstitutional. (Long and Gruening, 1961: 10)

Apart from the question of citizenship, the question of more direct representation of Samoan interests in Washington and a greater voice in their own budget and economic planning was a recurring request during the investigation by the Study Mission. Samoans suggested that a resident Samoan commissioner be permitted to sit without vote in the United States House of Representatives. (Long and Gruening, 1961: 6, 12)

Political Non-formal Value of Samoa

There is evidence in the literature of a set of non-formal factors in the political environment of Samoa which while latent, had the potential of influencing objective-formulation, decision-making, and the implementation of the television project. The principal factors were United States international prestige and the economic and military importance of Samoa's location in the Pacific.

International prestige and strategic importance are termed non-formal factors because they are extrinsic to the formal investigation of the needs of Samoa's environment. Formally, only internal Samoan needs should dictate objectives of a project and its decisions. Any influenctial factors extrinsic to these needs and their assessment may be considered non-formal.

Long and Gruening themselves introduce the factor of United States international prestige:

> In American Samoa, the United States has a tremendous opportunity to show, both in the strategic south Pacific and to the world at large, that we do practice what we preach, and that a Christian nation can and will do justice to a minority group however small and however far away. (1961: 15)

Samoa was also a potential showcase for United States social and economic development, for Samoa:

> . . . is in the middle of Polynesia and the eyes of several nations are watching what we do for this possession. This territory thus could and should serve as a practical area of demonstration of the application of U. S. techniques in social and economic development for the benefit of its native people. (Long and Gruening, 1961: 20)

Several nations would in fact see Samoa firsthand when in 1962 approximately 200 delegates from 16 Pacific territories convened in Pago Pago for the Fifth South Pacific Conference. At the time of Long and Gruening's investigation, the city of Pago Pago had no suitable housing for the delegates of this conference. (1961: 13) The pressure to provide facilities for this international meeting was a nonformal factor in Lee's accepting the office of Governor in May, 1961, as can be seen from an article read into the Congressional Record:

> . . . He [Lee] recalls that he didn't particularly want the Samoa position, but he accepted it on an agreement to stay one year and prepare Pago Pago for the July 1962 conference of the South Pacific Commission. It was the first time the SPC had scheduled a conference on American soil. ("American Samoa and Rex Lee," August 2, 1967: 20959)

This same prestige factor may also have influenced Lee to introduce a modern instructional television project to the islands of Samoa as a "practical demonstration of the application of U. S. techniques in social development" which could be observed by the conference delegates.

Finally, Samoa had a strategic economic and military location where its excellent harbor and proposed jet airfield could assume importance in the political role of the United States in the south Pacific. As Long and Gruening suggest, "these assets alone make American Samoa a valuable piece of real estate in international waters." (1961: 20)

Summary of Political Factors and Needs

1. Samoan chieftains ceded their seven islands to the United States by a Deed of Cession in 1900.

2. Although ruled by Samoan chieftains, Samoa continued to be administered and protected by foreigners.

3. In 1960, Samoans approved their own constitution. However, because decision-making remained in the hands of non-Samoans, the constitution had no more real power than an administrative order of the Executive in Washington to the Governor of Samoa.

4. The upper house of the Samoan Congress is an elite of chieftains selected by a traditional method.

5. The lower house of Congress is representative and proportional to the entire population and is elected by a modern system, the secret ballot.

6. The Samoan Congress is advisory only, subject immediately to the appointed Governor and ultimately to the Secretary of the Interior and the Executive in Washington.

7. The judiciary is dominated by the non-Samoan Chief Justice who is appointed by the Secretary of the Interior. Associate justices and presiding officers of lower courts are appointed by the Governor, and the judicial system in general lacks appellate procedures from lower to higher courts.

8. Samoans were satisfied with the foreign administration but dissatisfied with their own social and economic development.

9. Samoans desired United States citizenship if it did not affect the traditional policy of "Samoan land for Samoans".

10. Samoans desired a more direct representation of their interests in Washington and a greater voice in their own economic planning.

11. By its location in the south Pacific and the impending South Pacific Conference in 1962, American Samoa had in 1960 a stragetic importance for United States international prestige and foreign policy.

The Socio-cultural Environment

The political factors cited above had a socio-cultural effect upon the environment and their significance will become clearer in the following discussion of the structure of Samoan society.

The Matai System

An initial description of Samoa society is to be found in a report by a Senate Commission of 1931 headed by a Senator Bingham during the Hoover administration for the purpose of making legislative recommendations regarding Eastern Samoa.

This commission described the traditional Samoan social structure as one based on the communal ownership of land by an extended family which was headed by a chieftain or matai. The matai held power of life and death over the affairs of the family but could be deposed by the family whenever his leadership would become ineffective. The commission stated, however, that at the time of its investigation, the power of the matais had diminished in that the matai would tend to discuss matters with the family group, functioning less as an autocrat than as a spokesman for the family. Further, while traditionally there was a strict communal ownership of land and no individual incentive, the Commission report stated that:

> . . . thirty years of contact with American civilization [sic] have weakened this communal organization. The idea of personal property owned by the individual has infiltrated deeply. There are complaints from those not matais that the leadership of old is lacking and that it is not practical now to depose a matai. The schools have hastened the new ideas. The children are oriented away from the old culture. The thinkers among the chiefs wish the best for their children but admit that the changes have come and sooner or later much of the old order will go. They look at these changes regretfully, but turn with hope and confidence to the possibilities of the future. (Long and Gruening, 1961: 3, quoting the Samoan Commission Report of 1931)

Long and Gruening, however, took exception to this description of Samoan social structure. They found that Samoan society was by no means as far advanced in a transition from traditional to modern values as the Commission of 1931 had suggested. They note that:

> . . . this 1931 report to the Senate of the 72nd Congress uses the past tense in describing the matai system. Your sub-committee in 1960 did not find this hierarchy of family chieftains nearly as much a thing of the past as the report of 30 years ago indicates; rather the system is still in the process of dynamic transition. . . . The "traditional leadership" is a vital force in Samoan life today. It must be, and should be, taken into consideration in any action taken by the Federal Government affecting Eastern Samoa. (1961: 3,4)

Long and Gruening conclude that the matai system in Samoan society controls "virtually every phase of Samoan life, economic and social. Results of individual effort are contributed to the communal family. (1961: 3)

Schramm, in an apodictic statement, agrees, but may be simplifying when he states that "[p]rivate property, individual incentive, and personal gain are foreign concepts to the Samoan culture." (1967: 12) The "concepts" mentioned were, at the time of the inception of the television project, not at all totally "foreign" according to Long and Gruening. They describe Samoan youth as moving toward individual values

and note that this was creating a conflict with the orientation and loyalty toward a family group. Samoan youth were questioning the communal structure of their society and were beginning to view an individual's education, training, character, and ability to be prerequisites for leadership rather than family possessions.

Samoan elders according to Long and Gruening, continued to identify Samoan culture with their long-established way of life. However, Long and Gruening felt that once the elders came to view culture as not necessarily identical with their traditional life, they would realize that they could preserve their culture and still attain a higher standard of living for their children. (1961: 20)

An American View

A further comment on the Samoan socio-cultural setting prior to the television project is found in the educational report by Everly included in Study Mission report. Everly was the Dean of the College of Education of the University of Hawaii and had been requested to assess education in American Samoa. He stated:

> . . . It is pointless to urge on the American nationals the advantages of a simpler, more primitive way of life with schools to match. The acculturation process is well advanced and there is no turning back the clock. The desire of the people is ultimately full citizenship and closer ties with the rest of America. They expect their public schools to take them along this road. (Everly, 1961: 137)

The significance of Everly's reflection is that it is less a statement of fact than a non-Samoan's argument using a questionable line of reasoning for a particular type of educational solution.

The major premise of Everly's argument is that the "acculturation process is well advanced" and that the "desire of the people is ultimately full citizenship and closer ties with the rest of America". This is a socio-cultural observation which, in the light of the comments by Long and Gruening, would seem to be inaccurate and oversimplified.

The minor premise is that it is "pointless to urge on these American nationals the advantages of a simpler, more primitive way of life with schools to match" and that "there is no turning back the clock". There is a not so subtle rhetoric in use here where the obvious impossibility of "turning back the clock" lends support to the pointlessness of "urging" a simpler way of life on "American nationals". This "simpler" way of life Everly equates with a "more primitive" one, and at this point in the argument, it would seem that anyone advocating a solution to Samoa's "simple" socio-cultural needs less sophisticated than the American-type of public school contemplated by Everly, would have to face the rhetorical implications of "simple needs" meaning "more primitive" needs, and the advocacy of any simpler solution implying a "turning back" of the socio-cultural "clock."

The basis of Everly"s educational recommendations is his socio-cultural interpretation of Samoa's educational history:

> As one reviews the history of Samoa's schools, the conflict of ideas over their appropriate functioning is striking. Central to this conflict has been the extent to which education was to "Americanize" these Polynesian people. The desire to preserve the "best of Samoan culture" usually has been proclaimed in various policy statements. Nonetheless the determination that the schools be "patterned after the American schools" and conducted in the English language was an equally dominant policy. (1961, 143)

Everly speaks of two dominant policies: preserving the best of Samoan culture and patterning Samoan schools after English-speaking American schools. He views the two policies as mutually exclusive; he terms their interaction a conflict; and he implies that the use of the two policies creates a dilemma which must be resolved.

Everly's socio-cultural argument resolves the dilemma by selecting one horn and dismissing the other: American Samoan nationals desiring full citizenship and closer ties with America expect their public schools to "take them along this road." The obvious educational solution not only to the dilemma of the two conflicting policies but to Samoa's educational needs it to give Samoa public schools like those of the "rest of America."

However, there may be no conflict and no real dilemma. If "patterning schools after American schools" is a statement referring to a pattern of educational values such as free inquiry, the demand for verification of insights, the prizing of the individual student, the social consequences of individual behavior, etc., then the statement outlines a structure. This structure may certainly conflict with certain Samoan values which limit inquiry, dismiss the demand for verification, or ignore the value of the individual, but it need not contradict the "content" of Samoan culture which could be considered "the best of Samoan culture." Such "culture" would be the Samoan language, its arts and crafts, its history, etc., which would form the content (or subject matter) for an educational structure composed of inquiry, verification, individual value, social behavioral consequences, etc., which would follow a pattern seen in American schools.

Thus because Everly sees the two policies as mutually exclusive and not interrelated as structure and content, he resolves a dilemma with an oversimplified socio-cultural major premise, a rhetorical minor premise, and a conclusion which precludes the painstaking investigation of Samoa's socio-cultural environment.

The point being made is simple. The systematic investigation of socio-cultural needs in order to set comprehensive objectives for an educational project in a foreign culture is not an easy task. False dilemmas and specious arguments must be identified both because of the complexity of a foreign culture and because a foreign educator comes from a culture of existing educational alternatives which all too easily suggest themselves as solutions to the needs of the foreign culture. Everly's argument required an extended comment because this type of rhetorical argument recurs in the Samoan project.

Summary of Socio-cultural Factors and Needs

1. Samoan society is organized on the basis of the extended family ownership of land.

2. According to the more nuanced account, families headed by Samoan chieftains still controlled virtually every phase of social and economic life.

3. Private property, individual incentive, and personal gain were concepts foreign to the part of Samoan society still governed by the matai social system.

4. To some extent Samoan youth questioned the communal structure of society and were beginning to view an individual's education,

character, training, and ability as bases of leadership rather than family possessions.

5. Samoan elders continued to identify culture with their traditional life, and looked upon change as destructive of culture.

6. Socio-cultural assessments by educators whether foreigners or Samoans must be examined for specious arguments and rhetorical conclusions which abort the thorough investigation of socio-cultural needs.

The Educational Environment: Everly 1960

Everly's general assessment of Samoa's educational environment has been cited previously for its bearing on an interpretation of Samoa's socio-cultural environment. His overall assessment was that Samoa needed American-style public schools both because Samoans desired such schools and because any other alternative would be foisting a return to a more primitive stage in cultural transition upon these American nationals. Everly's specific assessments of Samoa's educational environment constituted the major part of his report.

The School Population

Samoa in 1960 was facing a serious emigration problem. The population of that date stood at 20,051 and one-fourth of the Samoan population was estimated to have emigrated, the majority of this the productive working group of Samoans. Besides economic reasons, the poor condition and limited capacity of the educational system were factors cited for the emigration of a large percentage of high school candidates and graduates from Samoa. (Everly, 1960: 137,142)

Table 5.1. Samoa Schools and Population: 1960

Total Population of Samoa: 20,051			
School Age (7-15) Population: approximately 10,000			
In-School Population:	Number	Locations	Enrollment
Public Elementary Schools: (Grades 1-6)	47	7	5,022
Public Junior High Schools (Grades 7-9)	5	5	
Private Elem. & Junior High: (Grades 1-9)	9	9	1,460
Public High School: (Grades 10-12)	1	1	323
Vocational School: (post grade 9)	1	1	
Nursing High School:	1	1	43
Teacher Training College:	1	1	15
TOTALS:	65		6,863

The above Table illustrates the situation of the Samoan school system at the time of Everly's assessment. Fully one-half of the entire population whose median age in 1960 was 15.2 years fell within the compulsory school-age group and yet approximately only 65% of this group was enrolled in school. (Everly, 1961: 142)

Elementary Schools

Public elementary schools totalled 47 in 7 locations with some of these including grades 7 and 8 because of the limited capacity of local junior high schools. All students completing grade 6 were able to be accepted into junior high. The staff consisted of 170 locally trained Samoan teachers. (Long and Gruening, 1961: 98)

Private schools totalled 9 in 9 locations, all of these composed of grades 1 through 9, and were staffed by six different religious groups. These schools were under the authorization and standards of the Department of Education but outside its administration. (Long and Gruening, 1961: 97)

Junior High Schools

Of the five junior high schools, one served the three islands of Ofu, Olosega, and Ta'u. One on Tutuila island was a selective institution for boys, and the other three were in two districts of Tutuila. These five schools were staffed by approximately 40 locally trained Samoans. (Long and Gruening, 1961: 98)

High Schools

Samoa had but one high school, grades 10 to 12, located in the Pago Pago Bay area. Admission was by examination for candidates whose entry age was usually seventeen. This high school was staffed by 12 instructors, usually university graduates, of whom two-thirds were Samoans. (Long and Gruening, 1961: 98)

Pago Pago also had two other schools for grade 9 graduates. One was a nursing high school with 15 students offering a three year course terminating in a license in practical nursing. These students would attend high school courses during their nursing training. (Long and Gruening, 1961: 98)

The second school was vocational, offering a basic one-year course in carpentry, machine work, mechanical drawing, and electrical repair. An additional two years was open only to exceptional students who also

attended high school courses during their training. The staff consisted of three Samoans and one pelagi (non-Samoan). Long and Gruening considered this facility totally inadequate: it lacked trained personnel, adequate equipment, and offered no vocational instruction in the essential field of agriculture. (1961: 103)

The Teacher Training College

Teaching training in Samoa began in 1946 when such training was offered as part of the high school curriculum. In 1956, the Feliti Memorial Teacher Training College was established at the post-high school level. By 1960 this College offered a two-year program including a year of practice teaching at the Feliti Memorial Demonstration School. Everly's assessment was that this facility was totally inadequate: in 1959 there were 331 applicants for 35 vacancies during which period the entire teaching staff of all Samoa was undergoing an annual turnover of one-third of their teachers. (Everly, 1961: 148)

Feliti graduates, however, were in demand for elementary and elementary and junior high schools although they would receive only a salary below that of a common laborer: $401 per annum. (Long and Gruening; 99,102; Everly: 148)

Physical Facilities

Long and Gruening reported that Samoan school buildings were generally overcrowded, poorly lit, dilapidated structures. In 1957 a six-year building program was begun, plans were drawn up in 1958, but by 1960 not a single structure had been started. Even the six-year program would be insufficient: it was primarily not for elementary but for junior and

senior high school buildings, and not in sufficient capacity to meet even the 1960 school population requirements. (1961: 102)

Everly described the open-sided, thatched fales as "extremely unsuitable for the development of an instructional program even distantly related to American standards." (1961: 139)

Fiscal Structure

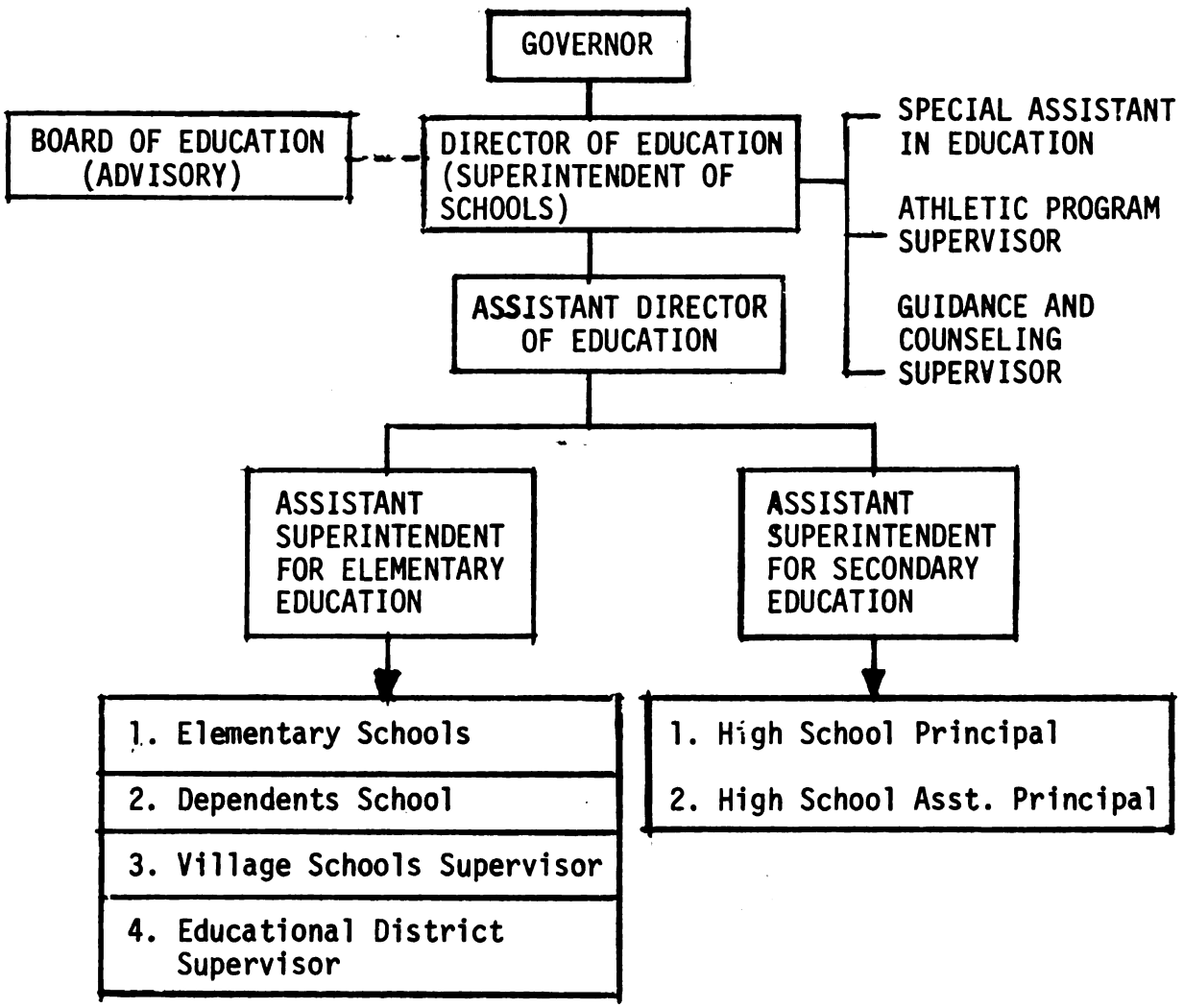
The United States Government in 1960 provided roughly $50 per pupil annually, most of which went to salaries. Seven thousand dollars was budgeted for supplies and $1850.00 for equipment. In addition, the government was responsible for providing buildings and facilities for junior high, senior high, vocational, dependents', and the demonstration schools, as well as the teacher training college.

Elementary schools, however, and teachers' living quarters had to be provided by individual villages. The government furnished elementary school teachers, equipment and supplies. This fiscal design left the villages much to themselves and as a result school funds were generally borrowed from the government-subsidized bank, and villages were chronically behind in payments or found the funds diverted to other uses by their chiefs. (Long and Gruening: 102)

Everly comments on this fiscal policy:

> Thus, the village school building program is literally and figuratively bankrupt. As a policy its wisdom is questionable. On the face [sic] it may appear justified to the extent that it encourages local initiative and keeps the people closely involved with their schools in the American pattern. However, in the absence of an orderly tax system, it was foredoomed to failure as a fiscal policy. (1961: 138)

Figure 5.3. Organizational Structure of the Samoan Department of Education.



Such a policy, Everly noted, encouraged poor fiscal practices of villages which fragmented the school system into an

> . . . unmanageable group of tiny entities. This is not to argue that the Samoan people should not bear the cost of the education of their children to the limits of their ability. There is every evidence that they are willing to do so. . . . Other alternatives are to allow the present drift to continue, or to embark on a program of outright Federal subsidization. Neither extreme is justifiable or necessary. (1961: 139)

The fiscal policy, therefore, of the educational system of Samoa of 1960 was both unsound and uneven and this may have contributed to the demoralization of personnel in education. This demoralization is reflected in the high annual rate (one-third) of turnover of educational personnel and might be explained by the wage scale which was $401 per annum for a starting teacher and $855 for a principal. (Long and Gruening: 100)

The Samoan Department of Education

A final factor in the educational environment is the distribution of power within the school system. The organizational structure resembles the structure of political power. Just as the legislative assemblies are equivalently advisory to the governor, so also is the board of education. This structure is given in Figure 5.3. (From Everly, 1961: 153)

As Everly notes, the Samoan board of education was:

> . . . seldom an important factor in the development of Samoa's school system. The dominance of the executive branch of government in Samoa is repeated in the case of the governing of its public schools. . . . Since the director of education will be appointed by the Governor as executive head of the public school system, it is obvious that there is no throught of altering the traditionally insignificant status of the board. (1961: 142)

The significance of the executive domination of the department of education is that it was precisely this power configuration that both initiated and eventually drastically modified the instructional television project.

Summary of Everly's Assessment of Factors and Needs

1. Samoa needed schools in the American pattern because the people desire them and anything less would be a nostalgic return to a more primitive life.

2. Samoa's school population required a large increase in school facilities. Everly suggested consolidation, centralization, expanded building programs, and busing to achieve this. (1961: 140)

3. The Samoan teaching profession required increased support through an expanded teacher training facility and a vast increase in salaries both to attract and retain teachers.

4. Samoan high school and vocational facilities required a three-fold increase.

5. Samoans required free education from ages 6 to 16 to eliminate the fiscal anomalies suffered by villages in their attempts to provide elementary school facilities. Everly recommended increased budgeting.

6. Samoans needed instructional material for literacy programs in Samoan and English for which Everly recommended fund re-allocation.

7. The Samoan Educational Code needed emendation to provide real power for Samoans to develop their own educational system.

8. Samoan adults needed increased public information services and a public library. (Everly, 1961: 151)

Everly's assessment of the educational environment thus at least touched the whole of the educable population from children to adults in both rural and urban settings. His frame of reference remained the American public school system and his recommendations were essentially within this frame.

Lee's Assessment of the Environment: 1961

H. Rex Lee took office as Governor of American Samoa on May 27, 1961. He had served fifteen years in various positions in the Department of the Interior, the last being deputy commissioner of the Bureau of Indian Affairs. Lee's assessment of the Samoan environment is found in scattered references in the literature.

Skornia describes the Samoan environment at the time of Lee's taking office. The people were in poor health; 95% had intestinal parasites; they were being exploited by their own businessmen and merchants. The school system had only forty decrepit schools wherein not one teacher had valid certification and all available textbooks were of a foreign (United States) culture. (1969: 56)

Schramm states that upon taking office, "the new governor was not pleased by what he saw. He felt that the social welfare and economic development of the people of American Samoa had been neglected. In particular, he was shocked by the condition of the school system." (1967a: 13)

Kaser states that Lee found that only 5,000 of 11,000 Samoans under 18 were in school in 1961, but "Lee was most shocked by the illiteracy of the Samoan school teachers. Although all instruction was supposed to

be in English, he couldn't find one native teacher who could speak it fluently." (1965: 58)

Schramm summarizes Lee's basic assessment of Samoan educational needs:

> It appeared to the governor that higher standards throughout the schools would depend on (a) better teaching; (b) more efficient use of English as a language tool and (c) ultimately a curriculum that would make more sense to the Samoans in terms of their own lives and needs. (1967a: 14)

Priorities in Lee's Assessment

There are hints in the literature that Lee viewed the reform of the educational system as a need within a larger context of the social, economic, political, and cultural needs of Samoa. Lee seems to have placed the highest priority upon the reform of the educational system because he saw a more general set of needs as dependent upon education.

A comment by Craib reveals how Lee related political and economic needs to educational needs:

> The concept of "Samoa for the Samoans" has been the fundamental rock of American policy in Samoa ever since the Deed of Cession of 1900. "But Samoans," says Governor Lee, "could never hope to run their own land successfully without a first-rate education that would enable them to enter the scores of professions which even small countries need. An upgrading of the school system thus became the first order of business." (1965: 18)

Here the general line of reasoning in Lee's establishing a priority of needs becomes evident. It seems that Lee was initially impressed with the neglect of Samoa's economic and social development, but was "shocked" by the conditions of the school system. According to the citation above, Lee reasoned that in order to run their country successfully (a political need), Samoans would require "scores of professionals which

even small countries need" (a socio-economic need). To enter such professions, Samoans would need a first-rate education. Hence, the need for improving the educational system became "the first order of business" which presumably would provide Samoa with those professionals needed to begin and carry on the social and economic development which had been neglected.

Craib's comment referred to the American policy of keeping "Samoa for the Samoans." There is evidence that Lee implicitly subsumed the general educational need under a socio-cultural need to keep Samoans in charge of their own social and cultural development. Apparently Lee considered that an advanced educational system would provide Samoans with the capability of keeping "Samoa for the Samoans." Evidence comes from a reflection on Lee's accomplishments at the end of his six years in office:

> . . . a far more compelling justification for Governor Lee's programs is reflected in the insight he has often expressed--that American Samoa doesn't have to extend itself to the world beyond its horizons if it chooses not to, but it is inevitable that the world--through modern technology, communications, and transportation--will extend itself to Samoa, especially as the Pacific Era expands.
>
> What will American Samoa do when that day comes? Will it sell its heritage and its dignity for whatever is immediately pleasurable? Will it lose its identity as Samoa?
>
> It is precisely in an awareness of these potential evils that many of Governor Lee's programs--especially an emphasis on education--have been based. ("American Samoa and Rex Lee," The Honolulu Advertiser, July 20, 1967, read into the Congressional Record, August 2, 1967: 20960)

Lee's viewing Samoa's educational needs in a larger context of social, economic, political, and cultural needs thus led him to hierarchize the environmental needs of Samoa which gave the reform of the educational system the highest priority. This, in effect, placed the

proposed instructional television project in a key position as an essential solution to Samoa's future development and the preservation of Samoa's socio-cultural identity.

Nonformal Factors in Lee's Assessment

Lee's subsuming some Samoan needs under others has just been noted. Such subsuming represents an active handling of an interpretation of an environment, and the systematic analysis of any assessment of an environment requires the discernment of possible sources of bias which may have affected the assessment and--as in this case--the subordination of some needs to other needs. Hence the identification of sources of nonformal pressure which may have influenced Lee's assessment will be considered.

Lee felt a definite pressure for swift and obvious results. First, as Schramm notes, there was "pressure, both in and outside the government, for improving the situation." (1967a: 14) Some of this pressure likely came from Long and Gruening's United States Senate Study Commission to American Samoa whose report was published soon after Lee took office. A second source of pressure was some unfavorable publicity given Samoa by an article in Reader's Digest and a documentary report by the National Broadcasting Company during Lee's early months in office which "invoked thousands of letters of protest over the treatment of Somoa [sic]." (Inouye, 1963, Congressional Record: 13101) A third source of pressure was the impending Fifth Conference of the South Pacific Commission to be held in Pago Pago in 1962. As noted above, Lee had been sent to Pago Pago to prepare physical facilities for the delegates of this conference.

Both the pressure of notorious publicity and impending international scrutiny can be considered nonformal factors in Lee's assessment. These factors may have pressured Lee into accelerating his assessment of Samoa's environment, for barely three weeks after Lee's inauguration in Pago Pago, he had returned to Washington to propose a 3-year, $26 million rehabilitation program for Samoa. (Inouye, 1963, Congressional Record: 13101) The same factors may also have been influential in Lee's performing a kind of logical reduction of political, economic, social, and cultural needs to a single, identifiable educational need. Inevitably, the swift solution to an obvious need would be similarly obvious--especially to visiting delegates to Samoa and other foreign observers of the impending conference.

Internal pressures also may have influenced Lee's assessment and his method of hierarchizing Samoa's needs. On the objective side, Samoa's problems had been neglected throughout the course of many previous administrations. On the subjective side, the dynamic character of Lee as an administrator may well have created its own nonformal urgency. Schramm describes Lee and his relation to Samoa's problems:

> The governor was of no mind to recommend a slow and gradual change. "There was no time for waiting, no time for 'armchair patience'--there has been too much of that for sixty years," he has been quoted as saying. "It was obvious that what was needed was a sudden and explosive upgrading [of the educational system]." (1967a: 14)

Hall is even more descriptive:

> Lee, a canny and dynamic administrator with a passionate distaste for the shoddy results of unimaginative bureaucracy, saw that any "gradual" improvement of the usual sort . . . would be too little and too late to be effective, even in the long run. . . . (1969: 18)

Thus, Lee was "shocked" by Samoa's educational needs; problems needed urgent solutions--there was no time for "armchair patience"; any gradual improvement would be too little and too late; hence a "sudden and explosive upgrading" was needed.

Pressure and urgency might well cause a "canny and dynamic administrator" like Lee to see Samoan problems as a challenge, find a key problem to exercise his administrative ability on, postpone or subordinate--by logical reasoning or fiat--other problems to a problem considered essential, and set about creating a strategy which would implicitly solve many problems by solving a single problem.

The present argument is not that Lee used the instructional television project to solve all of Samoa's environmental problems. His list of accomplishments after six years in office were many. In the field of communications, Lee constructed a jet airport and many times the mileage of paved highways he found upon taking office. His utilities programs included a massive public works compound and, with new generators, the extension of electricity throughout the islands. To enlarge the economy he established an all-Samoan economic development corporation, built a Samoan-owned hotel, and established a government tourism office as well as a new public marketplace in Pago Pago where farmers could market their produce. Under Lee, a second tuna-canning plant employing Samoans was opened. Lee's health program gave Tutuila island a new water supply system and a tropical medical center with a large, modern hospital.

To meet Samoa's political needs, Lee called in experts to study the question of United States citizenship for Samoans and introduced legislation gradually shifting power from the governor to the legislature.

To meet a fundamental socio-cultural need, he re-affirmed the Samoan matai system as a sufficiently flexible instrument for developing a modern form of democratic government. (Cf. Inouye, 1963, Congressional Record: 13100-103, and "American Samoa and Rex Lee," The Honolulu Advertiser, July 20, 1967; Congressional Record: 20959-60)

Such a list of wide-ranging accomplishments shows that Lee met Samoa's needs with multiple strategies. However, the various nonformal factors of pressure and urgency seem to have caused Lee to give the reform of the school system the highest priority among all his programs. This factor led to the creation and installation of a massive television project by a group of foreign personnel in a country whose fundamental desire was to keep "Samoans for the Samoans."

Summary of Factors and Needs in Lee's Assessment

1. Samoa needed social, economic, and political development.

2. Samoa needed its own professionals to develop and run the country.

3. Samoa needed a first-rate educational system to provide these professionals and prepare it for a future in the modern world.

4. Any improvement short of a "sudden and explosive upgrading" of the educational system would be "too little and too late to be effective, even in the long run." (Hall, 1969: 18)

5. Factors affecting Lee's assessment may have been governmental pressure to eradicate previous neglect, observation by international delegates, and Lee's active dynamism as an administrator.

Bronson's Assessment of the Educational Environment: 1962

The literature hints that the success of the first years of the instructional television project in Samoa derived in significant measure from the dynamism of Lee and the vision of the person he enlisted to head the project, Vernon Bronson of the National Association of Educational Broadcasters (NAEB). Apparently it was during Lee's return to Washington with his 3-year rehabilitation program for Samoa soon after his taking office that Lee met Bronson:

> . . . While casting about for competent professional guidance he [Lee] happened to make contact with Bronson, who at the time was a one-man R and D section for the NAEB in Washington. . . . Bronson, whose extraordinary educational background goes considerably beyond that of a myopic "media specialization" studied the [Samoan] situation. . . . (Hall, 1969: 18)

After this meeting with Bronson, Lee obtained a $40,000 appropriation for a feasibility study by a four-man team headed by Bronson to investigate the use of educational television to provide his drastic reform of the educational system of Samoa. (Schramm, 1967a: 14)

This feasibility study, limited to an assessment only of the educational environment, was further limited by its consideration of television as the only alternative. In a systematic analysis, such a limited assessment by Bronson properly falls under the consideration of alternative strategies. It is placed here because it includes certain of the more specific educational needs as they were interpreted immediately before the installation of the television project.

Schramm summarizes the results of this study:

> Bronson's report . . . went far beyond technical questions. It summarized and documented the deficiencies of the existing school system: (a) little sense of educational goals and little

> attempt to relate education either to life in Samoa or life in the United States; (b) a physical plant that ranged "from poor to terrible"; (c) low standards in every subject; (d) teachers with little training and almost no supervisory help or in-service training opportunities; (e) teachers' and pupils' English that was unsatisfactory in vocabulary, syntax, and pronunciation; (f) teaching mostly by rote recitation. (1967a: 14-15)

Nonformal Factors in Bronson's Assessment

If Schramm's summary can be taken as an accurate report of Bronson's expressed view of Samoa's educational needs, it would seem to present evidence of certain nonformal factors conditioning Bronson's assessment. The importance of sifting an assessment for nonformal factors lies simply in the chain reaction these factors can produce in systematic planning. If preconceptions condition an investigation of environmental needs, they will influence the assessment from which objectives are drawn. Since objectives determine a system-strategy which determines the results, nonformal factors influencing the assessment of an environment can be the causes of the deficient results of a system-strategy.

In the present instance, Bronson's reported assessment seems to contain a definite set of preconceptions which are revealed in the manner of expression. The six areas of need, (a) to (f), are expressed not in terms of objective behavior found in the Samoan environment, but in terms of implicit and unstated comparisons.

In (a), the "sense of educational goals" and the degree of the "attempt to relate education to life" are not expressed behaviorally, but as deficient members of a comparison whose standard of comparison remains only implicit. By some unstated standard, Samoan educators had "little" sense of educational goals, and made "little" attempt to relate education to life.

Similarly, the other educational needs are expressed by comparison with an unstated standard. The physical plants of Samoan education ranged "from poor to terrible" in comparison with some preconceived standard; the standards of every subject were "low" by comparison with an unstated standard; there was "little" or "no" supervisory help when compared with some expected degree of supervisory help; teachers' and pupils' English was "unsatisfactory" by comparison with standard English; and teaching methods were mostly "rote recitation" which in itself is to be taken as a low standard of teaching.

This style of expressing behavior by implicit comparison reveals the influence of a pre-conception which judges environmental data while an investigation is being carried on. It is not difficult to conjecture the general source of Bronson's preconceptions. He was an American educator familiar with American education and its standards as well as a "one-man R and D section" for the NAEB. There is no evidence of his contact with Samoan culture prior to the feasibility study which he headed in 1962. At this stage of a systematic analysis, only the existence of such nonformal factors potentially conditioning an assessment of the Samoan environment can be pointed out. The actual effects of such preconceptions remain the subject of later analysis.

Conclusion

At this point the environmental needs of Samoa prior to the introduction of the American television project are reasonably clear. A kind of synoptic view of these needs as determined by various non-Samoan assessors is given in Table 5.2. Whereas the Long-Gruening report ran

Table 5.2. Assessments of the Samoan Environment

Long-Gruening	Lee:
Economic Needs:	
1. Study Samoa's physical resources.	
2. Develop from subsistence to growth economy.	2. Professionals to carry on economic development.
3. Business agency to attract U. S. capital.	
4. Technical and scientific aid to develop Samoan agriculture.	
5. Improve public health facilities.	
6. Improve public utilities.	
Political Needs:	Lee:
7. Real power for the legislature.	7-10. Need for Samoans to run their own country.
8. Samoan judiciary independent of the executive with effective appellate procedures.	
9. Retention of Samoa for Samoans policy.	
10. Greater voice in economic planning.	
11. U. S. citizenship.	
12. Direct representation in Washington.	
13. On part of American administration: demonstrate how to remedy economic and social neglect.	

Socio-cultural Needs:

14. For Samoan elders: retention of matai system.
15. For Samoan youth: leadership to be based on individual values.
16. Retention of traditional communal family structure.

Educational Needs:

Everly:	Lee:	Bronson:
	17. Drastic reform of educational system.	17. Sense of educational goals.
18. Schools patterned after U. S. schools.	18. Educational system to provide professionals.	18. Education of high standards.
19. Increase elem. and high sch. facilities.		19. Vast improvement in physical facilities.
20. Increase teacher training facilities.	20. Better teaching.	20. Increased in-service teacher training.
21. Literacy materials in Samoan and English.	21. More efficient use of English.	21. Vast increase in English facility.
22. Vast increase in teachers' salaries.		22. Eliminate teaching by rote recitation.
23. Subsidize free education.		
24. Increase, improve vocational training.		
	25. Curriculum relevant to Samoan lives and needs.	25. Relate education to Samoan & U. S. life.
26. Improve adult services.		
27. Amend Samoan educational code to give Samoans greater control of education.		

the gamut from economic to educational needs, Lee's and Bronson's as they are reported in the literature, were mainly educational.

2. FORMULATION OF OBJECTIVES

Introduction

Objectives should correlate with needs. The description of the environmental needs of the previous section provides a pool from which objectives can be drawn. The present section considers the planners' formulation of objectives and the manner and degree of the correlation between assessed needs and objectives formulated by the planners of the instructional television project.

The manner of the correlation between objectives and needs refers to the question of whether planners set certain objectives in a one-to-one correlation with certain needs or whether they incorporated more than one need into an objective. The degree of the correlation refers to the question of whether the objectives of the project correlate with all or only some of the needs of the environment.

A priori there is no reason to require that an educational television project meet all the needs of an environment: political, social, economic, cultural, and educational. However, because the human person in whom these needs exist is an integral unity, these needs in society are also intimately interrelated. Hence, although a project may set only "educational" objectives to meet educational needs, the effectiveness of the project is conditioned constantly by the interrelated social, political, economic, and cultural needs of the environment in which the project exists. Thus, the manner and degree of the correlation between

objectives and needs is indeed a germane question in any systematic analysis.

General Objectives of the Project

Formal Objectives

Governor Lee was a principal decision-maker of the television project both because of his administrative ability and the power attached to his office. The literature contains some references to the expression of formal objectives by Governor Lee which correlate remarkably with a set of formal objectives for Samoan education cited by Everly in 1960. Lee's formal objectives were in all probability very close to those cited by Everly because both Lee's explicit views and his accomplishments during six years of office mirror those objectives found in Everly's report of 1961.

A second source of formal objectives is Bronson's report concluding the television feasibility study which outlined the basic project as it was eventually implemented.

1. The overall objective is found in the citation by Everly from the Samoan Board of Education:

> "The basic approach to education in American Samoa is to provide training which will enable the people to serve more effectively within their social, economic, professional, and political structure." (Everly, 1961: 144)

This objective is reminiscent of the need which Lee expressed: for Samoans to run their own land successfully, they would need "a first-rate education that would enable them to enter the scores of professions which even small countries need." (Craib, 1965: 18) A first formal

objective, thus, was the training of Samoans to carry on their own social and economic development.

2. A second formal objective was the preparation of Samoans for their encounter with other nations and the modern world:

> "At the same time, education must provide a suitable background for those who will find it possible to take advantage of opportunities for higher education in the United States or other countries. The mastery of the English language must not be the sole subject goal, but also mastery of basic skills related to science, medicine, law, business, the arts, and other varied fields must be accomplished. . . . As English is an international language and the official language of the Government, it is essential that the children become literate in that language. . . ." (cited in Everly, 1961: 144)

The role of English in forming an international competence is also emphasized in one of the television project's publications where it was noted that ". . . competence in a world language is a doorway to understanding." (A Co-operative Design for Instruction, 1965; cited in Schramm, 1967a: 17)

3. A third general objective was the equalization of educational opportunity for all Samoan students. Schramm terms this general objective an "assumption" of the project:

> . . . Another assumption is that "every Samoan child must have an opportunity to learn at a price the Samoan economy can eventually afford to pay"--hence the extension of universal public education to age 16, and free education in high school. (1967a, 17; citing A Co-operative Design for Instruction, 1965)

This objective involved a massive construction program which would eventually provide Samoa with 26 new elementary schools and 4 high schools. As Schramm notes, at the beginning of 1966, about two-thirds of approximately 7,000 elementary and high school students were housed in new schools and taught by television. (1967a: 17) The question of

Samoa's economy being able to provide this equalization of opportunity in years to come will be discussed below.

Nonformal Objectives

4. A fourth general objective can be considered nonformal: national and personal prestige. The human person has nonformal needs and government officials and project planners are human. It will be recalled that the Long-Gruening report referred to the opportunity the government of American Samoa had in ameliorating Samoa's neglected condition. It would be:

> . . . a tremendous opportunity to show . . . to the world at large, that we do practice what we preach, and that a Christian nation can and will do justice to a minority group, however small and far away. . . . (1961: 15)

This need to show the world at large that there is justice in American Samoa is nonformal because it is not directly relevant to formal needs. This same type of thinking occurred later in the planning of the television project itself where the project as a whole was seen as a means of demonstrating something to the world. This is evident in a reference by Skornia to an undated advance outline of procedures to be used in the television project. In this outline, Bronson stated:

> It is important for the Curriculum Planning Committee to understand and remember that the present situation in Samoan education presents the first opportunity in the world for the elementary educational system of an entire nation to be completely reconstructed to meet realistically and adequately, the needs and aspirations of its people in terms of a changing and dynamic world. (Skornia, 1969: 55)

On the face of it, Bronson's phraseology may be innocent rhetoric, but the degree of motivation Bronson was able to inject into the television project during his association with it suggests that national and

personal prestige and the creative challenge that Samoan education presented, were elements composing a functioning nonformal objective.

5. A fifth general objective, also nonformal, was that the transition from the old educational system to the new instructional television system should be a swift transition. Lee has already been cited for the need of a "sudden and explosive upgrading" of the Samoan educational system. This need was reformulated as an implicit objective of the project and was one reason why television was selected as the strategy. Schramm states:

> The most striking feature of the rapid educational development in American Samoa is the heavy responsibility being placed on television. It is being used to teach the core of the curriculum . . . and is counted upon to serve as prime mover in a very swift reconstruction of the entire educational system. (1967a: 13)

Further on, in assessing the cost of introducing television, Schramm notes that the decision to employ television was made partly on the basis of non-economic considerations, one of which was "the desirability of a maximum rate of change" (1967a: 47) and that "the extra cost was used in Samoa to buy swift rather than slow change." (1967a: 49)

Formal Socio-cultural Objectives

6. The need to relate education to Samoan life was met with objectives which were less educational than socio-cultural. This objective was specified by Bronson in a summary by Schramm:

> Every effort should be made to fit the curriculum to Samoan experience and needs, and illustrations from Samoan life should be substituted for the illustrations from United States suburban life typically found in the cast-off textbooks . . . in use. . . . The prohibition of the use of the Samoan language in the classroom should be eliminated; and first reading should be taught in Samoan. . . . (1967a: 15)

A curriculum to fit Samoan experience and needs is an educational subobjective meeting a socio-cultural objective. The function of the Samoan language within this objective has a background which is clarified in Everly's report of 1961. The language policy prior to the television project had been to use American textbooks in English but permit informally their explication in Samoan until students' command of English would be sufficient. Everly's recommendation was to begin the student in Samoan and establish a fundamental literacy in the student's mother tongue and then gradually introduce English as a second language. In this way the educational system could hope to conserve the best of Samoan culture and yet open the student to the modern world through a second language. (1961: 145-147)

Bronson's plan followed Everly's recommendation in this objective: first reading should be taught in Samoan with the transition to English teaching complete by grade 6. (Schramm, 1967a: 15)

7. A second socio-cultural objective in the planning of this project was that of disturbing the socio-cultural milieu of Samoa as little as possible in its transition to a modern system of education. This objective was reflected in one of the explicit goals of the project which was:

> ". . . To staff the schools with Samoan personnel wherever possible, using only minimum specialized assistance from outside Samoa. (. . . By 1975, most of the key roles in the educational organization will be performed by Samoan personnel.)" (A Co-operative Design for Instruction, 1965; cited in Schramm, 1967a: 17)

Further evidence of this objective occurs in Schramm's claim that Lee rejected the alternative of importing several hundred qualified teachers to upgrade the educational system because it would have meant the dismissal of an equal number of Samoan teachers. (Schramm, 1967a: 16)

Thus, a general objective of disturbing the Samoan milieu as little as possible was reflected in a planning design which initially employed as few pelagi (foreigners) as possible. Kaser mentions that Bronson made it clear to project personnel from abroad that "their goal was to eliminate their own jobs by training Samoan understudies who will someday take over the operations." (1965: 72)

Apropos of this objective, however, it remains questionable how minimal the project planners could have expected the socio-cultural shock to be while they subjected the educational system to a "sudden and explosive upgrading" with a television project which would have been innovative even in the United States. The shock to the economy was no less: Schramm's cost analysis concluded that the Samoan television project could be operated "at a very reasonable cost" if the school population were "perhaps ten times as large as Samoa." (1967a: 49) Further, Schramm's statistics suggest that in the foreseeable future Samoans would not be able to operate their own instructional television system:

> One way to illustrate the relative cost of the television system is in terms of the United States personnel it currently employs. These include fifty persons in administrative, engineering, and technical positions, with no expected reduction in that number for 1967 (indeed, with the likelihood that this number may be inadequate to the increased demands of the system). (1967a: 47)

Formal Educational Objectives

8. A general educational objective was the standardization of education throughout Samoa, that is, "to raise the educational achievement of the Samoan student at all grade levels to United States achievement standards; . . . ." (A Co-operative Design for Instruction, 1965, cited in Schramm, 1967a: 17) Television had a paramount role in implementing

this objective:

> The function of television is to make it possible for a skilled teacher to teach a standardized curriculum in all class-rooms, and by so doing to raise and to equalize the standards of instruction throughout the system. . . . (Schramm, 1967a: 18)

According to a report of the American Samoan Department of Education, teaching through television:

> . . . makes possible an equalization of educational opportunity. Children from Pago Pago to the most remote village of a reef-bound island experience the same sounds of English from the same English-speaking model. ("ETV in American Samoa", 1968: 4)

9. A second general educational objective was the standardization of teaching throughout Samoan education. Television teaching "spread the influence of the best teachers" and contributed to "teaching training by furnishing an example" to Samoan teachers. (Schramm, 1967a: 18-19) This objective is explicit in the manual A Co-operative Design for Instruction where one objective was:

> . . . To raise the level of teaching competency of the Samoan teacher by developing a continuous in-service teacher-training programme in techniques making maximum use of television. (1965, cited in Schramm, 1967a: 17)

10. A third general educational objective was that of providing educational services to adults. This objective is not stated as such in Schramm's report but is inferred from remarks in his report:

> In the initial Bronson report, as well as in more recent statements from the government, television is spoken of as a continuing component of the educational system, which shares the best teaching at relatively low cost . . . and provides a uniquely effective way for communicating with the adults of the main island, and with both the adults and the schools of the neighboring islands. Adult education and information are increasingly stressed. . . . (1967a: 19)

. . . . . .

> The producer-directors . . . have some responsibility for the evening news and other live programmes that are produced

> from time to time, including the agricultural extension programme. (1967a: 29)
>
> . . . . . .
>
> . . . about 25 per cent of the air time is used for adult education, information, and entertainment, and was so planned from the beginning. (1967a: 37)

The Correlation of Objectives with Needs

Since the purpose of objectives is to meet needs, analysis should determine how closely the formulation of objectives correlates with the assessment of needs.

Although the television project of American Samoa was formally an instructional and educational project, more than one of the objectives cited from the project relates to needs beyond those needs which might be considered strictly educational. The implication of this extrinsic relationship of educational objectives to non-educational needs is that planners inevitably acknowledge that a project, educational though its purpose may be, is a system within the larger system of society.

If an educational project, then, has educational objectives which implicitly relate the project to needs outside the field of "education" (in the more usual and stricter sense), these extrinsic needs condition the project's effective pursuit of objectives. The function of analysis, therefore, is to determine which project objectives meet which needs of the society forming the environment of the project, and whether the objectives meet these needs directly or indirectly.

The importance of such a correlation of objectives of an educational project with the needs of the larger system called society lies in the possibility that the non-educational needs of society which may

happen to remain unfulfilled may yet affect the functioning of the project. Thus the purpose of Table 5.3 is to relate each of the objectives of the television project to the list of needs assessed for the Samoan environment.

From Table 5.3 it will be seen that most of the assessed needs of the Samoan environment were met directly or indirectly by either an objective of the television project or an objective implicit in one of Governor Lee's programs during his six years in office. In two areas, however, the lack of evidence in the literature suggests that the need to develop Samoa's physical resources, its agriculture, and vocational training to provide this development, and the need to transfer decision-making power from the executive to both the judiciary and the Samoan board of education, were needs which went unfulfilled. The bearing of both these areas of unfulfilled Samoan need upon the eventual fate of the television project will be discussed later.

The Operationalization of Objectives

The "educational objectives" listed in Table 5.3 are merely general formulations without the operationalization necessary for planners to co-ordinate personnel behavior within the project and to evaluate project performance against established criteria.

Evidence in Schramm, however, suggests that these general educational objectives were elaborated into specific educational subobjectives. In a Bronson report of early 1964 we find:

> . . . it is the responsibility of the curriculum planning committee to determine the content and procedures of the curriculum that will most nearly and most adequately meet the established objectives. . . . The planning of curriculum simply means the determination of

Table 5.3. Correlation of Objectives with Needs

EDUCATIONAL OBJECTIVES:
1. To train Samoans to carry on their own social and economic development.
2. To prepare Samoans with a background to equip them to meet the modern world.
3. To provide education for all Samoans of school age.
4. To demonstrate to the world that a nation's entire school system can be reconstructed.
5. To reconstruct the school system swiftly.
6. To fit the educational curriculum to Samoan experience and needs.
7. To make the transition of Samoa to a modern school system as little disruptive as possible.
8. To standardize and raise the level of education throughout Samoa.
9. To improve and standardize teaching throughout Samoa.
10. To provide adult educational services.

Correlation of Assessed Needs with Formulated Objectives (including objectives implicit in Lee's programs)

LEGEND: O = Objective I = Objective indirectly meets need, i.e., is an implicit subobjective
LP = Need met by one of Lee's programs D = Objective meets needs directly
X = Need not met by an objective or program

Economic Needs:

Long-Gruening:	Lee:	Objective	Manner
1. Need to study Samoa's physical resources.		X	X
2. To develop from subsistence to growth economy.	2. Professionals to carry on economic development.	O1	I
3. Business agency to attract U.S. capital.		LP	D
4. Technical and scientific aid to develop Samoan agriculture.		X	X
5. Improve public health facilities.		O1,LP	I,D
6. Improve public utilities.		O1,LP	I,D

Political Needs:

Long-Gruening	Lee:		
7. Real power granted to legislature.	7-10. Need for Samoans to run their own country.	LP	D
8. Samoan judiciary independent of the executive with effective appellate procedures.		X	X

9. Retention of Samoa for Samoans policy.	7-10.	Need for Samoans to run their own country.	LP,07	D,I
10. Greater voice in economic planning.			01,LP	D,I
11. U. S. citizenship.			LP	I
12. Direct representation in Washington.			LP	D
13. Demonstrate to the world the effectiveness of American administration to remedy social and economic neglect.			04,LP	I,I
Socio-cultural Needs:				
14. For Samoan elders: retention of matai system.			LP,06	I,I
15. For Samoan youth: leadership to be based on individual values.			LP,02,03	I,D,D
16. Retention of traditional communal family structure.			LP,06	D,I
Educational Needs:				
Everly	Lee:	Bronson:		
	17. Drastic reform of the educational system.	17. Sense of educational goals.	05,08	D,D
18. Schools patterned after U. S. schools.	18. Educational system to provide professionals.	18. Education of high standards.	01,02,08	D,D,D
19. Increase in elementary & high sch. facilities.		19. Vast improvement in physical facilities.	03	I
20. Increase teacher training facilities.	20. Better teaching.	20. Increased in-service teacher training.	09	D
21. Literacy materials in Samoan and English.	21. More efficient use of English.	21. Vast increase in English facility.	02,06,010	I,D,I
22. Vast increase in teachers' salaries.		22. Eliminate teaching by rote recitation.	09	I,D
23. Subsidize free education.			03	D
24. Increase, improve vocational training.			X	X
	25. Curriculum relevant to Samoan lives and needs.	25. Relate education to Samoan and U.S. life.	06	D
26. Improve adult services.			010	D
27. Amend educational code to give Samoans greater control of education.			X	X

> what is going to be taught at which grade levels and for what purposes. . . . The teachers who will prepare the lessons and do the day-to-day teaching must have a set of guidelines which delineate and define the particular areas of broad subject-matter which are to be taught and which are to be emphasized. . . . (cited in Schramm, 1967a: 26-27)

Evidence of the operationalization of these specific objectives comes from some "samples of directions to class-room teachers" included in Appendix 6 of Schramm's study. (1967a: 54) (Cf. Table 5.4)

Table 5.4. Evidence of Operationalization from Directions to Class-Room Teachers

---

MATHEMATICS
Level 3, unit I.
Lesson 7

SETS
Main idea: A set is a group we make.

Before the telecast
Say: 'We are going to count the children in our class. Each child will count himself as I touch him.'
Touch the first child and he or she will say 'One'. Touch the next child and he or she will say 'Two'. Keep touching children until all have counted.
Have a girl stand and count the boys.
Have a boy stand and count the girls.

The telecast
A set is a group we make.

After the telecast
1. Tell five children to stand up. Say: 'This is a set of children.'
Name a child who is standing. Ask if he is an element of the set. (Yes)
Name a child who is not standing. Ask if he is an element of the set. (No)
Name another child who is standing. Ask him if he is an element of the set. (Yes)
Tell the five children to sit down.
2. Say: 'I know an empty set. It is the pigs in our school fale.
Can you name some empty sets?'
Try to get many children to name empty sets.

Conclusion

From the above directions it is clear that specific subobjectives were communicated to class-room teachers with specific behaviors assigned to the teacher and specific behaviors (answers) to be elicited from the students. Further evidence of operationalization is found in Appendix D of Schramm's study which is the "Class-room Teacher Feed-back" form where the teacher is asked to check off whether certain specific student behaviors occurred during class.

3. THE IDENTIFICATION OF CONSTRAINTS

Introduction

The next three operational stages (identification of constraints, discovery of alternatives, and selection of a strategy) are found woven together in the present project. Lee seems to have been exploring alternative strategies to meet the educational situation but in fact was exploring only one: television. Bronson's feasibility study seemed to have been a commitment to television on the part of Lee, but Lee did not commit himself fully until after Reller's survey report. The sequence of events is found in Schramm:

> The governor was of no mind to recommend a slow and gradual change. . . . He was turning over in his mind a daring idea: could television be used to share the best teaching, and to spread the use of English over the islands?
>
> The governor obtained an appropriation of $40,000 for a feasibility study of the use of educational television for these purposes. The study was made by a four-man team of engineers, educators, and broadcasters sent by the National Association of Educational Broadcasters and headed by Vernon Bronson.
>
> Bronson's report concluded that the use of television would be technically feasible, but went far beyond technical questions. . . . the report recommended far-reaching changes built around the use of television. . . . This was the far-reaching Bronson plan placed on the governor's desk in early 1962. (1967a: 14-15)

Apparently Lee had narrowed his alternatives to some use of television, called in Bronson to recommend how television could be used, and received not only a report but a complete project proposal. For some reason, Lee did not immediately adopt Bronson's plan:

> Governor Lee then called in another survey committee to observe the educational system and to advise him on the applicability of television to its problems. This committee was made up of Dean Theodore Reller, of the School of Education, University of California at Berkeley, Professor Richard Lewis, an audio-visual expert from San Jose College; and Dr. Lawrence Sheposier, superintendent of schools at Wichita, Kansas. When the governor got a generally favourable answer from the committee, he adopted the Bronson plan, and obtained a dramatic increase in appropriations for the islands; these appropriations included money to rebuild the schools and introduce a massive amount of television. (Schramm, 1967a: 16)

Thus, within a certain group of constraints to be discussed below, Lee seems to have narrowed the alternatives rather early to some form of the use of television to meet the needs of his "explosive upgrading" of the school system. He then committed $40,000 to study the feasibility of television as the only alternative, and then had this study reviewed by the Reller committee whose general approval sealed Lee's decision to use Bronson's plan for television.

The systematic description of this period therefore is complex because while Lee is reported to have considered a number of alternatives (Schramm, 1967a: 16), Bronson's study explored only one. Lee's calling in Reller's survey committee could have been the exploration of alternatives, but was in fact an advisory study on the applicability, again, of television. Schramm reports that when Reller's committee gave Lee a "generally favourable answer", he adopted Bronson's plan. One may wonder how seriously Lee would have turned to alternatives other than television

had the Reller committee recommended such alternatives, after the Governor had committed $40,000 and two committees to the exploration of a single alternative.

Socio-economic Constraints

1. A first factor confronting Lee in the Samoan educational environment was the presence of at least 300 Samoan teachers deriving their livelihood from teaching in a system which Lee felt needed a "sudden and explosive upgrading."

2. Another factor was the economic state of the islands which as a predominantly subsistence economy was limited in its ability to sustain a sudden and massive injection of economic aid.

Socio-cultural Constraints

3. The complex and tightly interwoven social structure of the matai system which was represented patriarchally in the upper house and proportionately in the lower house of Congress prohibited any piecemeal solution to the educational problem.

4. The Polynesian cultural life of the villages on the islands would present a difficult adjustment to any foreign personnel implementing educational changes in village schools.

Socio-political Constraints

5. Lee seems to have been constrained both by personal character and United States government pressure to bring a swift turnabout to Samoa's neglect by previous administrations.

6. At the same time, official United States policy and the mandate of the Long-Gruening study mission was "to give the people of American Samoa a greater amount of self-government." (Schramm, 1967a: 14)

United States Economic Constraints

7. On the part of the United States economy and appropriations the Department of the Interior was willing to grant, there were certain unspecified limitations. Although Lee obtained rather spectacular appropriations to reconstruct Samoa's school system, he considered at least one alternative as "prohibitively costly"--the importation of United States teachers to replace all Samoan teachers. (Craib, 1965: 18)

Implicit Socio-cultural Constraints

The above seven constraints are more or less explicitly acknowledged in the literature. Certain other unacknowledged factors were present in the environment which represented constraints upon the alternatives available.

8. A group of United States educators on contract to the Samoan system "did not believe television could be used to carry the core of the teaching." (Schramm, 1967a: 35)

9. A certain group of Samoan parents and teachers were similarly reluctant to accept television. (Schramm, 1967a: 35)

10. A third group in the environment "felt that their positions might be threatened by a large increase in better-educated, English-speaking graduates of the schools." (Schramm, 1967a: 35) This group may have been those businessmen and merchants accustomed to exploiting Samoans referred to by Skornia. (1969: 56)

11. A fourth group was "concerned about the changes in the Samoan culture that might be brought about by an education system built around television." (Schramm, 1967a: 35) This group may easily have been represented by Samoan elders who felt their traditional way of life threatened by modern values.

12. A fifth group was that of the Samoan teachers who had reason to fear they would be unemployed in the new system. (Schramm, 1967a: 35)

Conclusion

Governor Lee dealt with these constraints by disregarding some, diminishing the effects of others, and by working within the remainder to speculate about alternatives, the subject of the following section.

4. THE DEVELOPMENT OF ALTERNATIVES

Introduction

In the systematic development of a strategy, once constraints have been identified, ideally there should be a thorough exploration and testing of alternatives which are possible within the limitations imposed by the constraints. The literature contains evidence that Lee truly considered certain alternatives possible within the constraints of the Samoan environment, but only speculatively. The evidence that the consideration of alternatives by Lee was speculative at most, is implicit in the following citation from Craib:

> Three weeks after his inauguration, Governor Lee was on his way back to Washington to tell Secretary of the Interior, Stewart L. Udall and other Congressmen of his television plan. (1965: 18)

Within those three weeks Lee had obviously decided to reconstruct Samoan education through some use of television. The Bronson feasibility study, therefore, represented less an exploration of a possible alternative than the design of an already-decided strategy. The Reller survey committee's role equally was less a fresh assessment of the Samoan educational environment to develop alternatives than a study "of the applicability of television" which lent support to Bronson's plan.

Thus, the consideration of alternatives in the planning of the instructional television project of Samoa is necessarily reduced to a report of Lee's speculative consideration of alternatives which, within three weeks of his inauguration, he reduced to one: television.

A First Alternative

The first alternative considered by Lee was the dismissal of three hundred Samoan teachers and their replacement by United States personnel. Lee's reasoning within these constraints is evident in a citation from Craib:

> "I had several alternatives," the Governor said. "I could dismiss 300 Samoan teachers and replace them with properly qualified U.S. mainland teachers. That would have been extremely unjust to the Samoans, many of whom had 35 or more years of loyal service to the school system, and it was a social price I was not prepared to consider. Importation of an equivalent group of mainlanders would, among other things, have meant a tremendous shock in the villages; housing, medical care for the teachers, and their salaries would also have been prohibitively costly. Even the recruitment of people who were not only qualified but temperamentally suitable for island life would have been an enormous task." (1965: 18)

Thus, a first alternative was considered and rejected by Lee because of the "social price" of dismissing a large number of loyal Samoan teachers, the "economic price" of providing housing and services for

United States personnel on a United States scale, the "cultural price" of placing a large group of foreigners in the island's villages, and the "recruitment" price of finding sufficient personnel who could make the transition from United States to Samoan culture.

A Second Alternative

A second alternative, mentioned in Schramm, was:

> . . . to recruit a smaller number of teachers, say, 100, in the United States, and spread them throughout the system (this would also have had a quick effect on standards, and have been less expensive than the previous alternative but could have been counter to the Samoan norm of everyone moving forward together); . . . . (1967a: 16)

Schramm attributes Lee's rejection of this alternative to the socio-cultural constraint of "everyone moving forward together" in Samoa. Such a dictum appears nowhere else in the literature but most probably is a reference to the tightly interwoven social structure of the matai system.

It is to be noted that both these alternatives were consistent with the nonformal socio-political constraint of bringing a swift change and improvement of standards to Samoan education, but were rejected because they were inconsistent with nonformal socio-cultural constraints.

A Third Alternative

Schramm provides evidence of a third alternative which was:

> . . . to initiate an extensive and long-term plan for training future Samoan teachers in the United States, introducing these new teachers into the system as vacancies appeared (this would have had little effect on standards for ten years or so). (1967a: 16)

This alternative would have been consistent with the constraints of not dismissing Samoan teachers, of not disrupting the economic and cultural pattern of Samoa, and of not alienating United States and Samoan educators who held positions in the educational environment. The only constraint this third alternative seems to have been inconsistent with was that of speed; training Samoa teachers would have brought only a gradual improvement.

The Fourth Alternative

Although more alternatives within the stated constraints probably existed, the most complete list of alternatives is Schramm's, and he mentions only four, the last of which was:

> . . . to use television to carry the core of the teaching, and for adult education (this would require teachers and administrators to adapt quickly to a radical change in school procedures); . . . . (1967a: 16)

This alternative functioned basically to "share the best teaching and to spread the use of English over the islands. . . ." (Schramm, 1967a: 14) Bronson's report and plan elaborated this basic idea, which introduced a limited number of foreign personnel, retained the then-current number of Samoan teachers within the system as class-room teachers, placed a small number of foreign personnel in the villages as school principals, and raised educational standards by transmitting quality education via television.

Bronson's program further had the effect of a swift change of standards and while more expensive than gradually training Samoan teachers to take over their own educational system, his program was less

expensive and disruptive than importing United States personnel to take over the educational system.

There were, however, significant constraints with which this fourth alternative was inconsistent. As Schramm notes, using television to carry the core of the curriculum "would require teachers and administrators to adapt quickly to a radical change in school procedures." One constraining influence was the group of United States educators opposed to television to carry the core of teaching. They controlled the Samoan Department of Education and the Feleti Teacher Training School and this alternative would require them to adapt quickly to the Governor's new program. They apparently were unable or unwilling to adapt to this alternative and this constraint Lee acknowledged by eliminating it:

> . . . Competing educational bureaucracies, such as those of the pre-existing Samoan Department of Education and the Feleti Teacher Training School, have been swept aside or made impotent. . . . (Block report, 1965: 8, cited in Schramm, 1967a: 36)

A second constraint which was disregarded by introducing this fourth alternative was that of United States policy to give the people of American Samoa a greater degree of self-government. Everly too had recommended that the Samoan Board of Education be granted independence from the executive, but as Block reported:

> . . . All have been made to conform to the central programme of televised instruction, and groups or individuals who were dissident have been eliminated or neutralized. (1965: 8, cited in Schramm, 1967a: 36)

A third constraint which this fourth alternative disregarded was the economic disruption which would be caused by Bronson's plan which, although less costly than one or other alternative, still represented an

initial injection of approximately $2.3 million into a subsistence economy of roughly $9 million. (Cf. Schramm, 1967a: 12,40)

A fourth constraint disregarded (although not totally) by this alternative was the cultural disruption inevitably caused by introducing not only modern standards of education but a modern medium with its implicit values which could be expected to cause changes in the Samoan culture.

Conclusion

It is thus clear that Lee's consideration of alternatives was speculative and not experimental. An idealistic argument that his exploration of alternatives should have been more thorough, more varied, and more concrete, will inevitably be challenged by another argument. Just as the limitation upon the resources of time and money dictate the development of alternatives prior to final selection, so too the same limitations prohibit the costly experimenting with alternatives which can be eliminated by reasonable argument.

What neither argument can escape, however, is the relentless character of constraints. A project's planners disregard, diminish, or neutralize identified constraints at their own peril, and like the poor, constraints are always with us. It remains to be seen to what extent disregarded constraints were to condition the successful implementation of Lee's fourth alternative of core television.

5. SELECTION OF AN ALTERNATIVE

The decision process by which Lee adopted Bronson's television plan for Samoa has already been alluded to. To recapitulate:

1. Three weeks after his inauguration in May, 1961, Rex Lee returned to Washington with a rehabilitation plan for Samoa which included the idea of using television in a swift reconstruction of the entire school system. (Craib, 1965: 18)

2. The Long-Gruening report was published in July, 1961, which documented the broad range of deficiencies in the Samoan environment including the educational deficiencies and which gave Lee's recommendations and ideas "strong support." (Schramm, 1967a: 14)

3. While in Washington, Lee met Bronson of the NAEB, certainly discussed his provisional decision about the television alternative with Bronson, and subsequently had Bronson head a feasibility study which eventuated in a report and a comprehensive instructional television plan by early 1962. (Hall, 1969: 18 and Schramm, 1967a: 14-15)

4. Sometime later--whether before or after the submission of the Bronson report is not evident--Lee had Reller and his committee "observe the educational system and . . . advise him on the applicability of television to its problems." (Schramm, 1967a: 16) The effect of the Reller committee's general approval of television was to seal Lee's provisional decision to use television and to open the way for a large appropriation for the implementation of Bronson's plan.

6. IMPLEMENTATION OF THE SYSTEM-STRATEGY

Introduction

In 1962, Governor Lee decided to implement the strategy outlined by Vernon Bronson, and this began the association of the NAEB with education in American Samoa which is described by Schramm:

> When the governor accepted the Bronson plan, he also signed a contract with the National Association of Educational Broadcasters (NAEB) for continuing consultative service on the plan, and for recruitment of television personnel, teachers, and principals in the United States. Inasmuch as the tenure of United States employees in Samoa is typically short (only five of the present contract personnel arrived before September 1963, and only one before August 1962), a very high proportion of present United States personnel on contract have been recruited by Mr. Bronson in the NAEB. (1967a: 23)

Bronson's plan contained the following components:

1. In contrast to other systems, television in Samoa would not be supplemental but would carry the core of the entire elementary and high school curriculum.

2. The school curriculum would be fitted to Samoan experiences and needs and would be completely re-designed for Samoa by a central corps of teachers. Telecasts would be complemented in the classroom by printed materials integrated with the telecast and supplied to classroom teachers and students.

3. Rote recitation and fact-learning would be replaced by questioning, discussion, and problem solving in the classroom.

4. Classroom teachers would conduct class activities before and after the telecasts.

5. All school buildings would be completely rebuilt according to a consolidation pattern including new high schools in size and number sufficient to meet student population needs.

6. All new schools would have qualified principals (almost all were United States personnel), well-trained in administration, who could offer supervision and in-service training to Samoan teachers.

7. The television system would provide six channels for school use by day and adult education in the evening. (Schramm, 1967a: 15)

Bronson's plan thus had the breadth and depth required for a complete reconstruction of Samoa's educational system. Such a sweeping change would require a decision-process of unusual power. This process will form the opening topic of the system implementation.

The Decision Process: Principal Decision-Centers

One of Everly's recommendations (cf. p. 387, no. 27) regarding the decision process in Samoan educational administration was to grant the Board of Education greater powers to chart its own course. Everly had stated that the "dominance of the executive branch of government generally in Samoa is repeated in the case of the governing of its public schools." (1961: 142)

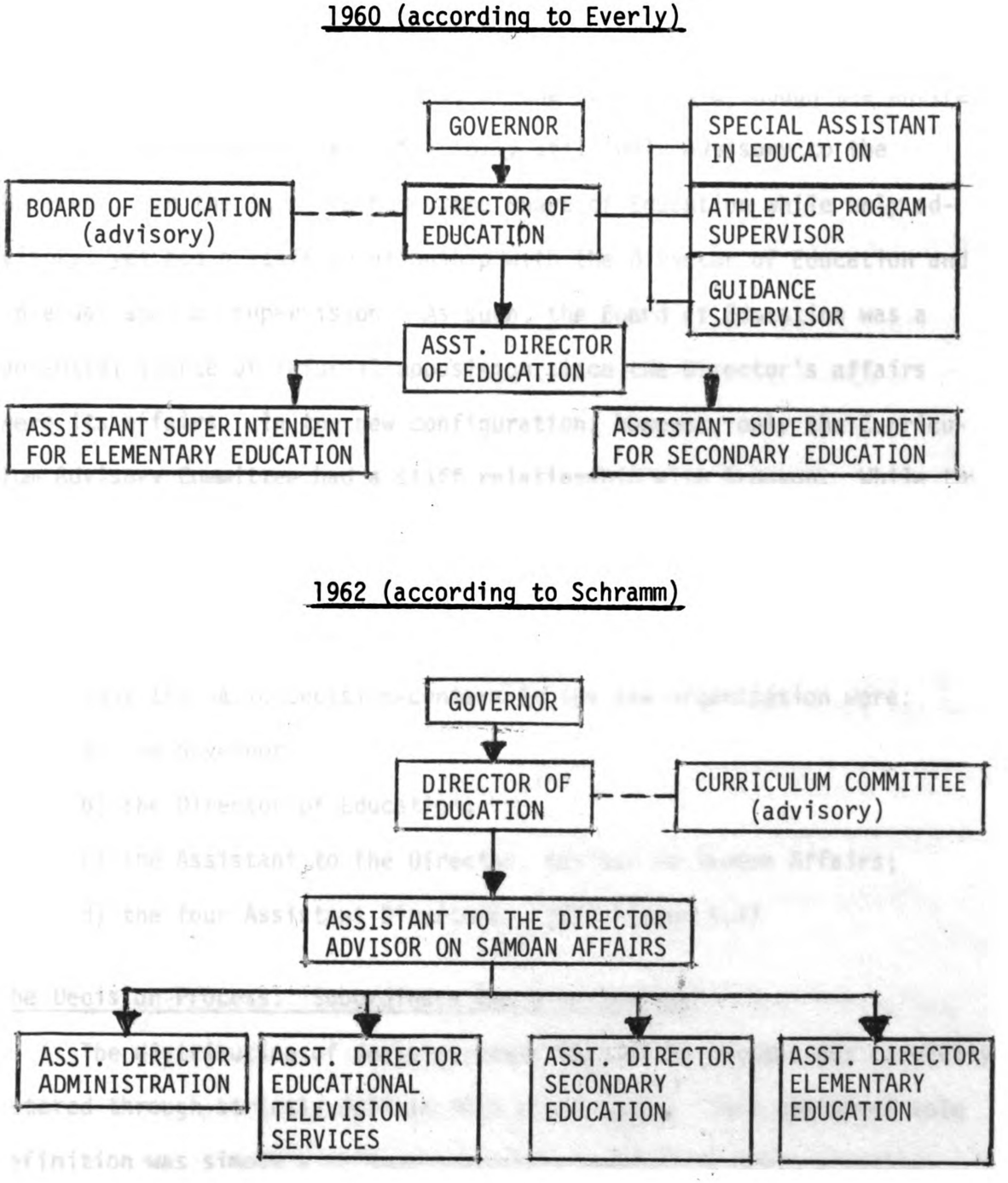
How little Governor Lee changed the power relationship of the executive branch with the Department of Education is illustrated in Figure 5.4 which repeats Figure 5.3 for comparison. The direct line-relationship from the Governor to the Director of Education (Bronson) and from Bronson to the subordinate Assistant Directors remains essentially identical to the power configuration prior to Lee's assuming office. The differences between the two configurations stem from the fact that Lee and Bronson:

1. eliminated the Samoan Board of Education which formerly was only advisory;

2. established the Curriculum Advisory Committee as the only body with a staff-relationship on the level of the Director of Education;

3. re-assigned former positions having a staff-relationship with the Director of Education (Special Assistant, Athletic Supervisor, Guidance Supervisor) to positions subordinate to the Assistant Directors

Figure 5.4. Decision structures of the Department of Education in 1960 and 1962.



in the new configuration;

4. and added two new departments required of the television scheme: Administration and Education Television Services.

This re-arrangement gave the Director of Education (Bronson) a potential autonomy similar to that of the Governor, although the entire Department of Education was officially still only advisory to the Governor. In the former scheme, the Board of Education while only advisory, yet had a staff-relationship with the Director of Education and an equal span of supervision. As such, the Board of Education was a potential source of informal opposition since the Director's affairs were its affairs. In the new configuration, however, only the Curriculum Advisory Committee had a staff relationship with Bronson. While this Committee was, again, only advisory, it supervised the much narrower scope of "curriculum" which provided a potential base of informal power much more limited than that of the former Board of Education.

Thus the basic decision-centers in the new organization were:

a) the Governor;

b) the Director of Education;

c) the Assistant to the Director, Advisor on Samoan Affairs;

d) the four Assistant Directors. (Cf. Figure 5.4)

The Decision Process: Subordinate Decision Centers

The distribution of decision-power within the project was carefully metered through strictly defined role assignments. This system of role definition was simply a refined operationalization of administrative behavior throughout the system. Hall lauds this as an innovation of Bronson:

> The territory maintains the worlds's first--and only--operating example of a strikingly radical methodology which has been termed "cooperative education" by its iconoclastic originator, the brilliant and sometimes irascible educational planner, Vernon Bronson. He apparently chose the term because it emphasizes the new sorts of relationships established among members of the total personnel component. (1969: 18)

Schramm plainly identifies the "innovation" as team teaching:

> In pre-television Samoa all responsibility for teaching, from curriculum to testing, was upon the individual class-room teacher, who apparently had very little help or guidance. In Samoa at present, these teaching functions are spread among a team of teachers. (1967a: 18)

Every person within the system is thus considered a participating member of a team. As Skornia described it, the system began with a re-definition of the teacher:

> In the Samoan system, the teacher is the "manager" of the learning process. The team, made up of the TV teacher, the research teacher, the classroom teacher, and other staff workers, makes for a co-operative effort on a system-wide basis that is a great tribute to its designers and to the educators who do the work. . . . While integrating the (still relatively poorly trained) classroom teachers into the process and making them feel important and useful and excited, the system makes maximum use of both TV and excellent professional teachers, teaching Samoan teachers, and future teachers to teach other Samoans. (1969: 57)

Within this system of "co-operative education," then, there were three areas of decision-making, the principal decision centers treated above and two areas of subordinate decision-making with these specific roles:

1. The administration decides the goals and objectives of the educational system. (In the literature it is unclear whether "administration" refers to all echelons illustrated in Figure 5.4 or the department called "administration.")

2. The curriculum planning committee (probably to be distinguished from the "curriculum advisory committee" staff-related to Bronson's position) decides the content and procedures that will most adequately fulfill the objectives. (Schramm, 1967a: 26)

3. The television teacher, research teacher, and the producer-director decide the presentation of the content in the televised lesson. (Schramm, 1967a: 28)

Hence, besides the administration, only the curriculum planning committee and the television studio team are clearly identified as decision centers in the Samoa project.

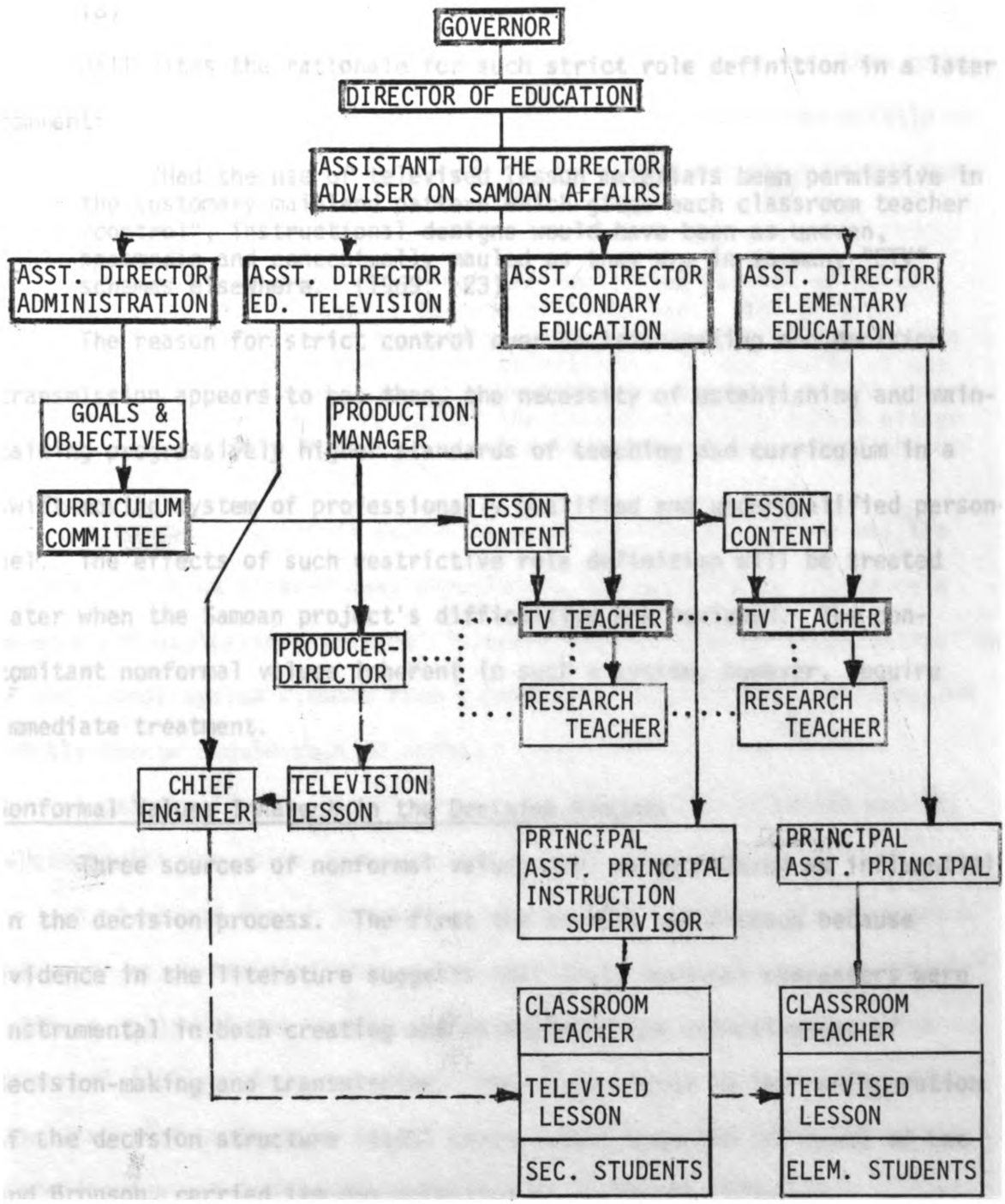
Decision Transmission

The flow of decision is illustrated in Figure 5.5 which--it should be noted--tentatively distinguishes the advisory from the planning committees on curriculum.

The many lines of decision transmission flowing from numerous decision centers might seem to suggest a considerable allocation of autonomy. However, if decision transmission lines are traced in reverse, it will be seen that all formal authority originates with one person, the Director of Education, and ultimately the Governor. Further, it will be noted that most of the personnel in the project are subjects, not participants, of the formal authority in the project. Bronson's "co-operative education" therefore operates through a highly defined and operationalized set of role descriptions wherein the behavior of each team member is carefully controlled and the confines of decision-making and transmission severely limited. A description of the role of the Samoan classroom teacher by Hall is illustrative:

Figure 5.5 Decision transmission (with decision-centers emphasized).

Transmission lines: ——→ Team relationships: ·····
Production lines: — — →



> According to the carefully spelled-out doctrines of "cooperative education", individual classroom teachers are neither required nor allowed to execute curriculum as they deem best. The "delivery of content" is never their province. The classroom is not regarded as a self-contained unit; it is an integral, working part of the larger interdependent instructional complex. (1969: 18)

Hall cites the rationale for such strict role definition in a later comment:

> Had the use of televised lesson materials been permissive in the customary mainland pattern which gives each classroom teacher "control", instructional designs would have been as uneven, spasmodic and conceptually mauled as they are in so many "ETV" schemes elsewhere. (1969: 23)

The reason for strict control over decision-making and decision transmission appears to be, then, the necessity of establishing and maintaining progressively higher standards of teaching and curriculum in a swift-moving system of professionally qualified and underqualified personnel. The effects of such restrictive role definition will be treated later when the Samoan project's difficulties are reviewed. The concomitant nonformal values inherent in such a system, however, require immediate treatment.

Nonformal Values Inherent in the Decision Process

Three sources of nonformal values will be considered as influential in the decision process. The first two are Lee and Bronson because evidence in the literature suggests that their personal characters were instrumental in both creating and maintaining the effectiveness of decision-making and transmission. The third source is the configuration of the decision structure itself which, apart from the influence of Lee and Bronson, carried its own potential of nonformal influence.

Lee's Nonformal Influence

1. Lee's influence first appears concerning the television project in his dealing with an opposition group of United States educators "who did not believe that television should be used to carry the core of the teaching." (Schramm, 1967a: 35) Apparently, Schramm notes, this group in the Samoan Department of Education resisted the new system quietly at first, but once television teaching began, the opposition became more pronounced:

> The opposition group said that the new system was not going to work, and that it should be radically cut back. The governor decided against these educators, and replaced them with educators more favourable to teaching by television. In the course of the altercation, the director of education, the director of elementary education, and the director of the teacher-training school either were asked to resign or were not re-employed at the end of their contracts. (Schramm, 1967a: 36)

Although Lee's formal authority deriving from his office was the means by which he cleared away opposition, his decision to introduce a "sudden and explosive upgrading" in preference to a gradual reconstruction of the school system stemmed from a nonformal value-choice regarding how quickly change should come to Samoa.

A primary factor, therefore, in Lee's nonformal influence was his valuing swift over slow change in the school system.

2. A second factor in Lee's nonformal influence was his personal character as an administrator. Hall describes Lee as "canny and dynamic" (1969, p. 18); Schramm speaks of the "vigour and determination of the governor" (1967a: 36); and a report from the Samoan Department of Education speaks of Lee's "ability to endure and willingness to stand firmly." (Frielinghaus and Cobb, 1968: 11) These characteristics are nonformal

factors in the decision process: they stem from the individual person; they cannot be produced as behavior through role definition; and they can be operative no matter what the configuration of formal authority. Lee's vigor, determination, dynamism explain the suddenness of phenomena such as the removal of opposition groups and the installation of a new system. The formal authority attached to the governor's office explains only how such removals and installations could take place, for the same formal authority could have been used, again, for a more gradual reconstruction.

Besides Lee's value judgment then, that swift change was preferable to gradual, his personal characteristics of vigor and determination further explain the functioning of the decision process in the Samoan television project.

Bronson's Nonformal Influence

1. Hall describes Bronson as having had an "extraordinary educational background" who was a "one-man R and D section for the NAEB . . . [an] iconoclastic originator . . . brilliant and sometimes irascible." (1969: 18) Brillance, originality, and background are characteristics which can tend to attract and retain decision-making power and influence decision transmission. "Brilliance" can answer objections; "originality" can produce alternatives from an apparent cul de sac; and "background" can house presumed and unspoken reasons for decisions. Such characteristics can surround decisions and their transmission with an aura of wisdom which influences the functioning of the system quite apart from role definitions and lines of formal authority.

2. A second nonformal factor in Bronson's influence was his dedication to the project he originated. Cobb states that Bronson's "drive and tenacity have been the spur necessary to hold us to the task." (Frielinghaus and Cobb, 1968: 11) Skornia elaborates on this dedication of Bronson which was:

> . . . reflected all down the line. Teachers working nights and weekends, . . . mainland staff families living in primitive surroundings, making the school and the children their life, night and day--these factors, not just television, are what have characterized this project. (1969: 57)

Dedication can be contagious. The appearance of wisdom and the evidence of dedication on the part of superiors, however, can not only facilitate decision transmission but also make subordinates hesitant to voice their felt objections.

3. A third nonformal factor in Bronson's influence was the autocratic manner in which he used the decision structure. The configuration of formal authority in the project, as we shall see, concentrated decision-making power in the hands of a very few United States personnel--principally Bronson. The structure of formal authority, however, should be distinguished from its benevolent or autocratic uses. The following citation from a report cited in Schramm illustrates both the powerful position of Bronson and the NAEB as well as the former's execution of that position:

> "They [the NAEB] designed the system, determined the specifications for equipment, and supervised purchasing. They are fully responsible for technical personnel. While their role in administration is advisory by definition, with administrative responsibility lying with the governor's office, Governor Lee made the observation that as a rule the recommendations of the NAEB are supported by the governor. Thus the chief NAEB adviser, Vernon Bronson, has had very broad powers. Bronson's influence becomes rather awesome when one considers the fact that the governor's

> influence is almost unlimited . . . and in the field of education, this influence has been delegated to Bronson and the NAEB. Thus there has been opportunity for rather autocratic administration, and this there has been." (Block report, 1965: 8, cited in Schramm, 1967a: 36)

As the above report points out, because of Lee's delegation of his almost unlimited authority to Bronson in the field of education, there was an "opportunity for . . . autocratic administration." The structure of formal authority thus presented Bronson with the opportunity to be autocratic, but the seizing of the opportunity by Bronson was his own choice and stemmed not from the structure of formal authority within the project but from nonformal values within Bronson. Thus, Bronson's manner of wielding power within the formal authority structure must be considered a significant factor influencing the process of decision-making and transmission.

Nonformal Aspects of the Formal Decision Structure

1. A first aspect concerns the pattern of formal authority dispersal in the project. From Figures 5.4 and 5.5, certain decision centers can be identified only approximately. This identification is approximate, first of all, because the personnel representation in all decision centers is insufficiently detailed in the available literature. A further reason for the approximation is that the figures themselves, in the interest of clarity, do not detail the personnel of certain decision centers. For example, the curriculum planning committee actually included personnel from every part of the system as well as representatives of churches and schools with years of experience in Samoa. (Schramm, 1967a: 27)

Another factor in the dispersal of formal authority is that while the Assistant Directors had fairly large areas to supervise (Administration,

Educational Television, Secondary and Elementary Education) as did the Curriculum Planning Committee, below the echelon of the Assistant Directors, there seems to be only one decision-center, the television studio team and their area of decision is extremely specific. Thus, although formal authority in the Samoan decision process is moderately dispersed, authority is almost completely confined to the upper three echelons containing a very small percentage almost exclusively United States personnel.

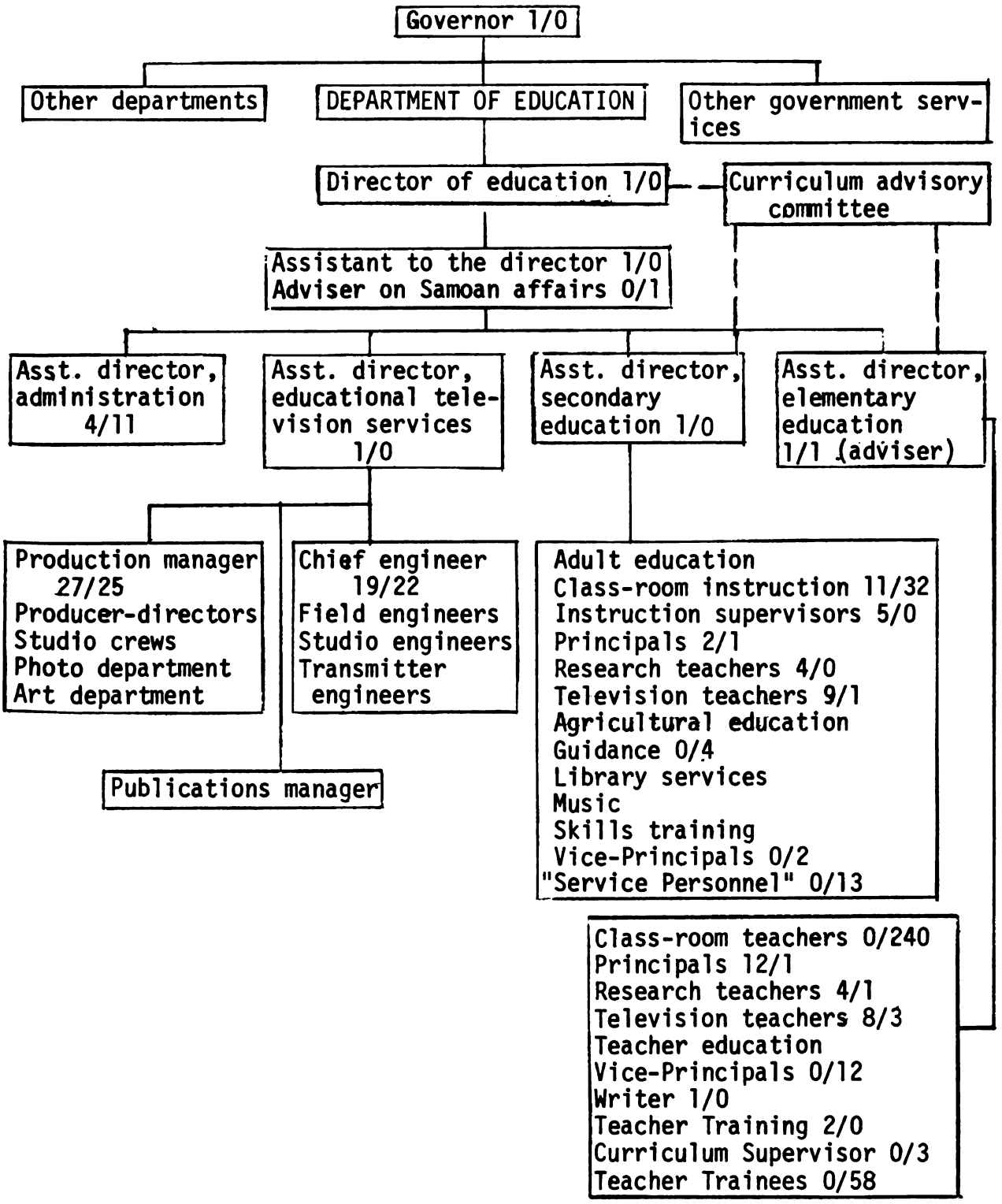
The significance of such a limited dispersal of formal authority in the project can be grasped more readily from Figure 5.6 which combines data from a chart and a table in Schramm to present, by inference and estimate, how Samoan and United States personnel were probably placed in the project organization. The official personnel totals given in Schramm (which include clerical staff not mentioned in Figure 5.6) appear in Table 5.5 with an estimate of how many personnel were probably in decision-making positions.

Table 5.5. Totals for Major Areas of Personnel in the Decision Process

	United States	Samoan
Television Support	50	58
(Decision Center Personnel)	1	0
Elementary Education	29	231
(Decision Center Personnel)	9	4
Secondary Education	33	54
(Decision Center Personnel)	10	1
Administration (Asst. Director, Lee, Bronson)	3	0
Total Personnel (approx.)	115	347
Total Decision-Center Personnel	23	5

Figure 5.6. United States and Samoan personnel placement.

Legend: United States personnel = #/# = Samoan personnel



(Adapted from Schramm, 1967a, pp. 21-22)

Although the above table rests to some extent on reasonable conjecture, it gives a picture of how few Samoans were decision-makers and how many were on the receiving end of decision transmission. The preponderance of decision-power rests with United States personnel; the preponderance of submission to decision-power lies with the Samoans.

The rationale underlying this disproportion in the distribution of formal authority among United States and Samoan personnel should be clear from the objectives of the project: the integration of poorly qualified personnel into a team of qualified personnel teaching by television in order to introduce, raise, and maintain high standards of teaching and learning as swiftly as possible. Nor, according to Bronson's plan was this proportion to remain indefinitely. Regarding newly hired United States personnel, according to Kaser, Bronson:

> . . . made it clear that their goal was to eliminate their own jobs by training Samoan understudies who will some day take over the operations. (1965: 72)

Further, according to Skornia, Bronson had designed the system

> . . . to operate on three levels at once: teaching children . . . teaching teachers, with the most intensive inservice teacher training program I've seen anywhere; and educating and teaching tribal leaders, parents, and other cells within the tribe-based society. (1969: 56)

A report from the Samoan Department of Education stated that, as the project progressed, Samoans were in fact moving up toward positions of decision-making. Frielinghaus and Cobb claimed that the training of teachers and technicians in all positions and responsibilities:

> . . . is a constant on-going phase of the overall operation. Teaching Samoans to teach themselves is not just a catchy phrase; it is the heart of our operation. (1968: 9)

The administration held workshops during the summers to advance technical personnel toward such positions as producer-director:

> . . . each participant is responsible for planning and executing a complete production. . . . Performance in these workshops has already resulted in promotions and the establishment of trainee positions. . . . Such programs provide a channel of upward mobility. (Frielinghaus and Cobb, 1968: 10)

It is clear that the project planners envisioned that the initial disproportion in the dispersal of formal authority among United States and Samoan personnel was to be temporary and formally contingent only upon Samoans' progressively increasing ability to replace United States personnel in decision centers.

2. With the dispersal of formal authority in the Samoan project to some extent clarified, the nonformal effects of this dispersal can be discussed by considering the general socio-cultural climate surrounding the project, the authority configuration of the project vis-a-vis this climate, and the time-span of the project envisioned by the planners.

The socio-cultural environment contained a theme acknowledged both by the Long-Gruening report in their investigation, by Lee in his educational and politically-related programs, and by Bronson in his in-service training for Samoans (supposedly) at all levels and positions in the project. The theme "Samoa for the Samoans" was apparently taken seriously by planners of the Samoan project, for it dictated, as has been seen above, both the elimination of certain unacceptable alternatives (such as the outright dismissal of Samoan teachers) and the inclusion of specific structures (such as in-service training) in the project.

The configuration of formal authority within the project, however, represents the opposite of a policy of "Samoa for the Samoans."

The central reason which planners would certainly adduce regarding this apparent contradiction is that the initial years of the project would require strong and consistent decision-making in order to establish an educational system of high standards. Such authority could not have been entrusted to unqualified personnel and Samoans in these initial years were judged unqualified in the sense that they were unfamiliar with "high standards."

It is here that a certain time-span envisioned by planners of the project pin-points the nonformal significance of the authority configuration within an environment which values "Samoa for the Samoans." In the initial years of the project, Samoan personnel predominantly were not to be the makers but the agents of decisions. The formal authority structure designated United States personnel as the gate-keepers of Samoans' upward mobility into the decision centers of the system: Samoans would be "moved" upward by United States decision-makers when United States personnel, not the Samoans themselves, would consider them to be qualified.

The United States planners of the project envisioned the essential time-span of the project to be approximately twelve years, the time required for a Samoan child to matriculate through the twelve grades of the system and, hopefully, the length of time required for Samoans to have become competent to take over the system. An official document of the project estimated that by 1975, "most of the key roles in the educational organization will be performed by Samoan personnel." (Untitled, cited in Schramm, 1967a: 17)

However, it is one thing for planners and decision-makers to have in mind the objective of integrating Samoan personnel into the project's "key role" within ten or twelve years, it may be quite another thing for a Samoan to be on the receiving end of all decisions throughout those years with United States decision-makers being the gate-keepers of upward mobility in the system.

A number of factors of nonformal significance may be noted. If one is excluded from decision-making power, the period of waiting to be judged qualified to assume positions of formal authority may easily be perceived to be far more protracted by decision-receivers than by decision-makers. This difference in perception may lead those disenfranchised to feel they are unreasonably excluded from the power to make decisions. This exclusion may be felt to be a use of power to discriminate unfairly and, in the case of the present project, such a perception on part of Samoans could be supported by the common judgment that foreigners "do not really understand" indigenous cultural values. Thus Samoans within the project might readily feel that the standards used by United States gate-keepers of Samoan upward mobility were "culture-bound" and inaccurate in judging when a Samoan would be capable of assuming decision-power within the system.

A second nonformal factor possibly implicit in the formal authority structure may have been a difference in perception between Samoans and United States personnel concerning the replacement of United States by Samoan personnel. "Replacement" means taking the place of a person removed from a position of authority. Although United States personnel may have been fully prepared to be removed and replaced, this readiness can

have seemed somewhat incredible to Samoans for whom the positions of power at the top of the organization may have easily seemed too attractive ever to be relinquished readily.

Hence the retention of decision-making power in the hands of a few United States personnel may have seemed, in a sense, domineering to Samoans. The gate-keeping of upward mobility may have seemed cultural discrimination. The concept of replacing foreigners in attractive positions of authority may have had the potential of being perceived by Samoans as an attempt to mollify those excluded from power. Finally, the time of apprenticeship may have seemed intolerably extended to a Samoan with a nonformal sense of time--a not unreasonable assumption--significantly different from that of the United States decision-makers.

Conclusion

The tentative exploration above serves to elucidate possible nonformal effects of the television project's decision structure in the cultural environment of Samoa as well as the nonformal effects of Lee and Bronson in the process of decision-making and decision transmission. Whether and to what extent these nonformal factors affected the success of the project will be the subject of a later discussion, while the implementation and operation of the project constitutes the next topic.

The Action Process: Technical Infrastructure

Financial Input

Bronson presented his report and recommendations to Governor Lee in early 1962. (Schramm, 1967a: 15) According to Representative Kirwan, Lee's request for 1963 appropriations for Samoa included:

$2,828,750 for educational construction;

$1,869,000 for the educational TV system;

$5,116,550 for operating expenses for education, health and welfare. (Kirwan, Congressional Record, March 20, 1962; 4597)

Schramm in a detailed cost analysis of the functioning system breaks down financial input in a number of ways. The totals of the tables in Schramm are given in Tables 5.6 and 5.7.

Table 5.6. Capital and Operating Costs

A. Capital costs (to 27 January 1966): Total =	$2,381,000
Transmission costs:	$2,284,000
Reception costs:	$97,000
B. Operating costs (fiscal year 1966): Total =	$1,199,000
Materials:	$210,000
Salaries, Utilities, etc.	$704,000
Elementary teaching costs:	$120,000
Secondary teaching costs:	$105,000
Printing, reproduction:	$60,000

Table 5.7. Cost of Production, Transmission, Reception

	Production	Transmission	Reception	Total
Investments:	$1,239,000	$1,045,000	$97,000	$2,381,000
Operating costs:	$805,000	$349,000	$45,000	$1,199,000
Capital charges:	$103,000	$87,000	$34,000	$224,000

Both tables concern essentially the same budget, Table 5.7 adding the capital charges of "depreciation and notional interest." (Cf. Schramm, 1967a: 38,40)

Construction Program

Essential to the television project was the consolidation of the many elementary schools recommended by Everly. Twenty-six new elementary schools were planned along with four new high schools to replace the original forty-odd elementary schools and one high school. They were built in the Samoan pattern of the domed fale with openable sides, of concrete and redwood. Unlike the old fale schools, the new buildings had toilet facilities, room for libraries, excellent soft lighting in the classrooms, etc. (Schramm, 1967a: 21)

The construction of television facilities in Pago Pago began in 1963 and included an air-conditioned studio building, transmitter building, and two 227 ft. antenna towers erected on 1,600 foot Mt. Alava overlooking Pago Pago harbor. (Schramm, 1967a: 16)

By the end of 1965, thirteen of twenty-six elementary schools and two of four new high schools were in operation. Nine more elementary schools and one new high school were scheduled for completion in 1966, and by 1966 two-thirds of 5,500 elementary and 1,500 secondary school students were being taught by television in new schools. (Schramm, 1967a: 17)

Television Facilities

Schramm describes the television facilities installed in Pago Pago as "one of the most impressive collections of equipment in any educational television station in the world (for example, ten video-tape recorders)." (1967a: 17) A complete list of equipment is included in Appendix E of Schramm (1967a: 56-57) which includes 400 23-inch Motorola tropicalized receivers for classroom installation.

Station KVZK-TV began telecasting on three channels October 5, 1964 with a signal reaching all islands of Eastern and some of Western Samoa. The remaining three channels were operative by autumn, 1965. (Wiegand, 1965: 118; Schramm, 1967a: 17)

The Action Process: Roles and Organization

The Television Lesson

The following are the personnel related to the production, the transmission, and the execution of the television lesson.

1. The elementary and secondary Curriculum Planning Committees determine the lesson content in line with educational objectives set by the school administration. This content is communicated to the television teacher. (Cf. Figure 5.7)

2. The television teacher produces a script and outlines procedures in collaboration with three other personnel (below).

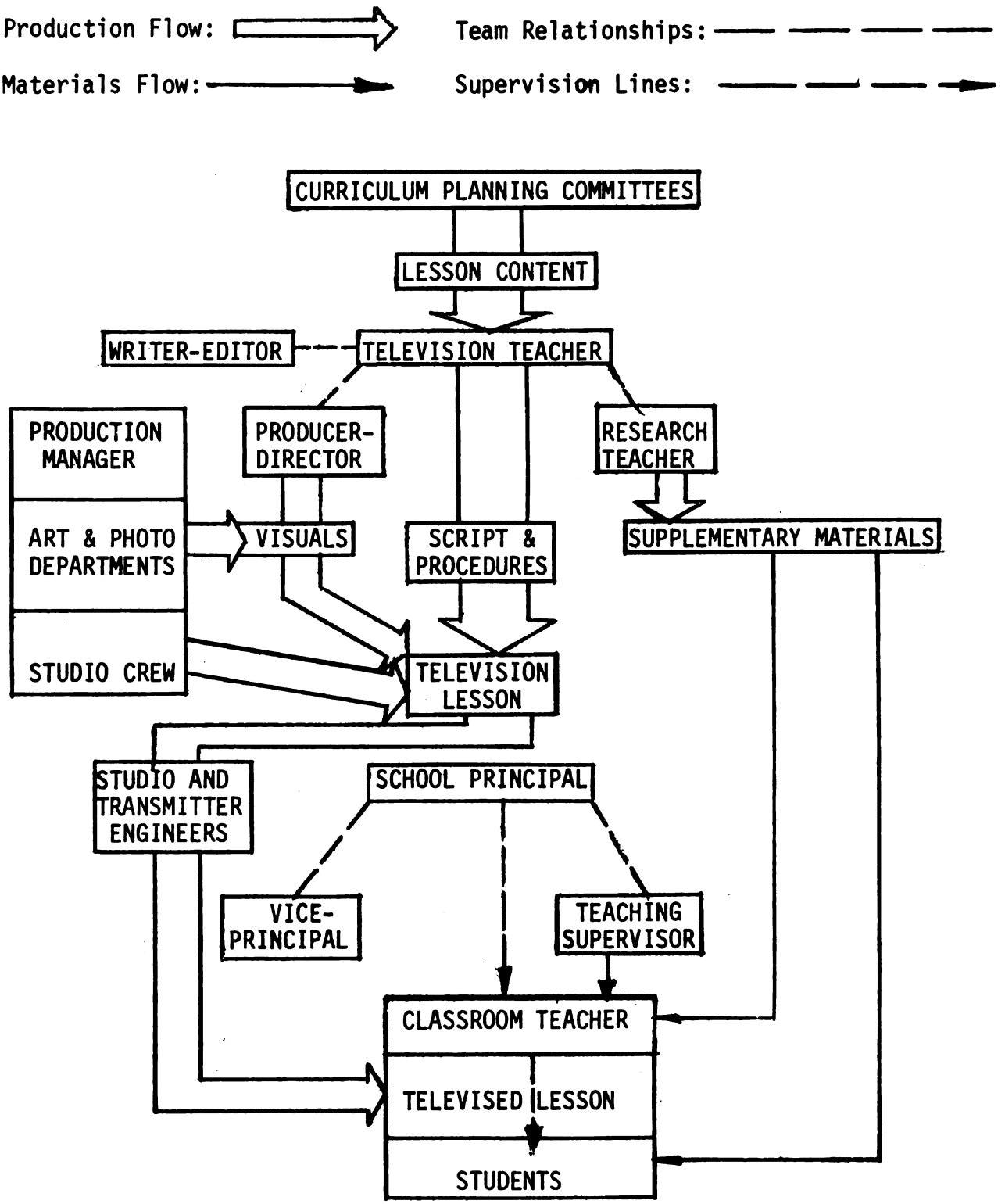
3. A writer-editor checks the script for English usage within specified vocabulary ceilings.

4. The producer-director procures all necessary props and visuals required for the television lesson which are supplied by the art and photography departments of the production section.

5. The team of the television teacher, the producer-director, and the studio crew then videotapes the television lesson.

6. The research teacher, working closely with the television teacher and the producer-director, produces materials containing information and guidelines for the preparation and follow-up activity of the teacher as well as supplementary readings and exercises for the students, all coordinated with the television lesson.

Figure 5.7. Television-lesson action process: principals and inputs.



7. Studio and transmitter engineers (atop Mt. Alava) communicate by microwave to co-ordinate transmission throughout the islands.

8. The school principal supervises the co-ordination of television reception and classroom activity.

9. The teaching supervisor supplements the supervisory work of the principal regarding the quality of classroom teaching.

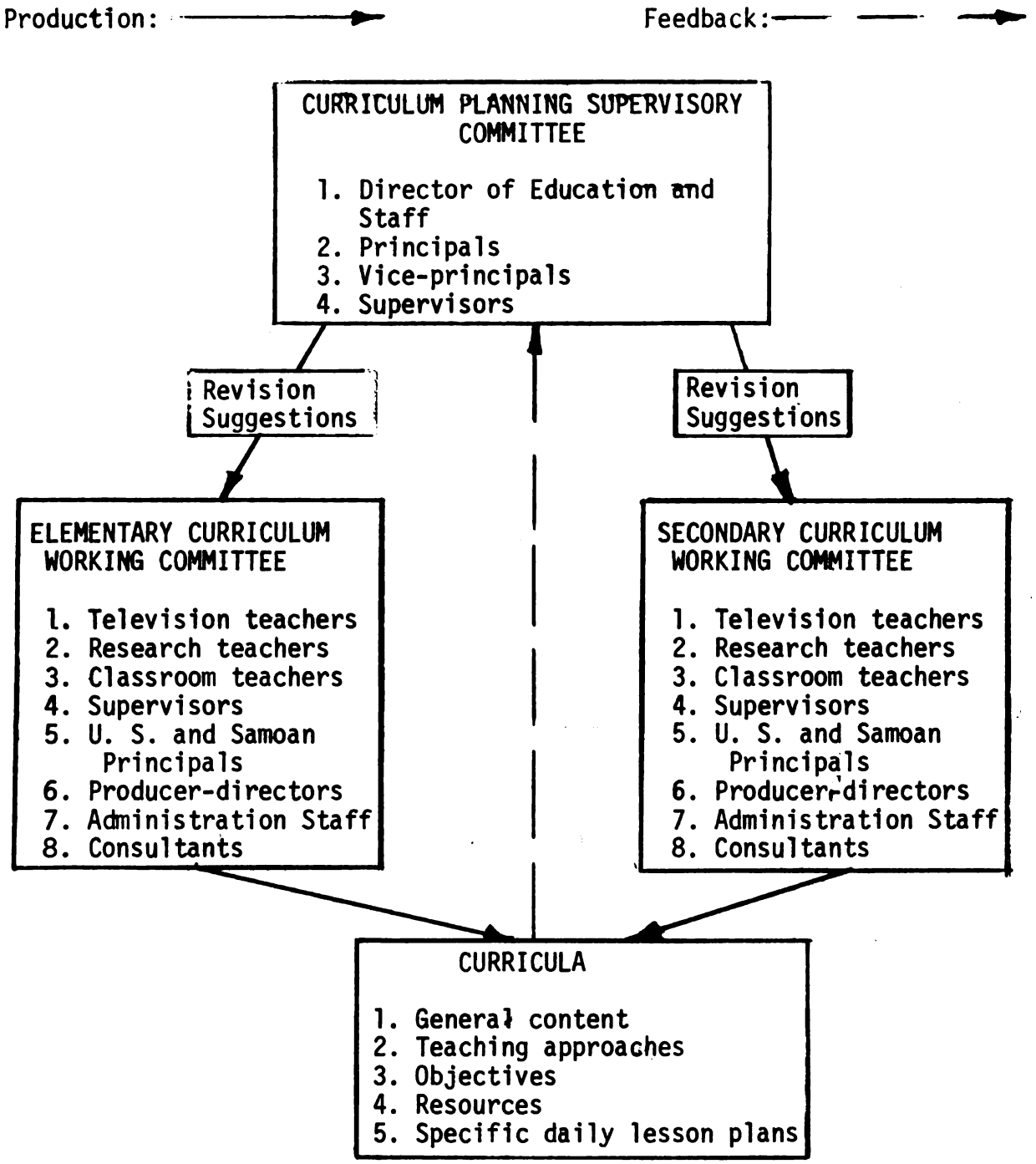
10. The classroom teacher advises and counsels students and prepares an effective learning context before and after the telecast. (Schramm, 1967a: 18-19,26-29; Frielinghaus and Cobb, 1968: 4; Craib, 1965: 21)

Curriculum and Planning

One of the objectives of the new system was to fit the curriculum to "Samoan experience and needs" by using original texts and printed material produced specifically for Samoa and by introducing Samoan early in the child's education. (Schramm, 1967a: 15) The preparation of instructional materials relevant to Samoan experience and written with controlled vocabulary was a "major effort" of the project. (Frielinghaus and Cobb: 3)

Curriculum planning began in the spring of 1964 with the elementary curriculum and continued through the summer in preparation for the elementary school telecasting starting in the autumn. Planning for the secondary school curriculum began a year later in the summer of 1965. Both curricula were designed by separate working committees overseen by a supervisory committee. The organization and representation of the curriculum committees is given in Figure 5.8, using data in Schramm. (1967a: 27)

Figure 5.8. Curriculum committees: organization and representation.



The working committees produced material which ranged from general content and objectives to specific lesson plans for the coming year. These were fed back to the supervisory committee which returned them "often with suggestions for change." (Schramm, 1967a: 27)

Two decisions of importance were made in 1964, both of which were peculiar to a system designed to establish progressively higher standards. The first was to use a modified ungraded approach on the elementary level "because the lack of written curriculum and the limited achievements in English made it impossible to determine the base upon which subject sequence could reasonably be built." (Schramm, 1967a: 28) A second decision stemmed from the inevitable rise in standards from year to year as a student, moving through a system of rising standards, became capable of progressively higher achievement. To create progressively higher standards, the curriculum working committees would have to re-convene each summer to establish virtually entirely new curricula for the coming year including objectives, content, resources, and lesson plans.

This decision made it impossible to use videotaped material beyond the year for which it was created and put the studio production team, year after year, under heavy pressure to create original material for the entire range of curriculum.

Curriculum Content

A major decision on content regarded the function of English in Samoan education. Skornia describes this decision:

> After considerable consideration, Samoans and pelagi (mainlanders) alike decided that English must be the basis of instruction and island-wide communication as soon as possible. . . . Pacific languages in general, and Polynesian languages in

> particular, are incapable of coping with many kinds of complex and abstract ideas. (1969: 57)

Besides the stated ability of English to express complex and abstract ideas, its ability to remove barriers to "educational development" and "economic self-sufficiency" was a further reason cited for establishing English as the principal language of communication in Samoa. (Frielinghaus and Cobb, 1968: 2) Thus, according to Bronson's original plan, ". . . first reading should be taught in Samoan. But there should be heavy emphasis on English in all grades, and the transition to English should be complete by grade 6." (cited in Schramm, 1967a: 15)

A major theme in the treatment of content regarded Samoa's physical and psychological isolation. Time magazine noted:

> Much time is spent on introducing the concept of change. "It may seem simple," says Vernon Bronson, . . . "but to the tropical Samoan, such concepts as change in season in temperate climates are enormously confusing." Also difficult is teaching world history to isolated students who may not even see a stranger all year. (December 4, 1964: 91)

The core of the curriculum comes to the student over television. In the classroom, the telecast is complemented by:

> . . . a very large amount of supplementary mimeographed or printed material for students and teachers . . . supplied with each lesson. In a conservative estimate, this averages ten sheets of paper per student per day, over 12 million sheets of paper per year. Behind this flow of material are the research teachers, six artists, and three photographers, a teaching materials centre, and a very sizeable reproduction section which mimeographs most of the materials and turns over to the government printer what it cannot readily duplicate with its own machines. Materials go out to the schools once a week by truck or boat. (Schramm, 1967a: 29)

Besides the software input above, supplementary recources such as encyclopedia and specifically prepared readers and booklets were provided for elementary students. (Schramm, 1967a: 29)

The organization and inputs to the classroom learning situation are given in Figure 5.9.

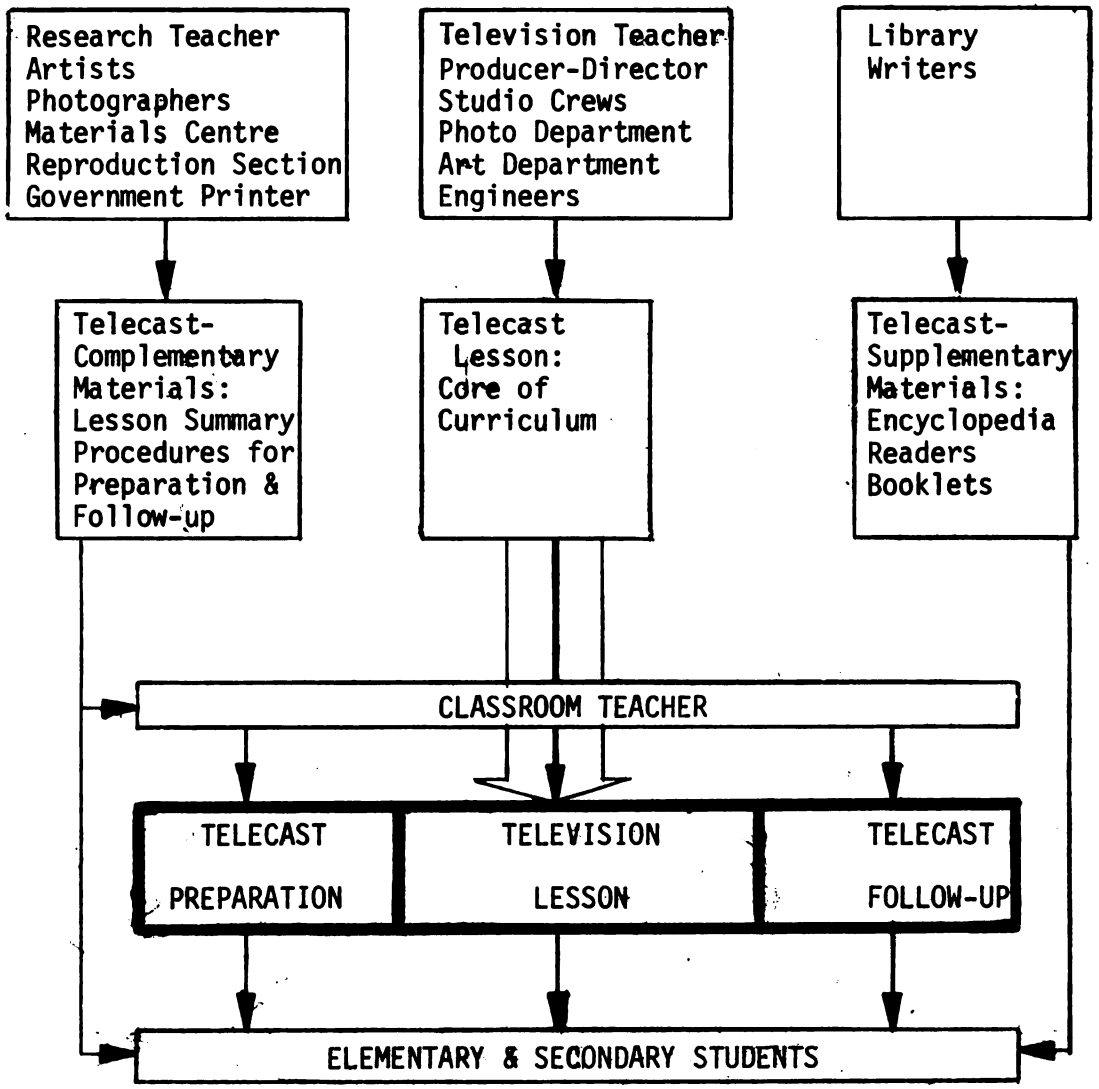
The Classroom

Schramm gives a report of classroom activity from his own observation of Samoan instructional television in operation:

> Both students and teachers received a summary of the telecast (one page), a student work sheet (one page), and a student reading sheet (one page). The teacher received an additional sheet describing the way in which the work sheet and the reading sheet should be used. . . .
>
> The television broadcast was one of a series on China. . . . The programme was paced very rapidly with only modest emphasis and explanation. . . .
>
> The summary of the telecast appearing in the supplementary materials was not entirely descriptive of what went on in the telecast, having been prepared far in advance of the telecast by the research teacher, and based on preliminary discussions with the television teacher. . . .
>
> The sheet of instructions to the teacher indicated that he should help the students with any of the vocabulary that had been difficult for the (e.g., "dynasty," "construct," "treaty,") and that he should not worry too much about proper names as "Manchu." . . . Finally, the teacher was told to ask the students to read the supplementary materials and answer the questions with complete sentences. . . .
>
> The student work sheet consisted of one section of fifteen questions on the programme designed to elicit true or false answers, and a second section of six statements some of which are facts and some of which are opinions. The student reading consisted of three short paragraphs and five questions on these paragraphs.
>
> Reinforcement activities under the direction of the classroom teacher varied widely from those suggested in the teachers' materials. One Samoan high school teacher proceeded to summarize in his own words what he understood the telecast to have said. A United States high school instructor in one of the other sections used an overhead projector and constructed a time line on which he marked the various events mentioned in the telecast. A third teacher drew a two-column model on the black-board and proceeded to discuss the differences between communism and democracy. . . . (Schramm, 1967a: 30-31)

Two difficulties noted in the lengthy description above will be considered later: the discrepancy between actual classroom reinforcement

Figure 5.9. Classroom inputs: materials flow.



activities and the activities suggested in the teachers' materials; and the discrepancy between the materials designed far in advance to complement the telecast and the content actually conveyed by the telecast.

Adult Education

One of the system's stated objectives was to improve adult educational services (cf. p. 387). Kaser, writing in 1965, was able to claim that:

> Lee is giving careful doses of ETV to adult Samoans as the incipient stage of a planned adult education program. Since last November [1964], travelogues, syndicated educational films, and even occasional feature movies have brought standing-room only crowds to the school fales at night. (1965: 73)

In Appendix A of Schramm's report a representative weekly schedule of evening television viewing is given. It shows that, for a total of twenty-four hours of television over a six week-day period, only four quarter-hours--judging from segment titles--were related to the Samoan language: two segments entitled "Let's Learn English" and two entitled "Olaga Manuia" In the note to the Appendix Schramm comments:

> The station is on the air four hours or a little less in the evening, with Mickey Mouse for the children, a variety of westerns, adventure programmes, and popular music, all of which had originated on the United States commercial networks; and also some cultural programmes from National Educational Television, news, and a fifteen-minute agriculture programme produced locally. (1967a: 51)

This preponderance of English-language fare for evening television viewing by adults of Samoa would seem to be a questionable attempt at "adult education: and will be commented upon below.

Training of Samoan Personnel

Another of the project's stated objectives was to improve and standardize teaching throughout Samoa. The teacher training and in-service program of the project was called by Skornia the "most intensive" program he had seen anywhere (1969: 57). From within the system, Frielinghaus and Cobb claimed that training Samoan teachers and technicians "in all required positions and responsibilities . . . is a constant on-going phase of the operation. Teaching Samoans to teach themselves . . . is the heart of our operation." (1968: 9)

From the inception of the project Samoans were employed as technical personnel and by 1968 had full responsibility as cameramen, floor managers, and crew chiefs. Summer workshops were created to advance technical personnel toward positions such as producer-director and engineer, although the replacement of United States personnel in the latter type of position was reportedly slower because of the greater amount of theoretical understanding required. (Frielinghaus and Cobb, 1968: 10)

The training of Samoan teachers was carried out by a multiple-input system of example, reinforcement, and supervision.

1. The television teacher during each day's telecast for students provided implicitly a daily example of qualified teaching for Samoan teachers viewing the telecast.

2. Reinforcement of this example was provided by in-service training also given via television in programs aimed at the teacher.

A report of the Samoan Department of Education (1968) states that "some regular in-service help is given via television" (Frielinghaus and

Cobb: 10); Skornia (1969) claims that this in-service program occurred "every afternoon." (57)

Evaluation days during the school year would stress areas of current need, especially the area of language instruction, while summer workshops for teachers emphasized utilization and organizational techniques. (Frielinghaus and Cobb, 1968: 10)

3. The United States principal in each school along with the supervisor was charged with overseeing daily instruction and providing day-to-day supervision and advice for the Samoan teachers. (Frielinghaus and Cobb, 1968: 10)

Although at the beginning of the television project, the Feleti Teacher Training School had certain of its personnel removed, the school remained and its capacity was increased to Everly's recommendation of 50 students annually. Lee's appropriations provided the school with a $200,000 scholarship program comprising two years of training beyond high school with students doing their field work and practice teaching in the new schools supervised by United States personnel.

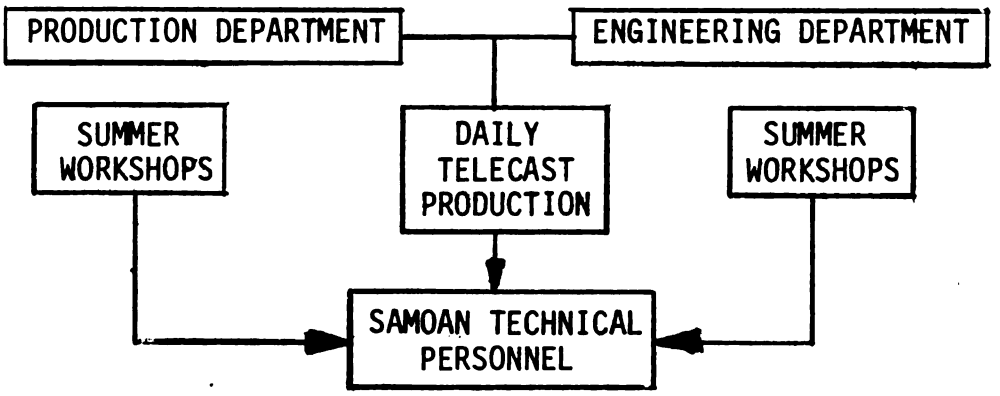
In addition to programs for its own students, Feleti offers courses for Samoan teachers, designed to improve their teaching. It is reported that many Samoan teachers were motivated to take these courses because their students were improving so rapidly under the new system. (Frielinghaus and Cobb, 1968: 10) The system of training technical and teaching personnel is given in Figure 5.10.

Nonformal Factors in the Action Process

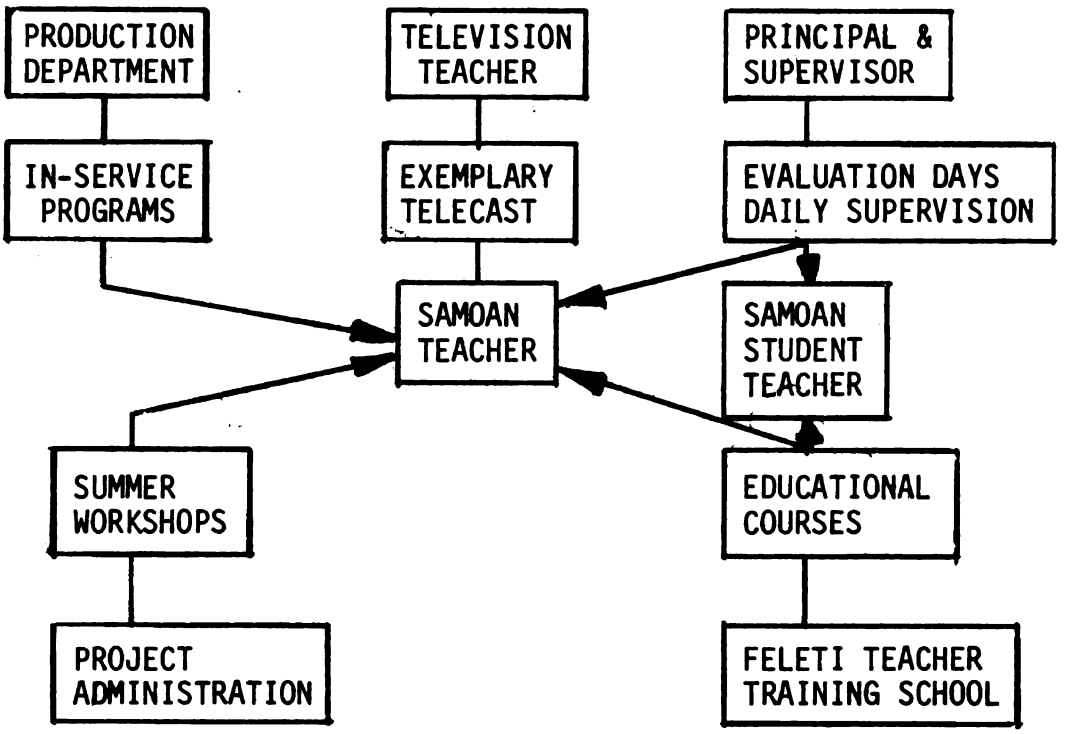
A consideration of the Samoan teacher in the action process will draw together many of the factors potentially affecting the nonformal

Figure 5.10. Training system and inputs.

Technical Personnel Training:



Teaching Personnel Training:



dynamics of the Samoan project. Although the televised lesson broadcast into the classroom might be considered a pivotal component in the system from a formal point of view, the pivotal component in the nonformal dynamics of the project would seem to be the Samoan personnel, especially the classroom teachers who form the major portion of critical personnel.

In support of this view, certain factors may be recalled. The television project was instituted by non-Samoan personnel ultimately for students who were Samoan. The majority of classroom teachers were Samoan, and in the project it was mainly teachers who maintained interpersonal contact with students. Even though the major part of the student's education was transmitted by a United States television teacher, such a teacher was necessarily remote from the nonformal environment of the classroom. It was the Samoan teacher in the presence of Samoan students who provided and conditioned this nonformal environment into which the formal components such as the television lesson, complementary and supplementary materials, were received. Thus the Samoan teacher, while he controlled little of the formal system, was in a pivotal position to control much of the nonformal environment surrounding the formal system at a critical interface, viz., the classroom. For these reasons, a consideration of nonformal factors related to the Samoan teacher can illuminate many of the nonformal factors in the action process.

The TV Teacher-Classroom Teacher Interface

As described in Figure 5.9, the classroom period had three phases: preparing the students for the telecast, the telecast, and following up the telecast. The classroom teacher thus shared attention and time with

another--foreign--teacher and did this in the presence of students of his own culture. The television teacher with his "high standards" of qualified teaching and his excellent command of English (the mandatory medium of communication) was, by formal project design, interfaced with the Samoan classroom teacher who by project definition was unqualified to teach the core curriculum or the English language.

The formal reason for the presence (via telecast) of the television teacher in the classroom was to provide the student with qualified teaching of uniformly high standards. The formal reason for the presence of the Samoan teacher in the classroom was (1) the impossibility of dismissing him for lack of qualification, (2) the real possibility that the Samoan teacher would learn better teaching by being exposed to it, and (3) the need for someone to perform the ancillary roles of preparation and follow-up.

Thus the formal design of the project interfaces a source of high standards in the person of the television teacher (cf. his United States teaching experience, his command of English, his teaching resources) with a source of lower standards in the person of the Samoan teacher. Further, the formal role of the classroom teacher in the system was ancillary and subordinate to the television teacher's role. The Samoan classroom teacher was not allowed to create his own preparation and follow-up materials but was provided with detailed guidelines dictating what should be done in the preparation and follow-up periods. All the classroom teacher's activity, therefore, was dependently related to the television teacher's activity, and for all the vaunted originality of Bronson's system of "co-operative education," the classroom teachers had a

subordinate position in the classroom scene and were even formally designated as "follow-up" teachers, a nomination which carried an overtone of subordination (much to the planners' belated regrets: cf. Schramm, 1967a: 50).

The formal system, therefore, places the classroom teacher (especially the Samoan classroom teacher) in a vulnerable position: he is defined by the system as deficiently qualified and given an ancillary role in the classroom, and yet is interfaced regularly by virtue of the hourly telecast with another person with distinctive qualifications and a dominant role in the classroom.

Such a role of subordinate identity within a formal system of itself creates the status relationships which are the basis of a conflict between the formal authority and the nonformal power inherent in the organization. Thus the ancillary status of the classroom teacher must be considered to have nonformal significance in the analysis of the project's difficulties further on.

The Classroom Teacher-Student Interface

The subordinate status of the classroom teacher was further aggravated by the fact that the classroom teacher's dependent role and his deficient qualifications were contrasted with those of the television teacher's in full view of students. The relationship of the students to the television teacher delivering the core of each course was a primary dependent relationship; the relationship of students to the classroom teacher was a secondary dependent relationship, but with a difference. Whereas from their dependent status as students the Samoan students would

not have been able to exercise any kind of nonformal power relative to the television teacher in his dominative role (as he was too remote), the students relative to the Samoan classroom teacher had two nonformal bases of power.

The first base derived from the classroom teacher's need for the co-operation and receptive attitudes on the part of students if he has to implement his role as preparatory and follow-up teacher. A second base was the Samoan students' potential cognizance that a member of their own culture had to face them daily from a subordinate position of authority effectively so defined by the implicit authority of the television teacher. In addition, the students might well have realized that this position stemmed from the Samoan teacher's "deficient" qualifications which were daily contrasted with the television teacher's "superior" qualifications and that the Samoan teacher was, like the students themselves, in the position of a learner, with all the dependence the process of being taught involves.

Thus if a student felt a cultural inferiority vis-a-vis the foreign television teacher and any kind of "learning" inferiority vis-a-vis the classroom teacher, there was a base of nonformal power available to him for thwarting the formal authority of the project, and this base was related to the Samoan classroom teacher's inferior status within the system.

It is to be expected that the Samoan classroom teacher might have some kind of role-identity difficulties both because of his inferior status relative to the competent television teacher as well as because of his vulnerability to comparison with that teacher by any student

wishing to exploit the nonformal power available to him. Thus the formal design of the Samoan project, by making the Samoan classroom teacher functionally pivotal, in effect "caught" him between the superiority of the remote television teacher and the glare of critical comparison by students whose co-operation was necessary for the classroom teacher to function adequately even in his ancillary position.

Hence, the vulnerable position of the Samoan classroom teacher relative to the students must also be considered in its nonformal dimension in any analysis of difficulties in the project.

The Teacher Training Classroom Teacher Interface

From Figure 5.10 the massive effort to improve Samoan teaching is clear. From a formal point of view, the televised in-service programs, the high quality telecast, the daily supervision of teaching, the summer workshops, and the Feleti educational courses, all can be considered a rich pool of resources provided for the Samoan teacher to become an increasingly competent teacher. From a nonformal point of view, however, the same inputs can form a kind of suffocating pressure on the Samoan teacher to undergo a painful change of identity, role, and skills. In itself, the statement that a change of role, identity, or skill is a painful personal process is certainly unexceptional. In a culture, however, where change was an experience of sufficient novelty that the concept of change had to be made a major theme of the curriculum (cf. p. 426), the plethora of components in the system urging the Samoan teacher to change his methods of teaching must have been at least disconcerting. Thus the entire teacher training system by reason of its

omnipresence, may have put the Samoan teacher under one more nonformal pressure through its continual summons to a painful change of role, skills, and identity.

Regarding the teacher training system, two status relationships are evident. The first is constituted by the daily (formal) supervision or (nonformal) surveillance of the Samoan classroom teacher by the school principal and the supervisor who were, in most instances, United States personnel. This relationship would have both the nonformal significance of every supervisor-supervisee situation as well as the nonformal significance of dominant culture-to-inferior culture.

A second status relationship may have been present during the so-called "in-service program" produced for teachers and apparently televised in the afternoons during school hours. Skornia reports that students were taught, in effect, that their education should continue throughout their life, that learning and education were not terminal processes, because they saw their teachers being taught by the in-service programs:

> Every afternoon Samoan teachers put aside their homework and papers to correct, to become students in the inservice programs for them. The morale factor involved in the witnessing by the children of the dedicated self-improvement efforts of their teachers, which is built into the system, is another factor which is important. There is no terminal education. (1969: 57)

From the viewpoint of the formal system, the dissolving of student reluctance to consider education as a lifelong process would easily be a factor abetting student learning-morale. At the same time, for a Samoan teacher whose self-identity was already undergoing a nonformal siege from numerous directions, the necessity of having to set aside, in

full view of his status-inferiors (viz., his students), his role as superior and become for the time of the daily inservice telecast a peer of his own students, may have placed further nonformal pressure upon the Samoan teacher.

Curriculum-Classroom Teacher Interface

A final aspect which might be considered as a nonformal pressure on the Samoan teacher's role-identity was the continually changing curriculum. Both the core curriculum entering the classroom via the telecast and the complementary materials provided for the classroom teacher to prepare and follow up the telecast were revised each year. The rationale has already been alluded to: the raising of educational standards in Samoa had to proceed by systematic increments year by year because of the extensive range of improvement required. This imposed on the system the burden of developing during the summers a fundamentally new curriculum for each coming year.

The burden of adapting to a continually changing curriculum fell, of course, on all personnel within the system. The present point is merely that the burden of adaptation may have fallen more heavily upon the classroom teacher who was a Samoan and perhaps was less comfortable with the necessity of continual change and adaptation by reason of his cultural background. Again, a component designed into the formal system may have contributed to the nonformal pressure on the role-identity of the Samoan teacher, and wherever the formal organization puts pressure on the nonformal values it creates a base of nonformal power which can disrupt the formal organization and cause dysfunctions in the system.

Conclusion

The above analysis can be valid only if the underlying assumption should prove to be true. This assumption is that a person within a formal organization who is under the nonformal pressures to change his behavior and accept a new identity which the formal organization defines for him, may feel sufficiently threatened to reject the organization's formal prescriptions and cast about for means to counteract formal authority by employing techniques of nonformal power to cause the system to dynsfunction. If, however, the formal organization discerns these potentially threatened nonformal values and takes steps through the explanation of the new roles and their integral place within the system as well as by counselling personnel in their adaptation to new roles and their acceptance of new identities, the formal organization can reduce the threat to nonformal values.

The question to be put to the Samoan project, then, is to what extent the project's formal organization recognized and reduced its threatening of Samoan nonformal values. The scope of Bronson's efforts to explain clearly the integration of roles within the system is fairly evident in the literature of the project. It remains to be seen, however, from an analysis of difficulties in the project, whether Bronson's personal nonformal characteristics of brilliance, vision, driving dedication, and authoritarian demeanor permitted either him or the United States personnel influenced by him, to undertake the painstaking cross-cultural and interpersonal effort of helping Samoan personnel--and Samoans in the environment outside the project--to survive the nonformal cultural assault represented by the project.

7. MONITORING AND FEEDBACK PROCESSES

Evaluations From Outside the System

Preliminary to a consideration of the reliability cycle of the system, certain evaluations carried out by sources outside the system should be enumerated.

In June 1964, the Science Research Associates high school placement test, form 64A, was administered to grade nine graduates whose overall mean was grade 6.2. Schramm notes that this test was somewhat "culture-bound," yet it gave some indication of where Samoan students stood prior to the television system's introduction in October 1964. (Schramm, 1967a: 16)

In October 1964, however, "an English placement test designed specifically for Samoa" was given to grade 10 of the public schools (Samoan students) and to grades 7 to 9 of the American dependents' school (mostly American students). The mean for the former was 69, and for the latter 93 to 105, showing approximately where Samoan students stood when the system began.

In May 1965, a "mathematics achievement test" was administered to students of grades eight and nine. A television and a non-television group were tested and the higher achievement of the television group approached statistical significance. (Schramm, 1967a: 33)

In April 1966, students in grades 5 and 6 were tested for English facility. Out of 82 items of basic English, the group from a village school not then integrated into the television system scored an average of 33 while a television group of students scored an average of 63.5. (Schramm, 1967a: 34)

Beyond these external evaluations, Kaser mentions the NAEB as "currently negotiating with educators at the University of Pittsburgh and the University of California at Berkeley" to conduct a long-term study of the project. (1965: 73) This evaluation may or may not be related to a grant mentioned by Frielinghaus and Cobb that had been recently received to realize more reliable measurement within the system through a three-year evaluation program. (1968: 11)

Superstructure Monitoring Centers

The major monitoring centers can be derived from Figure 5.5 (p. 406) on the assumption that decision centers are some of the supervision centers. Principal monitoring centers therefore are:

1. The Governor.
2. The Director of Education.
3. Assistant to the Director monitoring Assistant Directors.
4. The Assistant Director of Educational Television monitoring the Production Manager and Chief Engineer.
5. The Production Manager monitoring production personnel such as producer-directors, studio crews, the art department, etc.
6. The Chief Engineer monitoring studio, transmitter, and field engineers engaged in the complete technical operation.
7. The Assistant Director of Secondary Education monitoring the secondary television teachers, the research teachers, and all personnel and operations of the four secondary schools.
8. The Assistant Director of Elementary Education monitoring the elementary television teachers, the research teachers, and all personnel

and operations of the twenty-six elementary schools.

9. The Assistant Director of Administration, monitoring the administration staff including (most probably) the curriculum planning committees.

These major monitoring centers represent the monitoring system implicit in the decision process. They are illustrated along with the numbers of personnel within their spans of supervision in Figure 5.11.

Monitoring centers and feedback channels more relevant to the action process, however, are those concerned with the classroom setting of teacher, telecast, and students.

Infrastructure Monitoring and Feedback

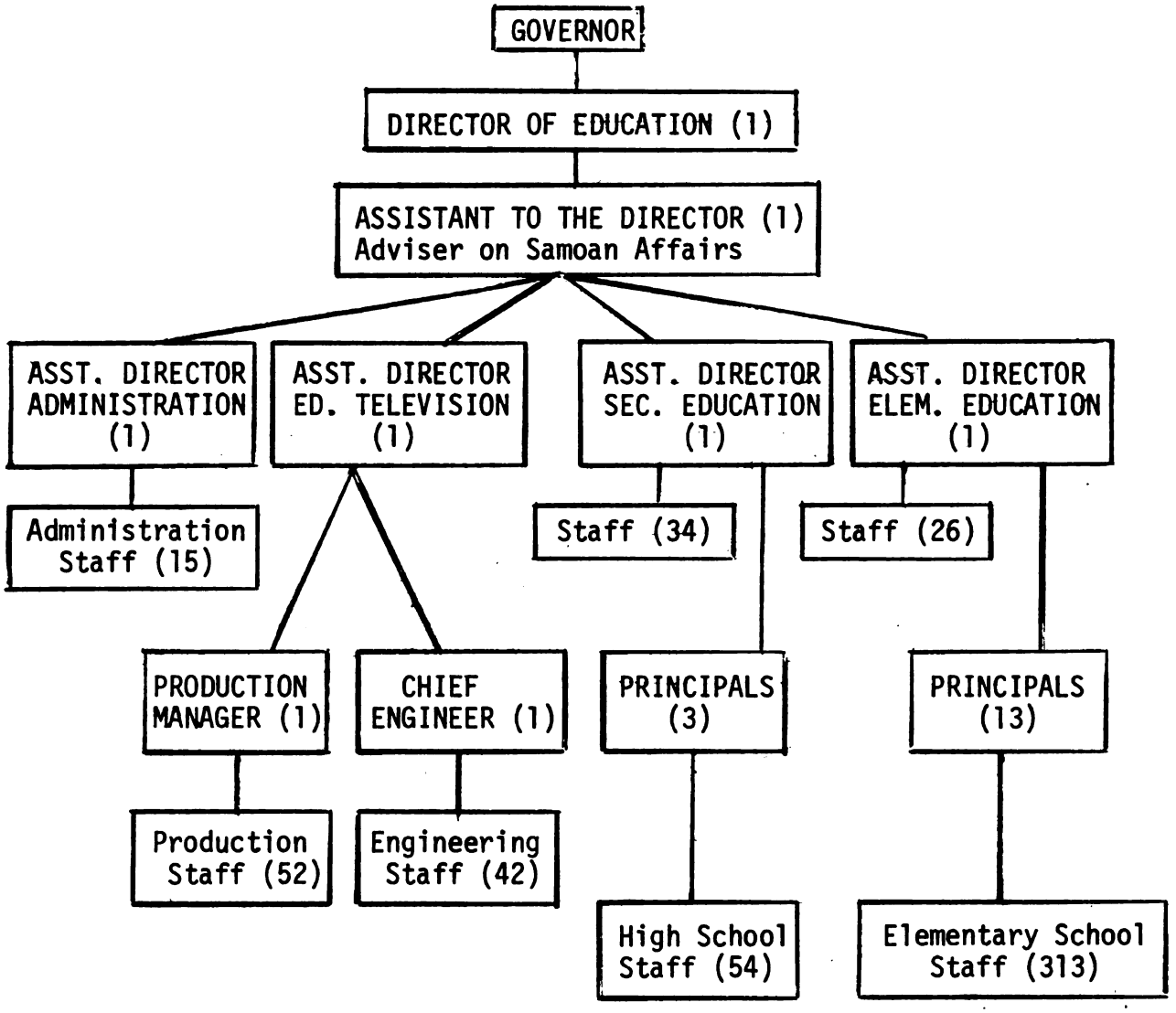
System design and system functioning, unfortunately, often diverge. From a description of the action process reliability cycle by Hall, one would conclude that the project's monitoring-feedback design functioned ideally:

> In Samoa, the whole instructional system is genuinely developmental in that day-to-day characteristics of the teaching output are made closely contingent upon actual student behavior. Daily testing and feedback are nearly always designed into the operational configuration of each lesson in each subject in each grade. In effect, Tuesday's lesson is directly contingent upon the student performance resulting from Monday's lesson, etc. . . . the results of each strategy "unit" are closely monitored and quickly fed back to the design authority for analysis with an eye to modifying the subsequent "unit". (1969: 23)

The report by the Samoan Department of Education also gives the impression that the reliability cycle was functioning according to design when it states that feedback:

> . . . in a variety of forms is also important to enable the studio staff to evaluate overall progress and not be unduly influenced by problems peculiar to a particular village or location . . . . Different principals or instructional supervisors may be asked to

Figure 5.11. Major monitoring centers and personnel within spans of supervision.



> observe units of work at specific levels . . . to get in-depth feed-back of a unit. Teachers, producer-directors, supervisors, and administrators regularly visit class-rooms to evaluate their own work. We are all very conscious that the real test of the value of a telecast is in the pupil's response to it. (Frielinghaus and Cobb, 1968: 4-5)

According to Schramm, however, the reliability cycle described by Hall could not provide day-to-day feedback and modification because of the inherent time-lag in communications, and the cycle described by Frielinghaus and Cobb was weakened by the time pressure inherent in the production schedule:

> Teachers and principals are asked to evaluate all television programmes transmitted to their grade or level. Some are fairly regular in sending in evaluation sheets; others are not. One problem is that the evaluation materials are collected once a week (when the new supplementary materials are delivered to the schools) and therefore are received in the studios after production is already several weeks ahead of them. Therefore, little immediate change can be made on the basis of comments collected; however, in many instances, suggestions can be implemented later in the course.
>
> Studio teachers try to visit the class-rooms as often as possible to see how their own telecasts are going, but the heavy production schedules prevent a great deal of this. At times, studio teachers give tests on television, and ask that the papers be returned to them so that they can get feed-back on how well their material is being understood and learned. . . .
>
> Outside of personal observation, evaluation comments from teachers and principals, and a brief test given on television every two weeks or so, the studio teacher has very little evidence as to how much his pupils are learning. Until autumn 1966, Samoan schools were without a tests and measurements specialist, and consequently lacked a regular and continuing examination programme that might check on student progress. (1967a: 32-33)

By 1968, however, the project apparently had obtained the services of a testing specialist because Frielinghaus and Cobb mention the oral testing for language comprehension given by a Supervisor of Tests and Measurements administering revised stateside tests. They further note that lesson plans had built-in checks in the student worksheets which were sampled regularly. (1968: 11)

From the data above, the reliability cycle of the Samoan project can be pieced together as follows:

10. The elementary and secondary school principals monitor not only the general operation of their respective schools, but as Schramm notes: ". . . since the mimeographed instructions are not always followed, much of the responsibility for encouraging stimulating classroom activities rests on the supervising principal." (1967a: 32) Principals are provided with evaluation forms.

11. The classroom teacher is also asked to evaluate all the television programs transmitted to their classes by means of two different forms which are described in Schramm:

> Two types of evaluation sheets have been used in Samoa, each with success. One is open-ended and reads like this:
>
> We would like to know the things that went well, and those that did not.
>
> The telecast
>
> (space for comments)
>
> The class-room
>
> (space for comments)
>
> Another form enables the teacher or principal merely to check a number of responses concerning the materials, the telecast, and the activities afterward (a sample is shown in Appendix D) although the evaluator is encouraged to use the back of the sheet to write other comments. The open-ended form tends to produce more comments, the closed form to be filled out more regularly. (1967a: 33)

12. Television teachers are advised to visit classroom. In addition, they are reported to give fortnightly tests to the students which are fed back for evaluation by the production staff.

13. Producer-directors are advised to observe classroom activity.

14. Administrators and instructional supervisors are likewise advised to visit classrooms regularly.

15. The Supervisor of Tests and Measurements administers certain tests which are fed back.

16. The students themselves have built-in checks in their worksheets which are "sampled regularly." This evaluation material is most likely available for inspection by all personnel of the reliability cycle.

17. The technical subsystem of the action process has its own feedback system formed by two-way radio contact of each school with the engineering staff to meet short-range, technical problems. (Frielinghaus and Cobb, 1968: 4)

Monitoring personnel and feedback content and channels in the action process are given in Figure 5.12.

Nonformal Factors in Monitoring and Feedback Processes

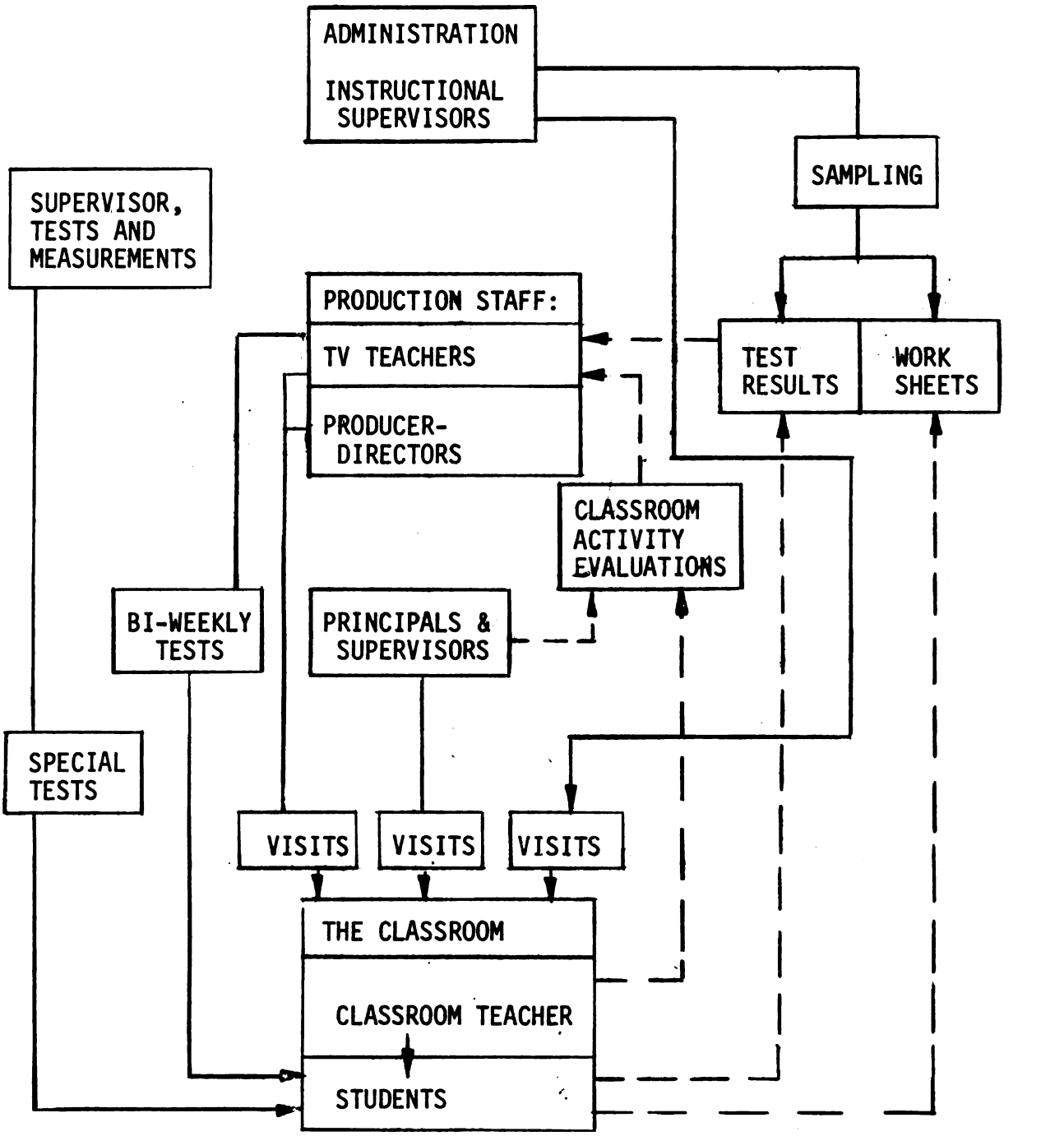
Despite the official monitoring and feedback processes just described, Schramm was compelled to observe:

> In the absence of a measurement specialist and a system-wide testing programme, Samoa knows less than it would like to know about the effectiveness of its new school programme. (1967a: 33)

The weakness in the reliability cycle might be attributable in part to certain formal elements such as the lack of a testing specialist (apparently remedied by 1968) to construct tests specifically for Samoans; the lack of a monitoring system to guarantee more regularity in classroom teachers' evaluations; and the lack of time in the production schedule to allow production personnel to view the student response to the telecasts. (Cf. Schramm, 1967a: 32-33)

Figure 5.12. Action process monitoring and feedback.

Monitoring functions: ——————→ Feedback functions: — — — →



Besides formal weaknesses, evidence from one of the United States personnel, Muhlbach (a producer-director), attached to the Samoan project suggests that certain nonformal factors also inhibited the monitoring and feedback processes. According to Muhlbach (on contract from July, 1965 to July, 1969) certain difficulties which the project faced were inherently cross-cultural, and of such a nature as potentially to inhibit both monitoring and feedback processes.

1. A first factor was the amount of time (six months, in the estimation of this producer-director) required for United States personnel first to become acclimatized to Samoa. To become fully effective in the project required a full year. Given the fact that it took stateside personnel fully one year to become functionally effective in the project and acclimatized to Samoans, plus the fact that Muhlbach's estimate was that 60% of United States personnel remained with the project only two years, it is clear that the project was always laboring under a certain amount of "cross-cultural delusion." In order to monitor accurately and feed back significant data, an observer of Samoan classrooms and test-results would have to be acclimatized and understand Samoan student response. Insofar as this familiarity with Samoan cultural responses was less than optimal, the monitoring and feedback processes suffered accordingly.

2. Muhlbach stated in interview that another recurring problem in the project was the ignorance of the production team as to the exact educational level of the target audience. He reported that often enough the television teacher or the producer-director would be simply told to assume that "these fifteen-year-olds are at a seventh grade level" of

United States students. If monitoring and feedback processes had been capable of providing information about the target audience culturally more accurate, this problem perhaps might not have been so recurrent.

3. A nonformal factor relating to the reliability cycle, according to Muhlbach, was the difficulty in obtaining hard evidence from the classroom teachers. Samoan teachers would characteristically be diffident to report anything resembling criticism of the television teacher. Such diffidence runs counter to the formal prescriptions of the telecast evaluation sheets and as such constitutes a further nonformal factor inhibiting the monitoring and feedback processes. (Muhlbach interview with the author, November 7, 1971)

Conclusion: System Effectiveness

Beyond the evaluations mentioned at the beginning of this section, there was--during the time-period of the literature available regarding this project--little solid feedback on the effectiveness of the system. Schramm, however, notes that he and other observers generally agreed that:

1. students, teachers, and even the adult population seemed to be speaking much more fluent English than under the old system;

2. important curriculum content was being taught in a much more uniform way throughout the school system;

3. in place of sing-song class recitations and rote memorization, there was more discussion and questioning in the classrooms; (1967a: 34)

4. the great majority of students appeared to pay close attention to the telecasts, although this varied with the ability of different classroom teachers to instill attention; (1967a: 32)

5. there appeared to be no widespread opposition to the system from students; (1967a: 37)

6. generally, teachers who learned to do their job better seemed to like the new system. (1967a: 35)

Hall reports that the use of English was fluent and flexible and that conceptual learning was apparent. He concluded:

> Overall, there is now strong indication that young Samoans are learning vital coping skills with which to confront the impinging forces of the twentieth century, something they were certainly not doing previously. (1969: 23)

Schramm concludes his report:

> Meanwhile, however, the tentative conclusion has to be that television in Samoa is proving itself an effective stimulant to educational change, and that it does seem to be contributing to raising educational standards. Every indication is that it is likely to prove itself a useful and permanent part of a school system, although in ways and patterns that are not yet entirely defined. (1967a: 50)

The ways and patterns not yet entirely defined which would condition the permanence of the educational system conceived by Lee and Bronson will form the core of the next section: the degree to which the system-strategy was able to modify itself in the face of changing environmental influences.

8. SYSTEM-STRATEGY MODIFICATION

Introduction

The discussion of system-modification, the second half of a system's reliability cycle, will fall into three parts. The first will treat the modification cycles the Samoan system used to adapt and improve the core of its effort: the school curriculum. The second part will elucidate the formal and nonformal factors in the system which might facilitate or

inhibit modification. The third part will review the difficulties the project has encountered, from an etiological viewpoint.

Curriculum Modification: The Shorter Cycle

The discussion of monitoring and feedback established that the reliability cycle of the Samoan project as ideally designed (and described by Hall, p. 443) was not the actual reliability cycle of the project. From Figure 5.12, it can be seen that the system had a design-capability of immediate monitoring and feedback of classroom evaluations back to the production staff where the evaluations of one day's telecast could suggest modifications in the next day's production. However, as was seen in the last section, two factors prevented this extremely immediate reliability cycle from functioning.

The first factor was the overloaded production schedule. On the day of any given telecast to the classrooms, the production staff would be producing a telecast not for the next day but for a day several weeks thence. Thus, even if evaluations of each telecast were received by the production staff the same day of the telecast, they could be used only as general indicators of needed modifications, because production would have already been engaged in telecasts two or three weeks ahead in the schedule.

A second factor was the communications delay in feeding back the evaluations of telecasts to the production staff. The evaluations (and it must be remembered that their accuracy and frequency were uneven) were obtained only on a weekly basis at the time that the supplementary materials were delivered to the schools.

Hence, because production was several weeks ahead of telecasting and evaluations of telecasts were gathered only once a week, the feedback from school classrooms regarding any given telecast was able to be used not specifically but only generally to produce modifications in the production of televised curriculum. This reliability cycle is termed the "shorter" cycle and is illustrated in Figure 5.13.

Curriculum Modification: The Longer Cycle

The longer cycle refers to the modification of the school curriculum which took place each summer when the Curriculum Supervisory Committee brought together personnel from all phases of the project to form Planning Committees to create new curricula for the following school year. The necessity for creating a fresh curriculum for each succeeding year derived from the need to raise educational standards by yearly increments so that the goal of high standards would be achieved as quickly as possible. The personnel of these committees has been described earlier (p. 423); the design of this "longer" cycle of curriculum modification is given in Figure 5.13.

Formal Factors Facilitating Modification

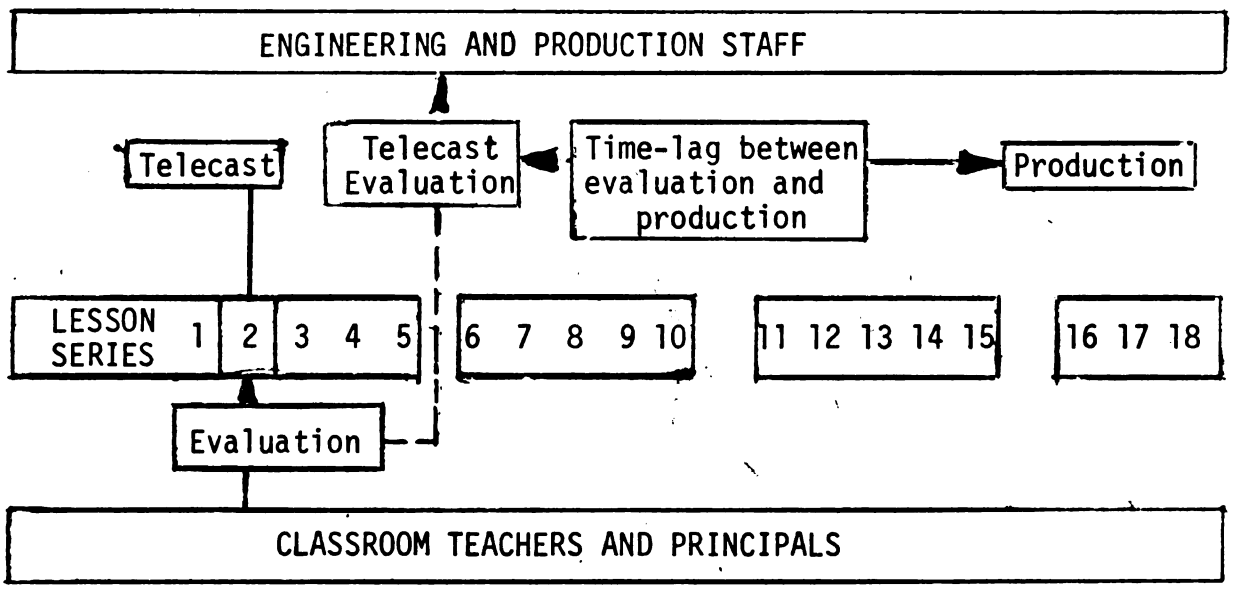
From the discussion up to this point, certain factors can be identified in the structure of the Samoan project which enabled the project to modify its output. Some of the clear formal factors were:

1. The centralized decision structure which limited the dispersal of authority to a few United States decision-makers reduced the possibility of delay (caused by opposition) once modification was decided upon.

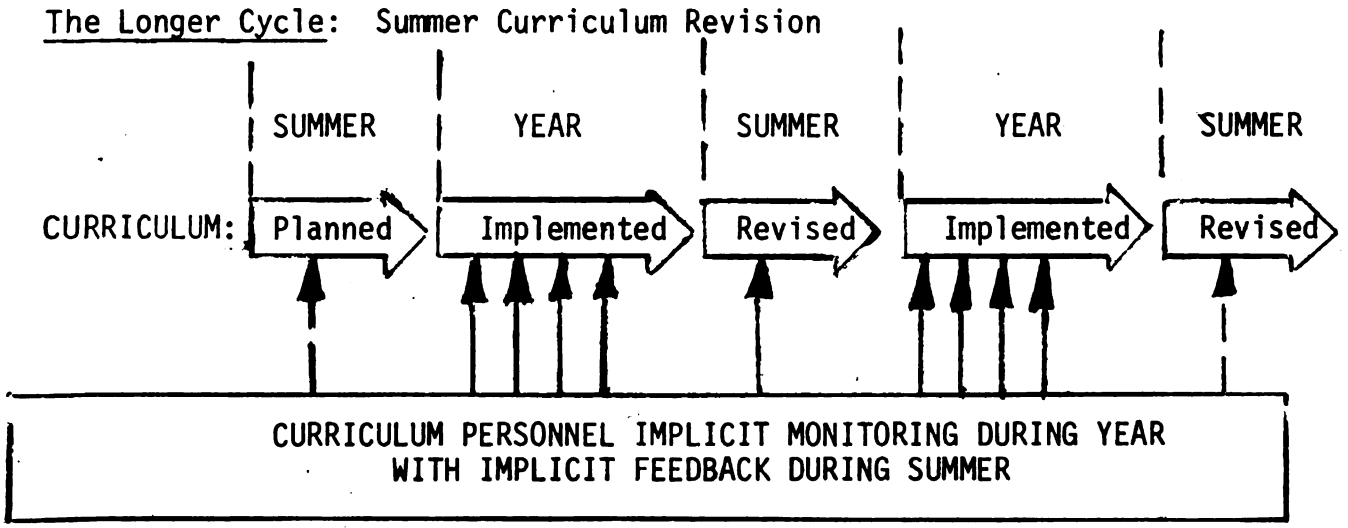
Figure 5.13. Curriculum modification cycles.

Monitoring process: ——→ Feedback process: — — →

The Shorter Cycle: Daily Telecast, Evaluation, Production Relationships



The Longer Cycle: Summer Curriculum Revision



2. The shorter and longer modification cycles were formal components of the system designed to produce regular and systematic modification of the curriculum.

3. The formal concept of "co-operative education" produced not only new role definitions for personnel, but positioned them in formal relationships of interaction. Such interaction is a formal information circuit which facilitates modification.

Nonformal Factors Facilitating Modification

Certain nonformal factors implicit in the genesis of the project can be viewed as facilitating modification, such as:

1. The nonformal influence of Lee's vision for change in Samoa and Bronson's brilliance and dedication--as well as his authoritarianism--were influential in producing change.

2. The nonformal values dictating the retention of all Samoan teachers and their incorporation into the new system influenced the degree to which the new system (a modification) was accepted by Samoans. By contrast, the dismissal of these teachers would have certainly inhibited or even prohibited any modification of Samoan education.

Formal Factors Inhibiting Modification

Certain factors designed into the system possibly had negative effects on system modification. These were:

1. If a modification desired by decision-receivers in the project should run counter to the views of the (extremely few) decision-makers of the project, the project's limited dispersal of authority would inhibit such a modification.

2. In modifications relating to curriculum, the advanced production schedule of telecasts and the feedback-delay of telecast-evaluations both inhibited the shorter reliability cycle from operating exactly as designed.

3. The formal necessity of raising educational achievement standards from year to year maintained such pressure on the production staff and the curriculum committees to produce fresh material that time for reflection and evaluation leading to modification was necessarily limited.

4. The short tenures of United States personnel would retard modification because of the necessary acclimitization of new personnel.

Nonformal Factors Inhibiting Modification

1. The limited dispersal of formal authority in the project possibly caused a feeling of disenfranchisement among Samoan personnel.

2. The salaries paid to personnel are formal components required for the operation of the system. The wage discrepancy between Samoan and United States salaries, however, could have been a nonformal factor inhibiting the co-operation required for system modification.

3. The authoritarian exercise of any authority configuration in the project could inhibit the co-operation necessary to carry out modifications of the system.

4. The diffidence of Samoans to criticize the system candidly would distort the feedback necessary for accurate modification.

5. The acclimitization period of United States personnel relative to Samoan nonformal values would have a retarding effect on modifications of the system.

6. The inferior position of Samoan project personnel in a system of continually rising standards may have retarded system modification insofar as such an inferior position would require Samoans to engage in a time-consuming and painful effort to discern their new identity implicit in a new role assignment.

Although the above summary of factors affecting the capacity of the system-strategy to modify itself may not be exhaustive, it should suggest some of the factors to be kept in mind in the following etiological discussion of the project's difficulties.

Difficulties of the Project

Technical Difficulties

Schramm reports that two basic difficulties presented themselves early in the project. The first was the positioning of the two 227 ft. antenna towers atop 1,600 ft. Mt. Alava overlooking Pago Pago harbor. Engineers first attempted to build a road to the summit but this effort was abandoned after a quarter mile as too expensive. The transport of tower components by helicopter to the summit was then tried and abandoned as too risky in the high winds near the summit. Finally, engineers decided on a cableway to transport components of the tower during construction and to service the transmitter once installed.

A second technical difficulty was the initially high incidence of failure of the high-voltage transformers owing to the humidity and heat of Samoa. Dipping the transformers in bees-wax and keeping the receiver on twenty-four hours a day served to reduce the humidity and prevent mildewing of components. (1967a: 20)

Curriculum Difficulties

Once the decision was taken to produce swift rather than gradual change in Samoan educational standards, certain effects of this decision began to circulate through the system.

1. The pace of change forced, as has been noted, curriculum committees to convene each summer to revise almost the entire curriculum, from content and approaches down to daily lesson plans. The burden of work was such, as Schramm notes, that during the 1965 curriculum sessions, "neither committee completely finished the job during the summer weeks available." (1967a: 27) If, in subsequent summers, the work to be done and the capacity of the committees remained similar, this would have meant that each school year would begin with an essentially incomplete curriculum. Perhaps a more gradual pace of change--and a curriculum specialist--could have resolved this difficulty.

2. The content of the curriculum being telecast and the complementary materials to support the telecast were often out of phase. The reason for this discrepancy, according to Schramm, was that the research teacher had to prepare the supporting materials far in advance of the production of the telecast. The production pressure on producer-directors to turn out upwards of twenty programs each week most probably caused deviations from curriculum scheduling devised previous summers. The production pressure in turn derived from the pace of change originally decided upon, and the burden of determining, each summer, the day-to-day scheduling of new curricula for each following year must have been a major effort in contingency planning.

Personnel Difficulties

1. Skornia mentions the work load put upon production staff as "enormous" and tending to "burn out" creative personnel. Again, the pace of change demanded of the system would seem to be the cause. (1969: 58)

2. Schramm mentions that project planners, if starting the project again, would have emphasized more the concept of the "teaching team." (1967a: 50) Evidently Bronson's system of "co-operative education" ran into difficulties which may have been caused by any number of factors: wage differential between Samoan and United States teachers; the absence of Samoans in decision-centers; the implicitly inferior status of class-room teachers vis-a-vis the television teacher and the supervising principal; cross-cultural dissonance between Samoans and United States personnel, etc.

Implementation Difficulties

1. Skornia (1969: 58) and Schramm (1967a: 30) both mention that telecast-followup activities were uniformly weak. The causes of this, Schramm suggests, may have been inadequate complementary materials, the training of the teachers, "or simply . . . the fact that class-room teachers want and need more freedom of activity than is provided them under this system." (1967a: 31) Muhlbach supported the last thesis: Samoan teachers with academic degrees from the United States were often intent on implementing their own ideas which were not necessarily correlated with objectives defined for them. (Interview, November 7, 1971)

2. Another of the project planners' second thoughts was that the project suffered from a lack of curriculum specialists, testing and evaluation experts, and guidance counsellors. Lee's decision to change the educational system swiftly may have prevented planners from assembling a more complete range of personnel, or perhaps initially it was thought that such personnel could be added once the project was underway. Curriculum specialists may have been able to design a less burdensome system of curriculum revision; testing specialists would have been able to provide more accurate information regarding the target audience of a telecast (cf. p. 449); evaluation experts could have helped eliminate curricular cul-de-sacs. (Cf. Schramm, 1967a: 50)

Nonformal Difficulties

1. Skornia mentions two misgivings based on his observation of the Samoan system which are equivalently nonformal effects of the formal design of the project. The first is that the system seemed to produce passivity and conformity in the student. The lockstep routine of children sitting hour after hour, hands folded, eyes glued to the television set disturbed this observer. Skornia suggests that the intense television format be relieved with more discussion, activity with teaching machines, etc. (1969: 58) The rationale, of course, for the intense television format was the decision to standardize teaching by teaching the core curriculum of each subject through television teachers of similarly high standards.

2. Skornia's second misgiving relates not only to nonformal values of students but of all personnel in the system. He states: "I fear the

totalitarian tendency represented by the 'imposition from above' of all aspects of the new curriculum." (1969: 58) This "totalitarian tendency" stemmed from the disestablishment of Samoan teaching authority and the concentration of formal authority within the system in the hands of a few United States personnel.

Reliability Cycle Difficulties

Apart from the lack of concrete evaluation and hard evidence regarding the actual functioning of the system due to the absence of testing and evaluation personnel, Skornia indicts the Samoan system itself for reliability cycle weaknesses. He states:

> . . . with 180 television lessons a week going out, 36 weeks a year, one becomes so preoccupied with doing it all that one ceases to have time to think, to reject, to innovate. Provision for such activity must be built into projects like this from the outset if, in a few years, such "new" projects are themselves not to become swamped in "vested interest" considerations. (1969: 58)

The system's pre-occupation with system-implementation was due to the decision for swift transition to high educational standards and the failure to recognize that the swifter the transition and the higher the standards, the more accurately the system would have to be monitored, evaluated, and modified.

A Major Modification: Ouster of the NAEB from Samoa

History

On August 1, 1967, former Territorial Secretary Owen Aspinall succeeded Rex Lee as Governor of Samoa. (Inouye, Congressional Record, August 2, 1967: 20959)

On February 28, 1969, with Governor Aspinall in office, the contract of Bronson and the National Association of Educational Broadcasters who had been the driving force behind Lee's educational reform, was terminated.

The obituary of the NAEB's role in Samoa appeared in Broadcasting magazine:

> The National Association of Educational Broadcasters has announced it will not renew its eight-year-old contract as educational adviser to the government of American Samoa, charging that the present governor has "consistently thwarted" NAEB and main officials of the local school system. The present $84,000 contract expired on Feb. 28. (March 3, 1969: 69)

Because of the dominant role played by Bronson and the NAEB in recruiting personnel for Lee's educational television project, the non-renewal of the NAEB contract had to constitute a major turn of events for the Samoan instructional television project. From bits of evidence gained from interviews with Muhlbach and McMullen, two former United States personnel of the Samoan project, a scenario can be re-constructed of the events leading up to the ouster of the NAEB from Samoa.

Governor Aspinall and Bronson

Aspinall apparently held strong views regarding (1) the lack of any vocational training in the curriculum of the educational television project, and (2) the extensive use of English and the methods used to teach it. This latter view moved Aspinall to consult with educators at the University of Southern California where, Aspinall appears to have felt, more efficient methods of teaching English were exemplified. (Muhlbach interview, November 7, 1971)

It also appears that Aspinall may have had reservations over the preponderance of United States personnel in the project, the absence of Samoans in major positions, and the lack of authority of school principals in Samoa to decide the degree of their school's participation in the project. The fact remains that Aspinall (probably some time in 1968) replaced United States school principals in the project with Samoan principals and gave them power to decide how much or how little television was to be used in their schools. (Muhlbach interview, November 7, 1971)

Aspinall's views on vocational training, the extensive use of English, and the amount of authority to be given individual school principals clearly must have conflicted with those of former Governor Lee and Bronson of the NAEB. The aims of Lee and Bronson (cf. Table 5.3, pp. 386-87) were to provide Samoa with professionals and technicians, not craftsmen and farmers; and the withholding of autonomy from school principals regarding the use or non-use of television was aimed at establishing uniformly high educational standards with consistency and speed.

This conflict, therefore, between Aspinall and Bronson over the general direction of the educational system in Samoa, would seem to have been the origin of Aspinall's decisions which "consistently thwarted" the NAEB and main officials of the system and which led the NAEB to terminate its contract with Samoa.

Governor Haydon and the Samoan Project

John M. Haydon succeeded Owen Aspinall as Governor of Samoa on August 5, 1969. He appears to have continued Aspinall's policy of replacing United States with Samoan project personnel. According to

McMullen, he fired all United States educational administrators and placed Samoans in charge, although United States personnel in lower echelons continued to do the actual running of the educational operation. Haydon also exercised his authority as governor to order educational experimentation which had been tried and abandoned in previous years. (McMullen interview, February, 1971)

Conclusion

Within two or three years of Lee's leaving office, therefore, the novel television system of education which Lee and Bronson had created had undergone major and unforeseen modifications. Writing after the ouster of the NAEB from Samoa, Hall states:

> The Samoan experience makes it clear that technology must be nourished in a proper methodological setting if its potentials for learning facilitation are to be realized. To make this sort of commitment requires rare "political" and educational courage. Recent events in Samoa itself may indicate that, even there, these necessities are in too short supply. . . . This is alarming. . . For it [the project] to fail for reasons external to its professional mechanism would be a far-reaching setback to the educational hopes around the world. (1969: 23)

The judgment as to whether or not the termination of the NAEB contract, the positioning of Samoans in decision centers, and the redistribution of authority in the Samoan project, constituted a "far-reaching setback to the educational hopes around the world" is a judgment which depends on one's viewpoint. If the highest priority in Samoa is to create a corps of professionals of high uniform educational achievement, the dilution of centralized authority and the positioning of less-qualified personnel in decision centers would be termed a "setback." If, however, the highest priority is to have Samoans in charge of Samoan

education, such modifications would be seen as an advance upon the educational system of Bronson and Lee.

However, beyond any value-judgment concerning the events that have taken place in Samoan education more recently, a systematic analysis is required to discover or infer those factors which--however unforeseen--may have been instrumental in producing the events which caused the Samoan project to undergo major modifications since Lee left Samoa in 1967.

Etiological Analysis of Recent Modifications

The System's Decision Structure

A primary cause of the major modifications the project underwent was the decision structure. Everly had recommended that the Samoan Department of Education be made independent of the Governor's authority (cf. Table 5.3, p. 387, no. 27). As has been seen, Lee in no way followed Everly's recommendation but instead dissolved the former board of education and placed the educational system squarely under his executive authority. It was precisely this centralized decision structure that enabled both Lee and Bronson to eliminate or neutralize opposition to the new system and to make swift and far-reaching decisions in order to bring about a radical change in Samoan education.

Aspinall and Haydon assumed the office of Governor with the same autonomous decision structure at their disposal, and they used their authority make major modifications in the Samoan project. Thus, the same decision structure employed to establish the Samoan project was also used to modify it drastically.

Had Lee and Bronson reflected on the authority at their disposal to make extensive and swift changes in the educational system, they might have realized that the same structure, in different hands, could be used to dismantle the very system they were constructing. It could only have been obvious to all concerned that the Governor's office was a political appointment, totally subject to political winds. It further needed only momentary reflection to realize that with a change in executive viewpoint, the whole Samoan project could be swiftly put in jeopardy. Lee's "first order of business", therefore, may reasonably have been "an explosive upgrading of the school system" but his "last order of business" should have been the establishment of the Samoan Department of Education as independent of executive authority if his educational project were to be guaranteed survival.

The System's Objectives

The improvement of agriculture and vocational training were two clear recommendations of the Long-Gruening and the Everly reports. As long as the educational system excluded these recommendations from its objectives, the system remained vulnerable to any executive viewpoint which would place a high priority on agricultural and vocational training.

Regarding the use of English, it will be remembered that Lee was struck by the fact that he could not be understood by Samoans, and that Bronson described the lack of English fluency in Samoa in rather rhetorical terms. Thus the establishment of fluent English among the Samoan populace was felt to be an urgent need by both decision-makers. However, the general policies of "Samoa for the Samoans" and the

"preservation of Samoan culture" were clear mandates for anyone assuming the office of Governor in Samoa, and it is not difficult to understand how Aspinall could have interpreted such policies differently from Lee in the former's decisions to change the project's objectives regarding the amount of English being taught in the schools.

Nonformal Factors in the System

At the time that Aspinall assumed office, it seems that there was a certain amount of criticism of the Samoan television project being voiced in the Samoan legislature. (McMullen interview, February 1971) It is quite possible that some of this criticism stemmed from nonformal factors inherent in the formal system which have already been extensively enumerated: decision-makers were United States personnel, decision-receivers were principally Samoans; the daily exposure of Samoan teachers to comparison with highly qualified teachers and supervisors was a constant nonformal pressure, etc. Both the decision-structure and its authoritarian exercise may well have rankled Samoans within the system. The preponderance of English entering the Samoan environment through a mass medium and the unfamiliar cultural values being taught and televised may also have contributed to a certain amount of Samoan disenchantment with the system and a fear of social and cultural disintegration because of the system.

It is easy to see, given this disenchantment, how Aspinall could have viewed the Samoan television project as an unwelcome intrusion into Samoa, a disestablishment of Samoan teachers from their rightful positions of power, and a social and cultural disruption. As a widely-accepted rationale for his decisions to alter the project drastically,

Aspinall could have harkened to the dual policies of "Samoa for the Samoans" and the preservation of Samoan culture.

Thus, nonformal factors also may have played their part in the marked modifications which the Samoan project underwent after Lee's departure.

CONCLUSION

The present account of the instructional television project in American Samoa ends with the brief allusion above to events under Governor Haydon which affected the project after the termination of the NAEB contract under Aspinall. The replacement of United States decision personnel by Samoans, the autonomy granted to the newly-appointed Samoan school principals, and the diminished emphasis upon English, etc., constituted a major modification of the project unforeseen by the original planners.

The immediate causes of these modifications have been suggested above: the power still residing with the Governor's office relative to education was sufficient to effect major modifications; the project's incomplete set of educational objectives left the system open to being modified on reasonable grounds; and the project's timetable, in scheduling a rapid change to high educational standards, necessarily excluded Samoans from decision-making positions and made the project vulnerable to possible Samoan discontent.

Since the immediate causes of the modifications appear to have been the differing evaluations of the project by those with formal authority (the Governor) and those with nonformal power (Samoan personnel

within the project and Samoan legislators), the suggestion occurs that the more remote causes of the modifications may have been various types of "cross-cultural dissonance" arising within and outside the project at points where differing cultural and subcultural value systems interfaced.

While the remote causes of the modifications of the project cannot be isolated with any degree of certainty from the literature available, a review of some of the cultural and subcultural interfaces of the project and its environment can serve to exhibit the inherent complexity of the establishment of this modern instructional television project by Americans in Samoa. At the same time, such a review of some of the cross-cultural interfaces may serve to identify the areas of potential "cross-cultural dissonance" which could have caused the modifications of the project.

Project-Personnel Interfaces

The American Political-Educational Personnel-Interface

Governor Lee was in United States Government service; Vernon Bronson had come from United States educational broadcasting. The differences in value systems of government officers and educators did not appear in the years of the Lee-Bronson collaboration because Bronson's educational ideas for an instructional television project meshed with Lee's administrative plans for swift changes in Samoa. The implicit subcultural differences in the United States political and United States educational value systems, however, eventually surfaced as disagreement between Bronson and the NAEB on the one hand, and Governors Aspinall and

Haydon on the other. This subcultural dissonance led to major modifications in the project.

The American-Samoan Educational Personnel-Interface

United States educators were generally in positions of authority throughout the project. Most Samoan teachers and educators for an indefinite period of time were largely relegated by the formal structure of the project to positions of "learning" a new system of instruction from United States personnel who were the television teachers, the supervisors of instruction, the curriculum designers, and the administrators of the schools. The speed of the changes effected by the instructional television project left little time for any meshing of American and Samoan educational value systems. Thus the project may have been rather continually beset by cultural dissonance at the educational interface.

The American-Samoan Socio-Cultural Personnel-Interface

In addition to being "taught" a completely new instructional system at the educational interface, Samoans within the project were constantly being "informed" and "directed" by the information and decision processes of the project. The information process disestablished Samoans from positions where they could interpret for themselves the educational needs of Samoans, and the decision process excluded them from determining how such needs should be met. This explicit mistrust of Samoan discernment by the formal structure of the project may have produced cross-cultural dissonance at the socio-cultural interface of the project.

Project-Environment Interfaces

The American-Samoan Economic Environment-Interface

The Samoan economy was predominantly a subsistence economy in which extended families held nearly all Samoan land. Lee's numerous programs of economic reconstruction (including the television project with its far-reaching effects) represented a massive injection of non-Samoan capital. While Lee's programs, with their advanced technology, had the effect of moving Samoa toward an economic "lift-off" stage, the capital behind the programs was non-Samoan. It is therefore conceivable that until Samoans would feel secure that the influx of capital were not inevitably going to disestablish their control of the Samoan economy, there may have been cross-cultural dissonance at the economic interface.

The American-Samoan Educational Environment-Interface

The Long-Gruening report found, in effect, two groups of adults in Samoa, both of whom had a stake in the way their children were to be educated. A first group can be identified as those adults satisfied with the patriarchal matai system who reflected traditional values and who identified Samoan cultural and educational values with their traditional way of life. A second group can be identified as those less traditional Samoans who found means either to leave Samoa to educate their children or send their children outside Samoa for their education. Thus the adult population of Samoa contained its own interface of two differing value systems of education. Hence, while the instructional television project may have reinforced the educational values of the less traditional group, the project may have caused cultural dissonance at its educational interface with the more traditional group.

The American-Samoan Socio-Cultural Environment-Interface

Since the economic and educational changes in Samoa were instituted not in a vacuum but in a socio-cultural milieu, such changes were not without socio-cultural side-effects. According to the Long-Gruening report, the matai system in Samoa in the 1960s still controlled virtually every aspect of Samoan life. Moreover, the upper house of the legislature was composed exclusively of matai chieftains. As influential arbiters of Samoan socio-cultural values, the matai chieftains might well have viewed the concomitant effects of Lee's numerous programs as disturbances of their socio-cultural value system. Therefore, to the extent that economic and educational changes in Samoa were experienced by the matai chieftains and others within the matai system as challenges to their control of socio-cultural values in Samoa, the entire gamut of Lee's programs may have produced cross-cultural dissonance at the socio-cultural interface.

Since both the identification of various interfaces and their dynamics of dissonance remain hypothetical, the remote causes of events affecting the instructional television project are similarly uncertain relative to the data available in the literature. Yet such hypotheses establish at least a partial heuristic structure of investigation which could--with more precise data--lead not only to the causes of the major modifications of the instructional television project in American Samoa, but also to the parameters and constraints conditioning the planning of similar projects in cross-cultural milieus.

CHAPTER VI

SYSTEMATIC COMPARISON OF PROJECTS

INTRODUCTION

With the completion of the systematic analysis of the three broadcasting projects in developing countries, what remains is the comparison of the projects to assess their use of the systematic stages of planning design relative to each other. That is, within the dual limits of the data offered by sources which were mainly secondary, and the tentative conclusions advanced by the foregoing analysis, the three projects will be compared and evaluated to determine their thoroughness, in carrying out the stages of systematic planning.

To recapitulate, the rational demand for systematic planning derives from the general canons of empirical method which in turn are refined by the general method of systems analysis. The canon of empirical data requires that planners operationalize objectives by expressing them in terms specific enough to define personnel roles in the system-strategy and to provide reliability cycle personnel with clues for monitoring the system's performance. The canon of operations dictates that the maintenance of the system requires a repetition of certain operations such as the exploration of alternatives and monitoring-feedback-modification. The canon of empirical solution requires that the system-strategy be designed with sufficient subsystems to effect the behavioral specifications

of the objectives. The canon of parsimony establishes the need for planners to identify those real-world constraints which will condition the system-strategy and, through experimentation with alternatives, select the optimal strategy within those constraints. The canon of complete solution in its turn requires planners to investigate as thoroughly as possible the environment of a projected endeavor and to monitor it continually. Finally, the canon of empirical residues demands that the monitoring of the system-strategy include not only the formal system as its object, but also the nonformal world of unsystematic events which can condition system performance.

In the general method of systems analysis and systematic planning, the first operation of gathering system-data implies that planners should not only gather monitored data about the system-strategy, but that system-related data must be derived from the environment both before and after the creation of the system, for the environment itself constitutes congeries of systems related systematically as well as unsystematically to the project. The second operation of isolating system-components exhorts planners to monitor not some but all system-components and their interfaces. The third operation of identifying system interrelationships underlies the hierarchizing of environmental needs and objectives, the development of alternatives relative to the limits imposed by constraints, and the creation of integrated decision and action processes. The final operation in the general method, relating the system-strategy to its environment, demands that the project's reliability cycle monitor not only the operations of the project but also the world of its environment upon which the project depends for survival.

The comparison of planning performance of the three projects relative to each other will follow the sequence of the eight analytic categories used to describe the projects in the foregoing chapters. The estimate of their relative thoroughness in carrying out each of the eight stages of systematic planning will be an entirely subjective judgment based on the analyses of previous chapters.

1. THE ASSESSMENT OF THE ENVIRONMENTAL NEED

The Use of Professionals

The most complete prior assessment of the environment of the three projects was that of the Samoan instructional television project. This project used professionals to assess Samoa's environment, first in the team composed of Long, Gruening, Everly, and others of the Senate Commission, and in the subsequent planning of the project, Bronson and the Reller committee. The former group were systematically concerned with the total environment, while the latter group was mainly assessing the feasibility of the alternative of instructional television.

The Poona-UNESCO project was itself an investigation of the environment and functioned as such for the subsequent National Scheme. The former project, however, while not carrying out a formal assessment of the environment prior to the pilot project, did use professionals connected with the Tata Institute of Social Sciences, Bombay, to design the pilot project in such a way as to assess the environment relative to the alternative of radio rural forums. Thus, the Poona-UNESCO project began with no formal assessment of the environment, and the National Radio Rural

Forum Scheme was inaugurated with a professional assessment of a limited sector of the Indian environment.

The assessment of the environment of Radio Sutatenza through the first three phases was unsystematic and carried out by Salcedo and his fellow *párrocos* as they developed their system-strategy by means of an informal pilot project. The judgment of both Torres and Corredor, and Musto, however, was that during the fourth and the fifth phases, ACPO neglected to monitor the environment effectively. Even if this judgment is an *ignoratio elenchi*, the fact remains the Salcedo himself toward the end of the fifth phase called for a more accurate monitoring of the environment by personnel within ACPO.

Non-Formal Factors in the Assessments

The assessments of the environments of the three projects were carried out under certain nonformal constraints, one of which, nonformal subcultural dissonance, will be considered. This factor is considered significant because however thorough or professional an assessment may have been, the problem of the members of one culture or subculture assessing the environment of a different culture or subculture includes the possibility of bias arising from subcultural dissonance.

The possibility of dissonance at a *subcultural* interface was present in both the Indian and Colombian projects. The environmental assessment prior to the Poona-UNESCO project was almost non-existent, but to the extend such an assessment was implicit in planning, this was carried out by members of the bureaucratic subculture. The National Scheme's

environmental assessment was implicitly the results of the Poona-UNESCO project which were determined by two non-Indians. Thus, the environment of the subculture of rural India was assessed by members of a different subculture or culture.

According to the argument advanced in Chapter 3, the underlying empirical philosophy of ACPO as well as decision transmission efficiency were determined by the clerical subculture of the Colombian Church. Thus, whatever environmental assessment there was in the ACPO project, may have been conditioned by subcultural dissonance between the clerical *párroco* and the subculture of the *campesino*.

The instructional television project of Samoa was clearly a project whose environmental assessment may have been subject to *cultural* dissonance, as Americans investigated the needs of Samoans.

Completeness of Assessments

The most complete environmental assessment of the three projects was that done by Long, Gruening, and Everly and used by Lee and Bronson to plan the Samoa project.

Although Radio Sutatenza had no thorough assessment of the environment prior to the inauguration of the project, evidence in Musto indicated that ACPO was well aware of an extensive set of environmental needs during the fifth phase.

The Poona-UNESCO project was planned without an environment in mind, but rather with the intention of testing the results of the UNESCO study of a farm forum scheme in the quite different environment of Canada. The National Scheme, however, drew upon a relevant environmental

assessment, that defined by the Poona-UNESCO results, but this assessment was limited to those factors in the environment required for the successful operation of radio rural forums and as such was not an assessment of the environment of rural India as a whole.

2. FORMULATION OF OBJECTIVES

Correlation of Objectives and Needs

Since objectives and needs are correlated within the analysis of a project, the comparison of the three projects will focus upon the relative evidence in this stage of planning of the effort to make the formulation of objectives dependent upon a prior environmental assessment.

In the Samoa project, Lee had already tentatively decided upon the alternative of instructional television and enlisted Bronson of the NAEB before the Long-Gruening report was published. Once published, this report most likely was an environmental assessment drawn upon in the formulation of objectives. The correlation of objectives with Samoan environmental needs, however, may have been conditioned by the nonformal factors in the personalities of both Lee and Bronson as well as American national prestige.

The Poona-UNESCO project's objectives were dictated not by an assessment of the Indian environment but by the results of the UNESCO study of Canada's farm forums. The objectives of the National Scheme in turn remained essentially those of the Poona-UNESCO project with its limited correlation with environmental needs.

The objectives of the first three phases of Radio Sutatenza were correlated with environmental needs mainly through the feedback response

of local level financial support and interested párrocos. The fourth and fifth phases, however, fall under the criticism of the Torres, Corredor and Musto studies, namely, that ACPO had eventually lost contact with its environment and that its objectives had become increasingly irrelevant, i.e., uncorrelated with environmental needs.

Operationalization of Objectives

An index of operationalization able to be expressed by a scale which could compare the three projects is difficult to establish. The most specific operationalization of objectives of the three projects was perhaps the Poona-UNESCO project objectives as defined by Lorenzo and Neurath. Then come the objectives established by Bronson for the Samoa project as these are found operationalized in the appendices in Schramm illustrating the lesson plans used in the project.

The objectives of educación fundamental integral during Radio Sutatenza's fifth phase as described by Bernal would fall about midway on a comparative scale of operationalization. Less explicitly operationalized were the ACPO objectives of phases one through four, as were the objectives of the Indian National Scheme.

3. THE IDENTIFICATION OF CONSTRAINTS

The consideration of constraints conditioning available alternatives was most clearly reported in the literature of the Samoan project where Lee was described as rejecting certain alternatives such as the dismissal of Samoan teachers or the importing of United States teachers for reasons of socio-cultural and financial constraints.

In the other two projects, because the development of alternatives had little evidence in the literature, the constraints which were identified were those such as funding and time schedules which influenced the design of the system-strategy. In the Poona-UNESCO project, funding limited the number of districts in the field study, and the shortage of time severely curtailed the training of organizers. In the National Scheme, while scheduling did not alter the system-strategy, the variation in funding of different Indian States did alter the effectiveness of the system-strategy's implementation.

Radio Sutatenza's private funding and clerical communication structure imposed certain constraints upon the project's expansion, but the constraint of time did not appear as operative in the literature.

Thus, only the Samoa project appears to have given constraints their proper consideration by using them to frame alternatives prior to the selection of a system-strategy.

4. THE EXPLORATION OF ALTERNATIVES

The alternatives considered by Lee were fundamentally hypothetical and not alternatives evaluated by experiment. Radio Sutatenza, on the other hand, showed evidence of a pilot project in its third phase and a number of similar projects carried out in the fifth phase. The latter, however, were not experiments designed to explore new system-strategies but rather adaptations of the basic strategy to specific local conditions.

The Poona-UNESCO project considered only the Canadian farm forums during its curtailed exploration of alternatives, just as the National Scheme considered only the Poona-UNESCO project during its "exploration

of alternatives." However, although the Canadian and Poona-UNESCO forums preceded the Poona-UNESCO and the National Scheme projects respectively, there was no exploration of multiple strategies. Hence, the Indian projects did not benefit realistically from the fourth stage of systematic planning.

5. THE SELECTION OF THE SYSTEM-STRATEGY

This stage of planning can be identified validly only if alternatives have been explored. In the Samoa project, Lee appeared to have made a tentative selection of television with his enlisting of Bronson of the NAEB to study its feasibility. However, the final decision came only after the assessment of Bronson's proposal by the Reller committee, indicating at least a certain amount of reflection prior to the selection of the system-strategy.

Salcedo's exploration of the alternatives of cinema and theatre preceded his selection of broadcasting, and the pilot project of the third phase preceded the selection of the system-strategy including the auxiliar inmediato which was implemented in the fourth and fifth phases.

The selection of the system-strategy of the Poona-UNESCO project was performed with no consideration of alternatives by the Government of India, in the same fashion as its selection of the system-strategy of the National Scheme was carried out.

6. THE IMPLEMENTATION OF THE SYSTEM-STRATEGY

Decision Process: Dispersal of Authority

The decision processes of the three projects will be compared by

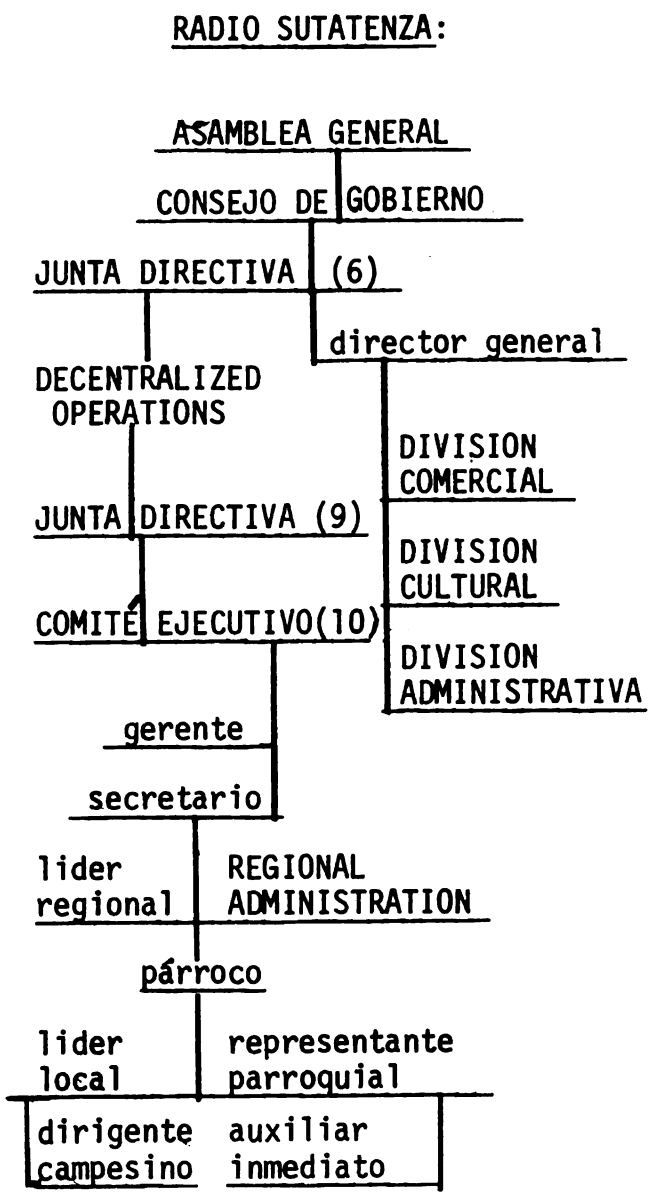
considering their respective organizational charts for evidence of the relative dispersal of authority within the projects.

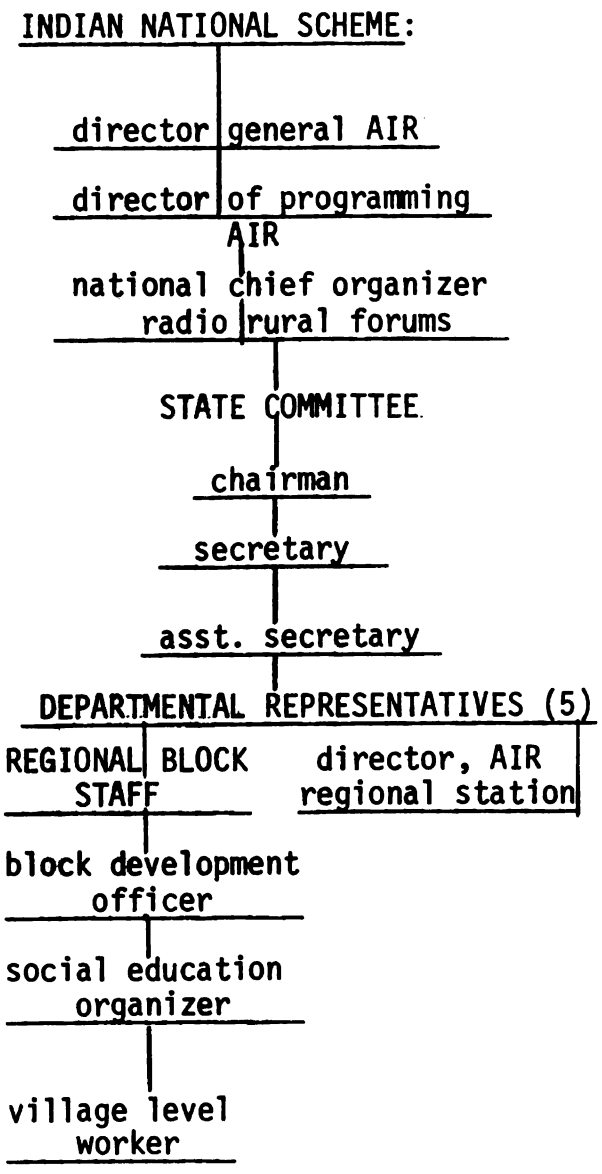
The evidence to be considered will be the authority "population" of each echelon in the formal organization. That is, the organizational charts will distinguish those echelons of authority having single personnel from those having multiple personnel in order to indicate the relative dispersal of authority from echelon to echelon.

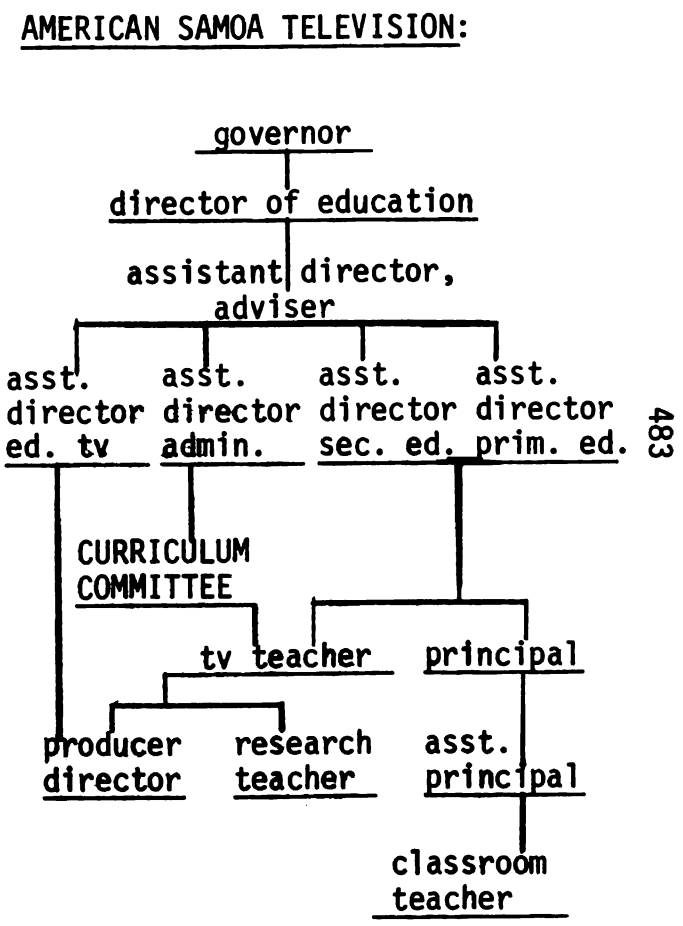
The three projects had rather different patterns of authority distribution. (Cf. Figure 6.1) Radio Sutatenza, for example, is conspicuous for its numerous echelons of formal authority with multiple personnel. The echelons with single personnel are, in every case, the supervisory echelons of the action process. ACPO decision process echelons are all multiple personnel ones. This would seem to indicate that the decision process (dealing with budget, policy, and general planning) was of considerable importance to numerous personnel having equal authority in their own right. Otherwise the phenomenon of three multiple personnel echelons one above the other would seem to be unexplained. Each bishop in fact did equal authority with other bishops having an interest in the operation of Radio Sutatenza in the dioceses of Colombia. The fact that so many personnel were to be found in the decision echelons further suggests a reluctance to assign authority to individuals. This preponderance of personnel in decision echelons normally would have made the action process supervisor's interaction, with personnel of the decision process, rather difficult by reason of the numbers of personnel to be dealt with. In the case of Radio Sutatenza, this condition was mitigated somewhat by Salcedo's being a member of both

Figure 6.1. Dispersal of Authority

Upper case: MULTIPLE PERSONNEL Lower case: single personnel







the Junta and the Asamblea, but not, however, of the Consejo.

The dispersal of authority in the Indian National Scheme was in many ways the opposite of that of Radio Sutatenza, in that most echelons in the former had single personnel. While the lack of multiple personnel in such echelons limited the scope of planning, the channeling of formal authority through individuals should have increased the efficiency of decision-making. In the lower echelons of the National Scheme organization, however, single personnel were less responsible for the decision process than the action process, which meant that the reliability and efficiency of the action process depended upon a chain of single individuals. Thus, the action process of the National Scheme was particularly vulnerable to deficiencies of individuals in carrying out action roles assigned by the decision process.

The most "efficient" pattern of authority dispersal was that of the Samoa project. Single individuals held positions in nearly every echelon of the decision process and the action process was not carried out by a chain of individuals but distributed among four groups of personnel, thus dividing the burden of implementation to reduce the risk of total failure. This interpretation of the Samoa pattern of dispersal was borne out by actual events. The drastic modifications were not due to a faulty action process as in the Indian National Scheme, but due to the authoritarian efficiency of the decision process.

Decision Transmission: Nonformal Factors

Although the patterns of decision transmission in the three projects differed, the nonformal factors affecting decision transmission provide

a clearer scale of comparison.

The largest cultural discrepancy between decision-makers and receivers occurred in the Samoa project where United States personnel constituted the majority of the decision-makers and Samoan personnel the majority of the decision-receivers. This discrepancy was not merely subcultural but cultural and almost certainly was a factor in the removal of United States personnel from decision-making positions in the project.

The smallest cultural discrepancy affecting decision transmission was that of the Poona-UNESCO project where decision-makers and decision receivers generally differed by only one subcultural set, the sets being defined by the bureaucratic levels of the various committees of the project. The National Scheme's decision transmission process was similarly affected in a general way by the subcultural discrepancies introduced by the national, state, regional, block, and local bureaucratic levels. Again, the decision and action echelons of the National Scheme differed by only one subcultural set, insofar as this may be extrapolated from the pattern of decision transmission.

Radio Sutatenza, however, may have had organizational levels of decision-makers and receivers that differed by two and perhaps even three subcultural sets. Not only was there the general organizational subcultural discrepancy between a decision-maker and a decision-receiver, but the pattern of decision transmission in Radio Sutatenza interfaced bishops (subcultural set_1) who were better educated (subcultural set_2) as decision-makers with less educated priests and laymen as decision-receivers. In the latter case, the laymen, decision transmission may have been affected by discrepancies arising from three distinct subcultural sets.

Decision Process: Complementarity

Complementarity refers to the distribution of decision-centers in an organizational infrastructure relative to the superstructure. The least amount of complementarity was exhibited by the Samoa project where, at the lowest level of possible decision-making, the classroom teacher was systematically denied decision-power and provided with instructions from the superstructure.

The Indian projects exhibited slight complementarity by their assigning to village leaders the responsibility of collaborating with the regional organizers in the composition of personnel for the radio forums.

The greatest complementarity was exhibited in Radio Sutatenza where the campesino could obtain ACPO services not through superstructural decisions but through his own decision to establish a radio school. Similarly, he could obtain other services and materiel from ACPO (sports equipment, etc.,) through his own decisions.

The question of the complementary allocation of decision centers is perhaps not an idle one. The project with the least complementarity, Samoa, underwent the greatest modifications relative to the planners' original design. The project with the greatest amount of complementarity, Radio Sutatenza, underwent during more than two decades of operation, the least amount of modification relative to original project objectives. The Indian National Scheme with its negligible degree of complementarity underwent the modification simply of failing to meet planners' expectations.

Action Process: Complementarity

Two complementarities were noticeable in the action processes of all three broadcasting projects, that of the broadcasting medium being complemented by print media, and that of organization personnel being complemented by personnel mediating the broadcasts. These complementarities are shown in Figure 6.2.

7. MONITORING AND FEEDBACK PROCESSES

The comparison of the reliability cycles of the three projects will focus upon those factors that inhibited the accuracy of monitoring and the relaying of feedback to decision centers.

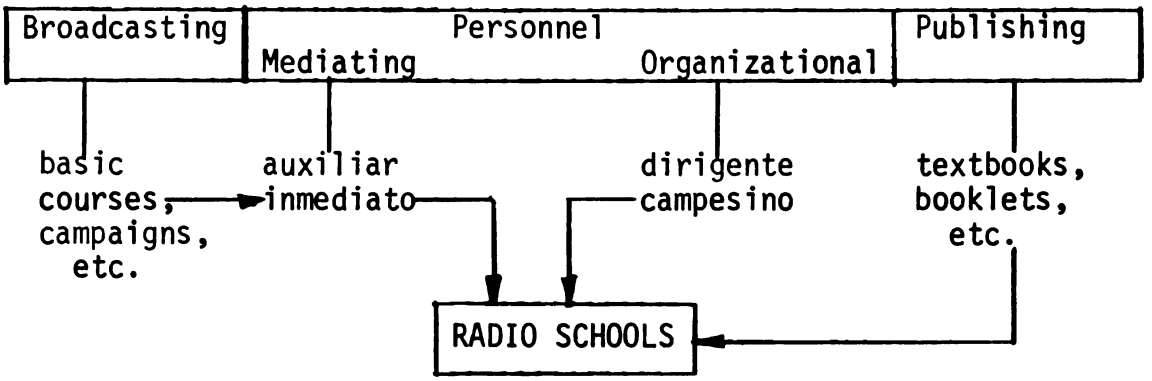
The frequency of direct personal observation of the action process was greatest in the Samoan project, less in the Indian National Scheme, and least in Radio Sutatenza. The Samoan project used regular visits by instructional supervisors within the schools and occasional visits by production personnel to monitor its action process, although the latter were severely restricted by the amount of time consumed by the production schedule.

Less frequent were the extremely rare tours of the State Chief Organizers of the Indian National Scheme, and the occasional tours of the Block Development Officers of the radio rural forums. The literature of Radio Sutatenza mentions no formal system of upper echelon personnel (Asamblea, Consejo, Junta) using direct personal observation as a monitoring procedure.

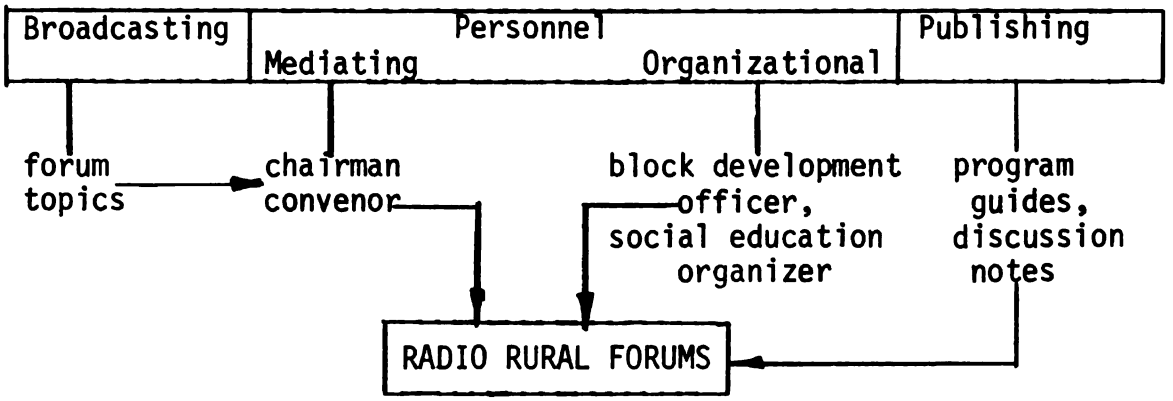
For all its formally specified frequency, the monitoring process of the Samoan project was, to an uncertain degree, inhibited by the

Figure 6.2. Action Process Complementarities

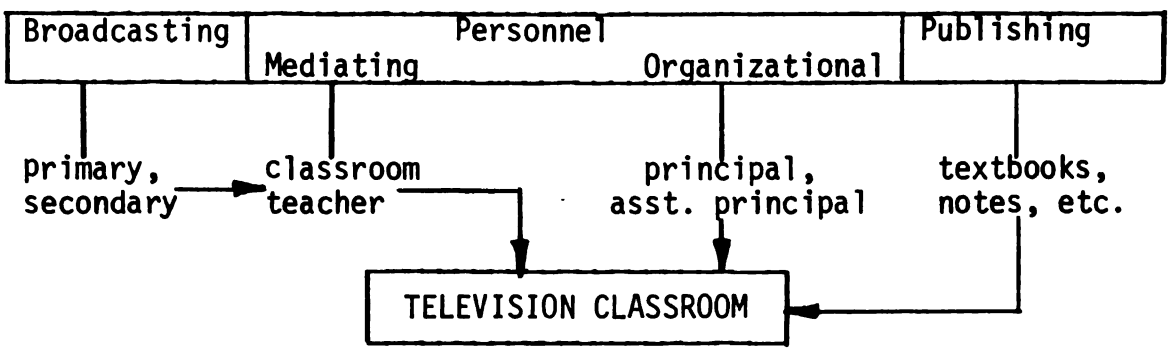
Radio Sutatenza:



Indian Radio Rural Forums:



Samoan Instructional Television:



cultural discrepancy between the expectations of United States monitoring personnel and Samoan students' performance. Neither in the National Scheme nor in Radio Sutatenza would cultural dissonance have presented as great a problem. Instead, in these latter two projects the monitoring process was inhibited by technical factors. In the National Scheme, monitoring was inhibited by the uncertainty of transport for, as well as distances to be covered by, monitoring personnel. In Radio Sutatenza, the need for monitoring a greatly dispersed action process was never formally met by a touring schedule of upper echelon personnel.

In each of the projects, a cycle of input and monitored output was evident. In the Samoa project, bi-weekly tests were administered and fed back to the production team. This cycle was inhibited, however, by the intense production schedule which hardly allowed the feedback to affect the action process until the following year.

In the National Scheme, the cycle was evident in the queries sent by forums back to the regional AIR station which would then insert replies into subsequent broadcasts. This cycle was inhibited by the inconstancy of the honorarium to have been provided to cover the expense of mailing the queries by the secretary-convenor.

In Radio Sutatenza, the cycle appeared in the letters of inquiry that campesinos would send to the ACPO center in Bogotá, some of which would be answered in the newsweekly El Campesino. This cycle was inhibited by the necessarily severe selection process in answering the inquiries, as well as the indirectness of using a publication to answer questions arising from the broadcasting subsystem.

8. SYSTEM MODIFICATION

The final category of analysis will consider the two basic questions concerning modification: to what extent did each project contain a formal design which facilitated modification, and to what extent did each project carry out modifications?

The project with the greatest potential for modification was perhaps the Samoa project by reason of its single personnel decision echelons and the line relationship connecting them with the Governor. Hence it was hardly accidental that the Samoa project underwent the most significant modifications.

By reason of its single personnel echelons connected by line relationships, the National Scheme also had the potential for effective modification, but this potential was vitiated by the ineffectual line relationship between the national and state-levels of decision-making.

Modification within Radio Sutatenza may have been formally limited by the unpredictability of its plurality of multiple personnel decision echelons. This formal limitation, however, may have been skirted by the nonformal influence of the director general, Salcedo.

Given these formal possibilities for modification, the question arises as to what extent modifications took place in each project.

The major modification of the Samoa project took place as a direct result of its formal design: the power retained by the Governor over the project. In a real sense, however, the cause of the major modifications of the Samoa project was not its formal design, for the project was an educational project and its essential decision structure began not with the Governor but the echelon below, viz., the Director of Education.

Hence the major modifications were effected not from within but from outside the project. Furthermore, insofar as Samoan discontent was a cause of the major modifications, the latter were caused by factors outside the formal design of the project since such disaffection is nonformal.

The internal design of the Samoa project however did produce regular modifications as seen in the continual revision of curriculum at the end of each school year.

The modifications due to formal design within the National Scheme were principally the adaptations of regional programming carried out in the light of the monthly reports by Social Education Organizers and the queries forwarded to regional AIR stations by forum convenors. It is questionable, however, given the hiatus between the national and state echelons, how influential the feedback from the local forum level to the regional AIR stations was in producing modifications originating with the national level. In the final analysis, the National Scheme was far more concerned with creating a structure similar to the Poona-UNESCO project than in experimenting, through modifications, in improving that project's design.

Radio Sutatenza carried out a series of pilot projects in the early 1960s, but these did not result in significant modifications, mainly because they were evaluated as misdirected attempts to localize the system-strategy. The major modifications of Radio Sutatenza were principally the subsystems of personnel training, publications, and extension services added to the basic system-strategy. It can be presumed that such modifications were stimulated by real problems fed back from the local level to decision centers because they were modifications not of

general policy but additions of quite specific action process sub-systems.

Throughout its history, however, Radio Sutatenza showed little evidence of major modifications of its objectives. This fact was perhaps far less owing to the dispersal of its action process and the indirectness of the correspondence forming its essential feedback, than of its empirical philosophy and ideology which filtered out of its feedback process many of the concrete and specific environmental changes which could have stimulated decision-centers to alter the system-strategy.

CONCLUSION

The problems of development in countries with a severely disproportionate ratio of population to resources continue to challenge those countries with a favorable ratio. The use of scarce resources of personnel and materiel can be left to the caprice of vaguely defined objectives and loosely integrated system-strategies only at the peril of losing precious time in the acceleration of development and causing the motivation and hope for development to disintegrate.

The inadmissable luxury in the haphazard planning of rigid and irrelevant formal systems designed to integrate human and technical resources may have been less than perfectly illustrated by the analyses of the three broadcasting projects. The difficulties encountered by these projects, however, and the tentative identification of their systematic or unsystematic causes, can at least stimulate the increased recognition of the need for systematic planning in a world of contingent and limited resources.

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