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ABSTRACT

A critique of policy and experience in the introduction of educational television in the Third World is made. Systems of public instruction and nonformal systems of education like agricultural extension, community development, and family planning are the main focus of the discussion. Further guidelines for policy makers are suggested for more effective planning and implementation of projects, increasing the probability that ETV, an educational medium of great potential, will be more functionally incorporated within educational systems in the developing (or the developed) world. The diffusionist's perspective is defined and explained, and the Configurational Theory of Innovation Diffusion is used as the analytical tool for discussion. India is used as an illustrating example. (Author/WH)

ETV IN THE THIRD WORLD --
A DIFFUSIONIST'S PERSPECTIVE

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ETV IN THE THIRD WORLD -- A DIFFUSIONIST'S PERSPECTIVE

By H.S. Bhola

This chapter seeks to do from one special perspective what the present book has been planned to do from many different perspectives. That is, make a critique of policy and experience in the introduction of television within systems of public instruction, and within non-formal systems of education like agricultural extension, community development, and family planning in the Third World. On the basis of such a critique, it further suggests guidelines for policy makers for more effective planning and implementation of projects, increasing the probability that ETV, an educational medium of great potential, will be more functionally incorporated within educational systems in the developing (or the developed) world.

This chapter is organized as follows. It begins by explaining what is meant by the diffusionist's perspective and defines a few of the terms used by diffusion researchers in their analysis of diffusion events. (Throughout the discussion the Configurational Theory of Innovation Diffusion[1] will be used as an analytical tool both for the policy and for generating future guidelines.) A review of policy imperatives and assumptions of ETV influentials, as well as some snatches of their experiences, is then presented as a backdrop for a diffusionist analysis of ETV. This analysis will point out the optimal conditions for successful diffusion of this instructional technology. To make this discussion as concrete as possible, India is used as a case to demonstrate the implications of introducing ETV in the Third World countries.

The Diffusionist's Perspective

Diffusionists deal with the diffusion (or spread) of innovations (new ideas, new attitudes, new skills, new organizational patterns, or new technological goods) within systems over time. Thus, diffusionists are interested in change and in changing.

The diffusionist naturally uses the concepts and models developed within the theoretical and research tradition of innovation diffusion to analyze the successes and failures of diffusion events or for planning change events for the future. The diffusionist's perspective thus consists in making phenomena fit the format of innovators (change makers) systems seeking diffusion of innovations within adopter systems.

Diffusion is today a rather healthy tradition of theory and research. There are different diffusion models available, some descriptive, some explanatory; and while the testing and retesting of models continues, and the search for a general theory of innovation diffusion goes apace, there is already a sufficient body of theoretical literature for a useful look at case histories of acceptance of innovations by individuals or diffusion of new ideas and new technologies to different aggregations both to be able to develop explanations for failure or success and to plan strategies for future diffusion events. Again, diffusion is a productive and interdisciplinary research tradition with contributions coming from anthropologists, rural sociologists, medical sociologists, communicators, marketing specialists, development economists and educators from all over the world, many of them from developing countries themselves.[2]

In our look at ETV in the Third World from a diffusionist's perspective we will equate ETV with Innovation; the donor countries or foundations, and their

experts and consultants would constitute the Innovator (Change Maker) System; the recipient country with their Ministries and departments, their school systems and schools, their classroom teachers and students (and in case of non-formal systems, their farmer groups, family planning groups and community development groups) will constitute the Adopter System. We will study the introduction of ETV in the Third World countries as an instance of the Diffusion process.

We might indeed be going over what to many of our readers may be familiar landscape--pitfalls they already know about, warning signs they have often read before. The value of the following exercise, we think, consists in creating insights from hindsights by providing a theoretical tool for coping with problems as they arise, putting them in perspective, developing appropriate levels of response to those problems. At the same time the existence of analytical tools should help decision-makers anticipate some of the future problems likely to arise with the introduction of ETV or any other innovations within schools and communities in the Third World.

Definitions of Some Terms

We have already introduced and used some terms from the literature of diffusion: innovation, innovator, adopter, and diffusion. Definitions of these terms have been included in the following. Also, we will indicate the sense in which we will be using the terms ETV and ITV. Some further definitions of terms will be presented later when we introduce the theoretical framework employed in our analysis.

Innovation. Innovation can be a concept, an attitude, a tool with accompanying skills, a reorganization of work or statuses, or two or more of these to-

gether introduced to an individual, group, institution or culture that had not functionally incorporated it before. An "innovation" is an innovation with respect to a particular individual, group, institution or culture, but is not necessarily a new invention or an addition to the total fund of human knowledge.

ETV is thus an innovation in regard to the educational systems in the Third World. It is also, as we will see when we unpack ETV as an innovation, not just one innovation but a whole package of innovations involving new technological tools, and new skills for handling them, new concepts of producing instructional messages, new attitudes toward students, and teachers, and new organizational and role arrangements.

Innovator. Though a basic concept in diffusion research and theory, innovator is not always used to mean the same referent. Some use it synonymously with 'inventor' a person who creates something new--an innovation. Other use it to describe a person who is open to innovations, is quick to adopt them. Innovator then is really an adopter, though an early adopter.

We will here use the term Innovator synonymously with an influential, a change maker, a person interested in the diffusion of an innovation within an adopter system.

In the case of our discussion on the introduction of ETV in the Third World we will refer to the donor system (with its experts, consultants, evaluators, and technicians) as the innovators. We will sometimes refer to them as the change makers.

Adopter. The adopter or the adopter system is the innovator's client; the target of an innovator or an innovator system's plans, the focus of its intentions. The word adopter is used also to describe what are really potential adopters.

In our case of ETV in the Third World the adopter system is the network of ministries and departments, state governments, school systems, schools, teachers, students, and the community.

Diffusion. Diffusion may be defined as the process involving information consumption, social interaction, and behavioral change through which an innovation is incorporated into a social unit over time.

Total diffusion of an innovation within an adopter system may be considered to have taken place when the innovation for that particular system becomes a non-innovation. That is, when the erstwhile innovation becomes a norm, a value sought by members of the system; and when the system itself can provide support and service for continued use of the innovation.

If in a particular school system ETV found a place within the instructional system such that if it was withdrawn it would leave an important instructional need unfulfilled; if teachers in the school system valued the use of ETV; and if the school system and the surrounding community was able to create professional and technical subsystems to produce the needed programs and to repair and maintain broadcasting and receiving functions then ETV may be considered to have been fully and totally diffused in regard to that particular school system.

ETV and ITV

ETV stands for educational television, and ITV for instructional television in the literature of educational communication and instructional technology. ITV is used to signify use of television to fulfill more or less structured instructional purposes. Whether ITV is fed into classrooms through the close circuit or whether it is broadcast to an audience spread over a whole city or a national region, the objectives are to offer experiences formally organized into a course

of instruction. ETV, educational television, is used to signify use of television with broader educational intent, in the tradition of life-long education for communities.

In this paper we will use the term ETV generically to cover both ETV and ITV but if comments are made that are appropriate only to ETV or to ITV particularly, the distinction between ETV and ITV as clarified above would be maintained. Also the use of satellite communication has introduced some new factors in television use which do not appear in terrestrial broadcasting of television. Again, where satellite use would make a difference the discussion will point out the implications.

The Third World As Social Context

It is not uncommon to consider the Third World as one common social context.[3] Undoubtedly, the countries of the Third World are spread over three continents of Africa, Asia, and Latin America and each is different, in some ways, from its next door neighbor. However, they are also similar in many important ways--in regard to the development of natural resources, manpower development, capital formation, technological infrastructure, technological know-how, and even in regard to institutional structures. The discussion in the following will be at a general enough level to be applicable to the whole of the Third World but in the section on diffusion-related implications of ETV we will make the discussion concrete by taking the case of India.

Some Retrospection on ETV

A policy critique of the introduction of ETV in the Third World must consist basically in reviewing what was done and in suggesting what should have been done or at least should be done in the future. What was done can, again, be described both in terms of intentions and of experiences. Undoubtedly, different donor governments and agencies made their own special ETV policy declarations and developed their own special operational stances. And different projects seeking to introduce ETV in the educational systems of the Third World have had different experiences in the field. In the following we attempt only to sample some of the policy statements and present merely snatches of the actual experiences of ETV influentials to be able to provide a feel for what it is like in villages and schools of Asia, Africa, or Latin America where ETV is being introduced.

Sampling Television Policy

The policy statements presented and discussed in the following have been picked up from the official documentation of USAID, UNESCO, and the Ford Foundation. All three agencies have worked with ETV in the Third World. These statements include part of the rationale on which the introduction of ETV in the Third World was defended by each donor to its own decision-making centers.

AID's policy response to the U.S. Foreign Assistance Act of 1970 in regard to programs of peaceful communications, making use of television and modern technologies, is typical. Joel Bernstein, Assistant Administrator for Technical Assistance, Agency for International Development in his testimony before the US Congress in April, 1970, talked of the inability of the conventional approaches to education meeting either the qualitative or the quantitative needs of

education in rapidly growing societies. He asserted that aggregate resource requirements for satisfaction of social demands for education by conventional means were beyond the capabilities of most of the developing countries while at the same time conventional means were both expensive and slow. He asserted also that educational problems could not be tackled effectively outside the total developmental context and it was indeed rational to turn to technology for both education and development. He wished to feel modest, of course, about the achievements of the U.S. in the field of technology, but believed that the U.S. did have an important contribution to make through sharing experience with the new technology with the developing countries in joint problem-solving activities when problems or opportunities arose.[4]

The communication technology in question was television including satellite communication. This was the mandate read in the Foreign Assistance Act of 1970 (Section 220). The mission was clear.

UNESCO's recent policy in the communication sector boasts of being novel in its espousal of the idea of a national communication policy rather than an international policy.[5] In the same breath, however, it talks of some thrusts in its communication policy[6] which on closer examination is not easily reconciled with the desire for developing national policies. For example, the following: "The basic role of the Secretariat consists in encouraging Member States to make full use of the opportunities provided by space communication to promote education, science, culture, and information. The use of satellites for the planned development of communication and in order to obtain a more balanced flow of news will be promoted. Attempts to develop new teaching methods using the stimulus provided by space communication and the adoption of such methods will be encouraged.... Further studies will be made in a broader context--that of general de-

velopment of the various mass media and the integrated planning of communication...—and will include a study of the comparative cost and benefit of satellite- and ground-based systems." That doesn't leave much scope for developing national policies!

The policy of foundations active in the international field in the area of technology and communication is not much different or more open-ended. The Ford Foundation, for instance, has declared its commitment to "accelerating the growth of the less-developed countries" and to the "development of non-commercial television for high-quality cultural, informational, and educational broadcasting".[7]

There is one overriding lesson that must be learned from these various statements of policy from USAID, UNESCO, and the Ford Foundation. It is this: that while ETV or ITV may be justified at the level of rhetoric in terms of the needs of the recipient countries, it is their need only in a very general way. More importantly it is the donors' need arising from ideology, altruism, or political competition. Television is communication diplomacy.

This writer does not think this is necessarily bad or dishonest. We state it only as a fact. As we have elaborated elsewhere,[8] it is the elite in societies (and today in the global society) who feel the need of influencing, and coopting groups, systems, and cultures to their systems of ideas. The elite use the army, the factory, the school, and now the media as different "affiliation modes" to network the have-nots into their system. This seems to be the process in all cultural action--though the humanists would argue that this need not be so at all.[9]

The elite act as the gate-keepers. They work not only to affiliate, but also to exclude. It is even possible to think of situations where the donors do not really care to succeed. They are more interested in the gesture of acting rather

than in the operational effectiveness of their actions. But, most often donors or those acting on their behalf do want to succeed though they may not understand the nature of their work, may not understand the process of change or changing, and may make naive estimates of resources of men, materials, and time needed for the change to take place--for the gift tree to take to the ground and to bear fruit.

Part of the Experience

It is difficult, again, to sketch in this brief space the essence of all the experiences of the ETV-ers in all of the Third World. Some rare ones have been happy with what they did and with what they saw; most others have been frustrated, even bitter about the whole experience.

Listen to a group of ETV-influentials who were once in India, or the Philippines or somewhere in Africa, now locked into an informal bull (discussion) session and you are sure to hear plenty of howls and shrieks, even some profanities.

You will find them complaining about the Indians or the Philippinos who wanted to grab the donor's money without making any commitments on their part; about their failure to understand the nature of the possibilities of the TV medium and what they were getting into; of too many ministries and departments in the recipient country straining hard to control the project, but failing to coordinate either horizontally or vertically.

You will find almost all of them complaining about the fact that the recipient nation simply added ITV on to whatever existed before with no effort to integrate the new input into the existing system of public instruction and with no attempt to redeploy the instructional resources of time, space, personnel, and finances.

You will hear stories of projects that expanded too fast or much too slowly; of ETV reinforcing existing privilege by giving more to those who already had enough and neglecting the underprivileged in the slum and the village.

You are sure to hear stories of the teachers' inability to use the new ETV/ ITV facilities, of their resentment at what they considered extra loads of work, of their jealousies with those who became TV teachers and came into the limelight; of production teams that could not work together because the teacher and the technician could not resolve the battle of statuses.

There will be stories of programs that were sloppy, that merely showed a talking face on the screen; of the disaster in the field where half the groups did not receive the programme they were supposed to receive and the half of those who did receive did not understand it. There are stories of TV receivers that broke down, of fluctuating electric power so that the message never came through, of tropical humidity eating into the equipment or rooms that were impossible to darken and when darkened were impossible to breath in. And the inevitable complaint that there was no evaluation of the program.

Sometimes you will hear some refreshing self-analysis on the part of our ETV-influentials. They realize that perhaps there was a lack of conceptualization, an underestimation of resources needed for doing the job, or resources were expended on equipment and hardware rather than anything else. There is an indication of understanding emerging on their part that political, administrative and budgetary support does not take care of itself, but has to be worked for as part of the innovation diffusion effort.

You may even experience instances of beautiful rage of one against another: "Don't give me that bull shit about Herculean efforts, courageous steps and bold leadership of Indians or whatever; and of research proving that ETV schools proved

better than others. No way! Nothing of the type happened! The only objective of the program was to establish the program and we failed even in that!"

The preceding is not made up. It is not story-telling. It is in fact developed from a bull session of a group of ETV-ers talking about their experiences. It should also be noted that this is typical of the experience of most experts working in any intercultural context. This is thus not peculiar to ETV or ITV. This is part of all technical assistance.

Lessons from the Retrospection

The preceding description of policy and of experiences of ETV-ers indicates some important points related to change in general and to the diffusion of ETV in particular that might be usefully elaborated in the following discussion.

There seem to be grave misunderstandings about why donor groups donate resources for diffusion of innovations in other cultures and why recipient groups in developing countries accept to give a particular innovation a try. We need to realize that such transactions take place within what could be appropriately described as a diplomatic frame--a context within which negotiations are conducted by nations for attainment of mutually satisfactory goals.[10] The process is not all rational as some of us might seem to think. The rhetoric used for the innovation transaction may be nothing more than a rationalization. As should be clear from the policy statements included in the previous section, donor agencies have their own ideas about what is good for whom. The recipient groups have then to select from a limited shopping list. It is not thus simply a matter of the recipient's educational or developmental needs; it also is a question of donor's needs and compulsions to influence. It is important for experts and consultants working in the Third World to realize this for any sense of realism in their work.

This realism need not lead to cynicism, however. The fact that the diffusion of ETV across cultures takes place within a diplomatic framework doesn't mean that a technical-rational model cannot be superimposed on what is basically a political and arrational field. Indeed this may be part of the expert's or the consultant's challenge: to relate the project to often unstated political objectives of the elite on the one hand and to the stated, more technical, objectives of the project on the other.

The client group in a particular case of innovation diffusion, again, may have more than one reason, or a different one, for accepting the innovation, than the donor has for offering it. The recipient group may want ETV/ITV not only to expand educational opportunity and improve the quality of instruction, but also to look modern, or to get experience in a technology that may be of use later for indoctrination at home or defense against an aggressive neighbor. Or it may accept the innovation merely because the next door neighbor has started ETV and thereby has started a scramble for channels. In such cases to defend ETV on the basis of cost effectiveness or for its ability to increase access to education may be unnecessary, even absurd.

Considering that the recipient national government is interested in expansion of the educational system, in improving the quality of the instructional services or in building information systems for agriculture and health extension it does not follow (as Joel Bernstein's testimony, quoted earlier, seems to suggest) that ETV is the solution. There is a paradox involved in the application of technology[11] to education and extension. Those social systems that need technology most can absorb it least: <u>they do not have the infrastructure to support the technology</u>. This is not to say that it cannot be done. It does mean that the level of resources needed is much higher, for the innovator must build part of the infrastructure himself, privately for private use.

Again, many of the developing countries are economies of scarcities with high unemployment in urban areas and high latent unemployment in the rural areas. Technological solutions, at least, in the beginning, eliminate jobs (of teachers, of village level extension workers). This points up to the need for more comprehensive solutions that involve not only new information systems, but also new economic and social reorganizations.

An interesting point that can be made in this business of technical assistance is a feeling of meglomania on the part of the donor groups. A project covering 30 villages in a country becomes Community Development in the Philippines or Sarawak. Installation of 400 TV sets in a country with many million classrooms is described as ETV or ITV in India. This "symbolic inflation" of reality also inflates expectations and results in extreme dissatisfactions and frustrations when evaluations are made.

Not only do projects need to be called by their proper names, but we must also realize that what we did not plan for, did not pay for, and did not work for is unlikely to happen. If we did not plan for and work for organization building, it is absurd to expect that organizational problems would not arise and if they do would somehow be solved. If we did not provide for staff training or production of training materials it is absurd to think that staff training will come about and training materials will somehow get written and produced. Also, if we did not provide for evaluation and research, it is unfair, even foolish, to expect that research and evaluation will get done.

Even a cursory reading of technical assistance reports (written by ETV-ers or other experts) would give the flavor of impatience and anger on the part of these influentials when things did not happen the way they wanted them or when they did not happen <u>at once</u>. This clearly is an indication of naivete on their

part about the change process. There seems to be an assumption among change makers that since they came, and they saw, conquest must follow. The expectation that one must succeed in all change all the time is presumptuous. The assumption that nobody else is working in the opposite or different direction; or that everybody is as excited as you are about your vision is foolish. ETV-ers forget also that while working within an intercultural context their roles are generally advisory--hypothetically without much power within the system. As much power, as much control: thus they have little control over what happens and how soon. To make matters worse, most ETV-ers are not sophisticated students of systems and have very little experience in being able to cope with systemic demands put on them by the organizations they work in or for.

Also they demand too much output for too little input. The scale of resources put into ETV projects and the scale of expectations from those projects simply do not seem to have any sensible relationship.

Lastly, the assumption seems always to be made that evaluation of projects is both necessary and good; and the further assumption is made that evaluation can happen without having to plan, or pay for it. That, of course, isn't so at all. Evaluation must be planned. An evaluation policy must be developed. What kind of evaluation would be important in a project--see, for example, Chapter VIII by Mielke.[12] What would be the objectives of such evaluation? What would be demonstrated to whom for what purpose? What would be the social risks involved in the expansion phase of the project if evaluation is not conducted? What are the economic costs of evaluation and can the project afford these costs?

One could say then that ETV-ers work within a diplomatic frame and in a situation of mixed motives both on the part of donors and recipients. The sensible thing for an innovator or change agent here would be to accept the arrational

and superimpose on it a rational-technical model thus relating ETV/ITV on the one hand with educational needs and on the other hand with larger national aspirations, even chauvinistic aspirations!

Again, while ETV-ers have most of the time worked with limited resources of money, men, and time, they have been most generous in their expectations from the projects; they have often unexpected results. Unfortunately, they have often neglected the political, and the institutional aspects of change making, working with a purely rational model, thereby showing a lack of awareness of how change takes place and how the probabilities of its occurrence might be increased.

In the following we present a theoretical model and demonstrate how it might be used to generate some questions, to anticipate some problems, and develop alternative change strategies.

The Analytical Model in Action

To learn from experience, experience must be examined. Descriptions must be translated into analyses to generate systematic knowledge that can be transferred from one context for use in another. Models must be created or available models used to make sense of why what happened happened and to make predictions about the possibilities of similar events happening in the future.

The Theoretical Framework

The theoretical framework used in this paper is that provided by the Configurational Theory of Innovation Diffusion. The Configurational theory pre-

vides a general model of innovation diffusion, planned change and development.[13] It has been used both for analyses of past diffusion events and for the planning of future ones.[14]

Why is the theory called a configurational theory? A configuration is a form resulting from the arrangement of parts of a thing, with particular relative positions of each part. The theory is called a configurational theory because it emphasizes the fact that innovator-adopter relationships provide different configurations because they are placed differently with regard to each other and because the different parts of innovator and adopter systems have different relative positions and arrangements. The implication is that each diffusion event will have to be looked at as a particular configuration and thus the model introduces relativity into our analysis or planning of diffusion events.

The theory at the same time suggests four social configurations--Individuals (I), Groups (G), Institutions/Organizations (IS), and Cultures or Subcultures (CL) --as actors in any change situation; and sixteen configurational relationships as follows in Table 1.

TABLE 1. Innovator-Adopter Configurational Relationships

		Adopters			
		I	G	IS	CL
Innovators	I	I-I	I-G	I-IS	I-CL
	G	G-I	G-G	G-IS	G-CL
	IS	IS-I	IS-G	IS-IS	IS-CL
	CL	CL-I	CL-G	CL-IS	CL-CL

This taxonomy of configurational relationships brings in generalizability to the theory. The classification of configurational relationship can help not

only in the analysis of patterns of flow and relationships but also in developing levels of response to a change situation by the innovator and the adopter.

Indeed molar configurations (G-G, IS-G, CL-G, G-IS, IS-IS, CL-IS, G-CL, IS-CL, CL-CL) act through, in some ways suggestive of chemical reaction, molecular (I-I) and molar-molecular (G-I, IS-I, CL-I, I-G, I-IS, I-CL) configurations.

The configurational relationships between innovators and adopters, however, are not the only determinants of diffusion. The model suggests four factors in all. The Configurational Theory of Innovation Diffusion, Planned Change and Development states that the diffusion (D) of an innovation depends upon: 1) configurational relationships (C) between the innovator configuration and the adopter configuration involved in a change or diffusion event; 2) the linkages (L) within and between the innovator and adopter configurations; 3) the environment(s) (E) surrounding the innovator and adopter configurations; and 4) resources (R) available to the innovator configuration to promote the change and to the adopter configuration to adopt and incorporate the change being promoted or proposed. In symbolic terms: $D=f(C,L,E,R)$

Thus, if an optimal, synergetic combination of C,L,E, and R can be brought about, the probability of diffusion of an innovation will thereby be optimized. We will define these terms further in a later section of the paper and elaborate them by applying them in explaining the case of ETV in India.

We should note that Innovation (INV) does not appear as a separate factor in the diffusion equation proposed above. This is so not because the innovation is unimportant, but because the innovation as a factor is implicit in all the four factors C,L,E, and R shown on the right hand side of the equation. Each particular innovation will determine the configurations that will get involved, the linkages that will exist or may have to be created, the environment for that particular innovation, and the resource commitments the innovation would demand.

Another way of representing the theory is the graphic presentation on the following page. As the model suggests, an innovation may not be just one unified entity but may have many components, that is, it may indeed be a whole set of innovations instead of being one innovation. An innovation then must be unpacked before its diffusion-related implications can be worked out in detail.

What does it mean to unpack an innovation? It means essentially to understand the nature of the innovation. What is it made of? What is it really selling? What might be the hidden agenda in this innovation diffusion transaction? /See Appendix at end of Chapter as an example of unpacking ETV using Benjamin Bloom's Taxonomy of Educational Objectives, 1956/ Such understandings would not emerge from purely logical operations. Innovators and adopters would have to draw upon the existential historical experience with the innovation or a similar innovation elsewhere.

As the graphic model should also suggest, there are diffusion-related implications both for the innovator system and the adopter system in regard to any one particular innovation. Thus while an innovator system may use the analytical model for improving diffusion probabilities within an adopter system, the adopter system may at the same time use the analytical model for enlightened adoption or for successfully resisting the imposition of something unneeded or unwarranted.

Keeping these components of ETV/ITV in view let us now work out the diffusion related implications of this innovation (or rather this set of component innovations) as they relate to both innovator and adopter systems. Four sets of such implications--those related to C,L,E, and R--will be worked out.

The Stage and the Actors

What is the setting? What is the terrain like? Who are the actors involved? Who are the innovators and who are the adopters? How are the innova-

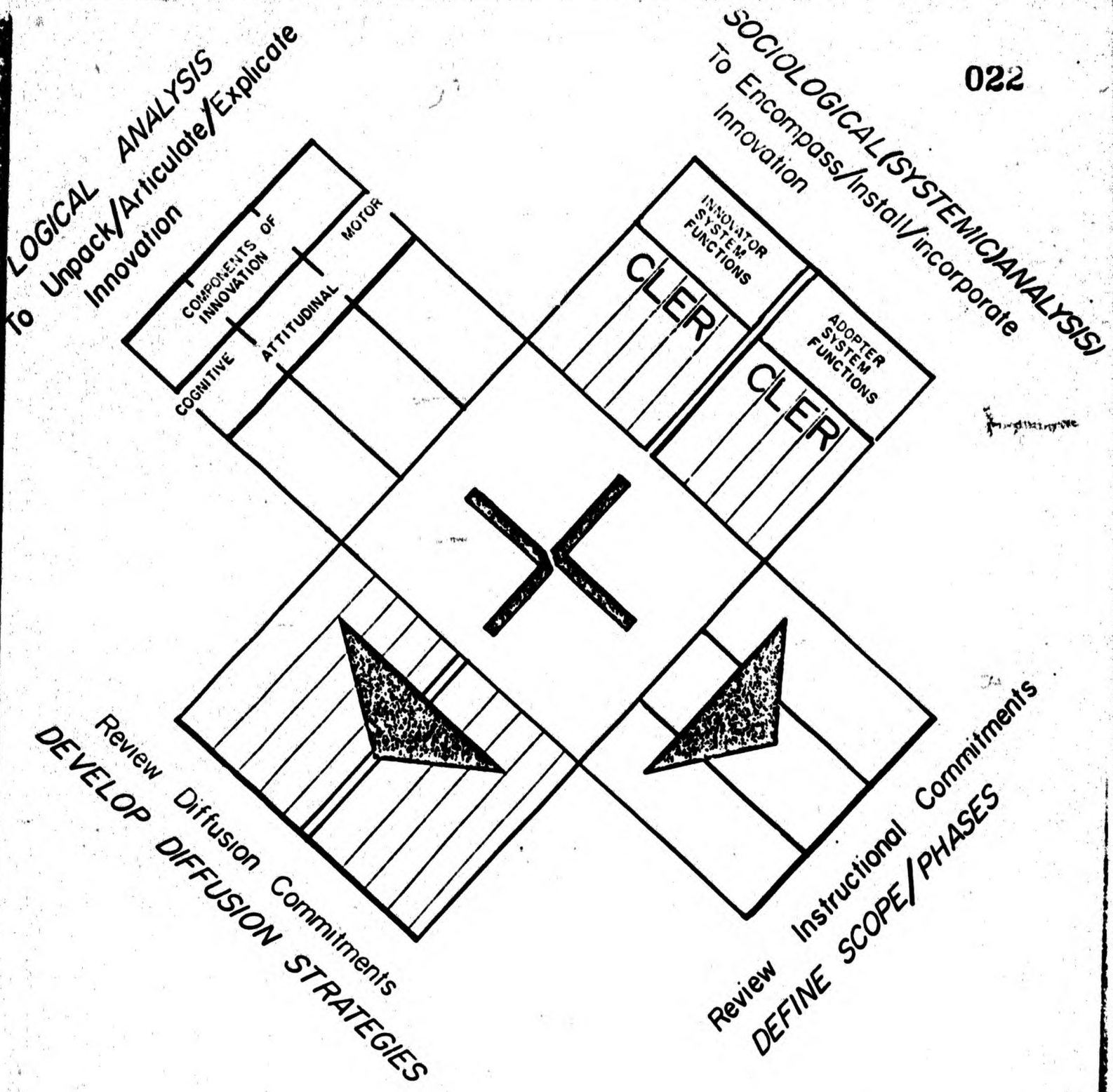


Fig. 1 An analytical model for unpacking an innovation and for working out its diffusion-related implications.

tor and the adopter systems placed with regard to each other in the field? Is there involved one innovation-adoption transaction or is a whole chain of such transactions involved?

Such questions can be answered by what may be called the process of configuration mapping or configuration plotting. We have in an earlier section provided the definition of a configuration. In extending the definition it may be stated that configuration plotting simply is the process of identifying the configurations, big and small, formal or informal, within or without the boundaries of the configurations directly involved as innovator(s) and adopter(s) in a change episode; and of presenting, graphically, their relationships in terms of structural bonds, locations in systemic space, relative hierarchy, and mutual expectations of influence and compliance established by custom, tradition, or law.

Configuration plotting is thus akin to sociometric analysis which plots individual interactions in a group and community settings. It is a matter of both empirical knowledge of the change configurations involved and of speculation as to what configurations, now latent, might get articulated and involved as the change proceeds. It is thus both a logical and a sociological process.

Configuration plotting is never complete in an absolute sense--that is, every larger configuration around innovator and adopter configurations and every smaller configuration located within them need not be plotted. The process has to be heuristic, adequate only for the purposes of solution invention. It has to be a process of satisficing--not achieving "perfect" solutions.

Finally, an innovator's value system will get involved in the process of configuration plotting. One innovator may want to let the sleeping dogs lie and avoid plotting and later articulating configurations which he thinks had better re-

main isolated. On the other hand, another innovator may believe in participative decision-making and may want to involve all the configurations he thinks should be involved; may, in a sense, go around looking for trouble!

Case Study of India

The configuration plotting in the case of ETV in India (an example we have chosen to make our discussions concrete) may be mapped in its barest outlines in terms of three overlapping sub-systems as follows:

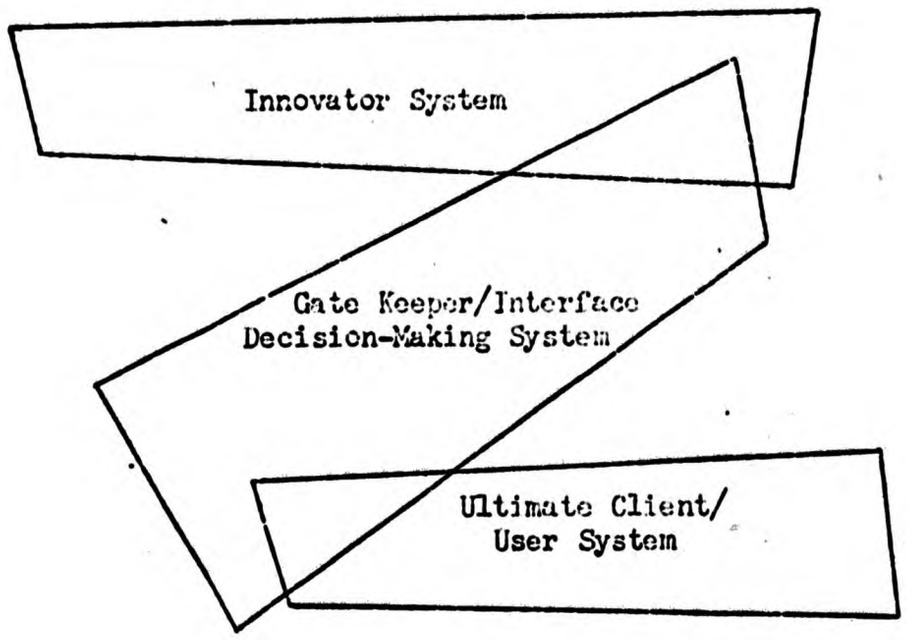


Fig. 2 The innovator, interface, and adopter sub-systems involved in diffusion process.

This outline of the overlapping sub-systems involved in the diffusion transaction should immediately suggest that in the case of ETV in a country like India there is not one but a whole chain of innovation-adoption transactions involved and that working only at the entry point would not help the donor in the achieve-

ment of its objectives. Interventions will have to be made at all the various links of the chain to boost the diffusion process. (See Figure Below)

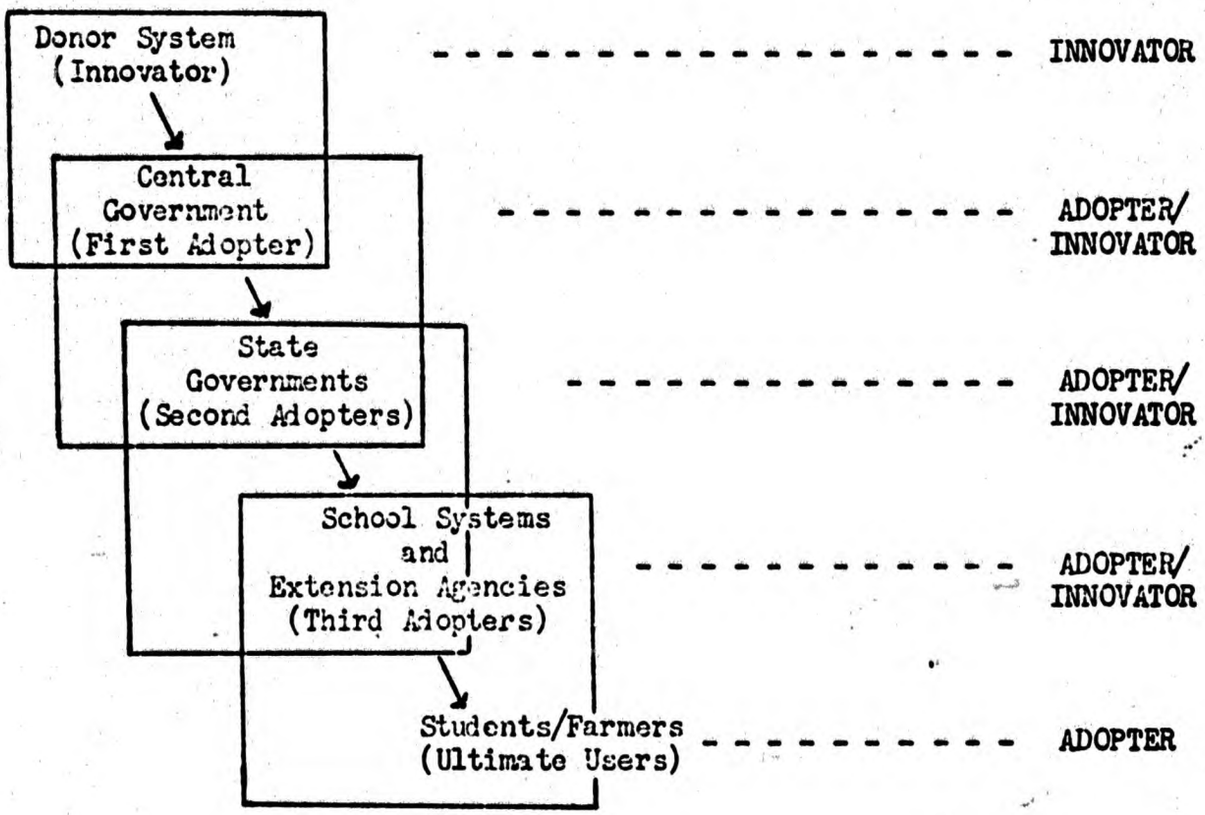
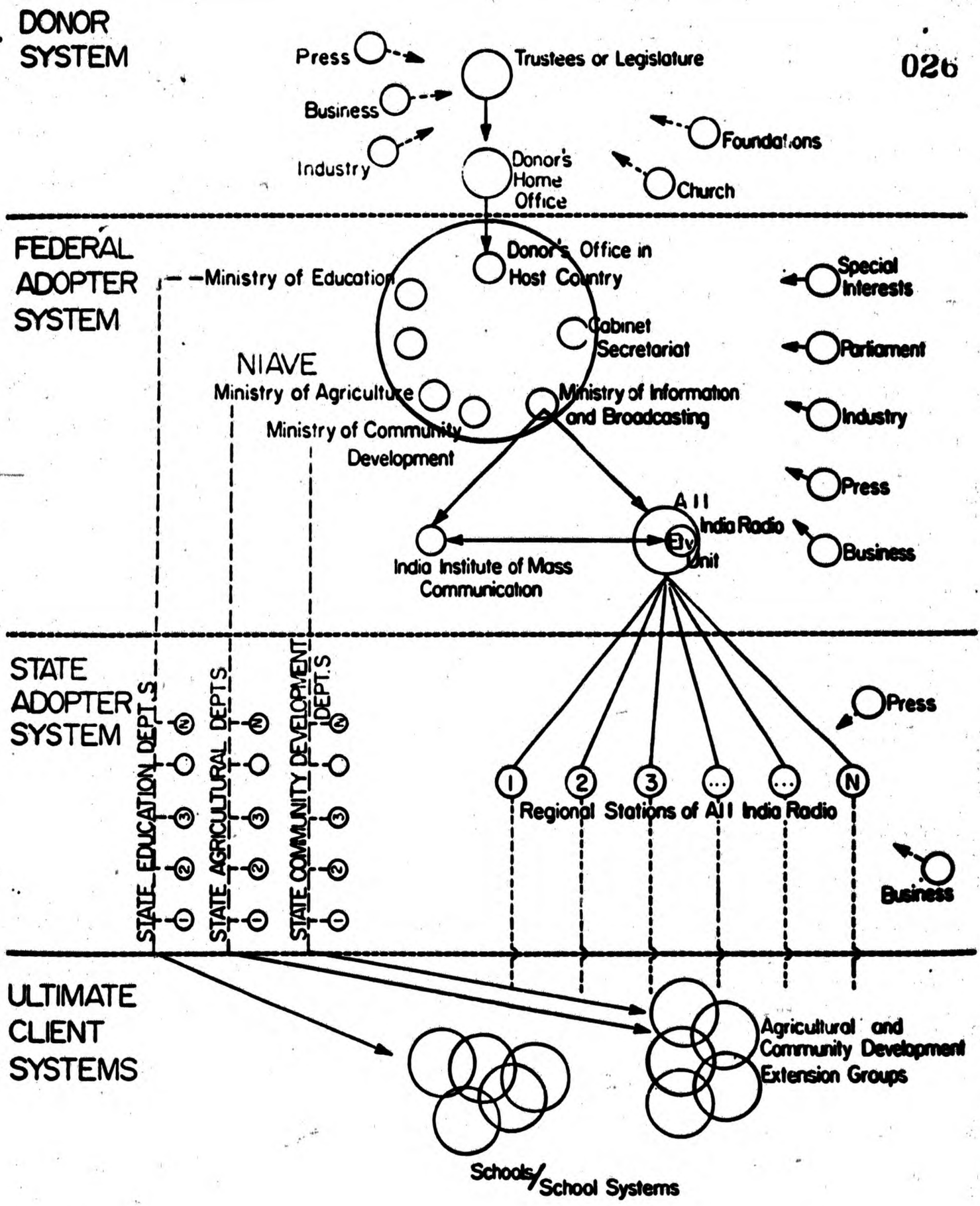


Fig. 3 The chain of innovation-adoption transactions involved in diffusion of ETV in India.

Let us now fill the details in our configurational map. (See Next Page)


DONOR SYSTEM
Press
Business
Industry
Trustees or Legislature
Foundations
Donor's Home Office
Church
FEDERAL ADOPTER SYSTEM
Ministry of Education
Donor's Office in Host Country
Special Interests
Cabinet Secretariat
Parliament
NIAVE
Ministry of Agriculture
Ministry of Information and Broadcasting
Industry
Ministry of Community Development
Press
All India Radio
Business
India Institute of Mass Communication
Unit
STATE ADOPTER SYSTEM
STATE EDUCATION DEPT.S
STATE AGRICULTURAL DEPTS
STATE COMMUNITY DEVELOPMENT DEPT.S
Press
Regional Stations of All India Radio
Business
ULTIMATE CLIENT SYSTEMS
Agricultural and Community Development Extension Groups
Schools/School Systems

As pointed out earlier, no attempt has been made here to present a complete configurational map. What we have done is to take an account of all the sub-systems involved and of most of the configurations likely to be involved in the change episode under discussion. While working on a diffusion project, diffusion-oriented ETV-ers, such as project directors and specialists, would certainly develop detailed "inlays" for the various parts of this first map. For example, he may find problems in regard to working with the Cabinet Secretariat and want to develop a configurational map for that part of the terrain to understand what is happening and what to do about it. Also he will most probably need to develop detailed configurational maps for the school systems adopting ITV and for the communities where ETV is being introduced.

The first thing that this configurational map should indicate to anyone is the number of configurations involved in the diffusion event in question and the complexities of relationships between them.

The map underscores the 'diplomatic nature' of the diffusion event. No governments allow outside donor agencies to go directly to schools, and farmer groups and provide them services, especially those related to information and indoctrination.

The fact is also articulated by the graphic configurational map that between the innovator and the ultimate client group is a complicated bicameral decision-making system that must mediate the diffusion process. It should follow that the persuasion of Federal and State elite to adopt ETV and the creation of ETV/ITV facilities would be only part of the job, the actual diffusion process must reach the ultimate client group and as students of planned change we cannot depend upon some theory of filtration but must include strategies that keep the ultimate user system in view.

The tenuous nature of the volitional, at best semi-formal connections between the various ministries and their attached and subordinate offices should again be understood, as also the relationships between Federal and State level decision-makers which would not necessarily mean compliance.

The client system again has a pyramidical linkage system; there is hardly any hope for horizontal communication unless such communications are created. The TV unit in India is presently located within the larger configuration of the All India Radio. That should help planners anticipate problems of administration and in regard to the possibilities for developing its own independent thrust for ETV.

Also the structure and history of the client organizations, the school systems as compared to the non-formal educational systems (community development, adult education, and agricultural extension), should provide some ideas about what to expect in regard to ETV in the two sectors and whether with the endemic scarcity of resources one or the other sector may be given prior attention. In fact, there are some ETV influentials who suggest that formal education systems all over the world are much too rigid for making good use of ITV but non-formal systems of education and extension provide excellent opportunities for experimentation and success.

Configurations-Related Implications of ETV/ITV

Let us now work out the detailed configurations-related implications of introducing ETV in India both for the innovator and the adopter systems. [See Table on the next page]. In the following we take closeups of the scene of which

we have so far only presented a long shot. That is, we look at the Individual, Small Group, Organizational and Cultural and Sub-Cultural configurations involved and see what ETV/ITV might do to them. It should be indicated here that this exercise in working out implications is meant neither to be comprehensive nor definitive but only illustrative of what a group of change makers sitting together could generate and usefully reflect in their planning and implementation of diffusion.

TABLE 2
The Configurations Involved in Diffusion
of ETV/ITV in India: A Tabulation

Configuration Category	Innovator System	Adopter System
I (Individual)	Foreign Experts in the Country	Federal/State Government Administrators, School Administrators, Teachers, Students, TV Producers, The New Specialists
G (Group)	Small Groups Within the Team of Experts/Consultants	Small Groups within School Systems and Government Bureaucracies, Production Teams including TV Producers and Educators
IS (Institution/ Organization)	Donor Agency Local Office, Donor Agency Home Office, Donor Government/ Governing Board	Government of India Ministries, Cabinet Secretariat, Planning Commission, All India Radio, NIAVE (National Institute of Audio-Visual Education), Schools, Broadcasting Units/Stations, TV Production Units, Legislatures
C (Culture and Sub-Culture)	Donor Country as a Culture and as a Nation State	Adopter Culture, and the Recipient Country as a Nation State, Subcultural Groups within the Country

Configurations-Related Implications
The Individual Level

We can think of the following individual configurations as being involved in the case under review: student, teacher, school system administrator, TV producer, other new specialists and the foreign expert.

What would the introduction of ETV/ITV mean in individual terms for a student? First of all it would mean a new classroom behavior, a new learning style. The student now would have to deal with a team of two on the other side of his desk. This would mean a new student role. He would now have a new source of socialization which would generate new expectations in him of the classroom teacher's performance. The student would again have to acquire new attention spans and new study habits for coping with ITV presentations. Clearly, helping the student to assume the new role, to keep his expectations in perspective, and to develop new learning strategies should be part of the innovation package.

ETV clearly breaks the teacher's monopoly in the classroom. There is now a new presence, and this new TV teacher on the screen is well provided, has more equipment and teaching materials available to him. He also has had expert help in structuring his lesson and has spent time in rehearsing his presentation. This new competent presence is going to compel the classroom teacher to put more into pre-preparation for his lessons, and perhaps it will bring about an erosion of self-confidence. The teacher's status with regard to students is going to change because some of the material presented through television would be learned together by the students and the teacher at the same one time configuratively as Margaret Mead[15] would say. After the students have been exposed to a model of excellence on the television screen, they would make similar demands on their teacher. Here, again, the teacher must be prepared to defend his status, to cope with the new role and relations, and develop a new confidence. This again won't

just happen, it will not take care of itself, it should be part of the innovation diffusion package. (For further discussion from a different analytic framework, see Chapter VI.)

Some new specialists are going to emerge by the fact of introducing ETV into the educational and extension systems. We may use the same old designations for them, but they are going to be different people with different specializations. Most of them are going to make a little more money in terms of special fees or honoraria. Some of them are going to come into the limelight just from the fact of showing up on the television screen. They are going to have new work schedules and they are going to be deputed from one department to another. [We are anticipating here the problems related to invention of new roles, integrating them within the existing system, developing new incentive systems which make sense in the new realities.] These, again, are things which won't take care of themselves, but must be provided for as part of the innovation package.

ETV programs are not produced by teachers alone, there are technicians involved, camera men, script writers, directors, and producers. They have to be brought together with content specialists, graphic artists, demonstrators, and educators. There would be problems here not only of bringing together two people with different world views, but also of reconciling their divergent claims to status and leadership. This, again, is something that must be anticipated by the diffusion specialist; good working teams will not just blossom forth.

The new headaches for an administrator are implicit in our discussion of what ETV would do to students, teachers, program producers, and the new specialists. Organizations indeed determine the limits of freedom and action for individuals working within those organizations. An administrator has to be helped not only to see these problems, but he also has to be trained to be able to tackle them. This

is a very important consideration for most systematic educational change is organizationally mediated. If organizational design and development are not handled as part of the innovation package, diffusion strategies are quite likely to collapse.

The last but not the least is the ETV expert, the man on the donor team who is working on an ETV project. The foreign expert, as an individual, should not only be a good technician, but also a sensitive individual, a man with good inter-cultural skills. He not only has to have respect for the people he has come to serve, but, more importantly, has to have a belief in their destiny. This has implications for selection of experts by donor agencies; it also points up the need for innovators to articulate their basic beliefs and values and relate their actions and approaches directly to their belief systems.

Configurations-Related Implications:
The Group Level

While discussing the configurations-related implications of ETV for individual students, teachers, program producers, new specialists, administrators and foreign experts we have in fact already hinted at some of the group-related implications of ETV. A number of small groups-fueled by shared jealousies or common interests in advancing or defending present statuses or merely by the human need to relate—will always emerge within schools, departments, and ministries. Outside of such formal organizations small groups will emerge in communities to follow their own special interests and to exert their influence to defend those interests. In the case of ETV in India, for example, it is likely that ETV may generate groups both in support and in opposition of ETV, the latter considering TV as a cultural affront.[16]

The problems related to building and working in teams are as frequent as they are crucial. These problems do not belong only to the adopter system that must develop working teams of 'curriculum specialists and television teachers' or of 'educational directors and television producers'. The problems also exist within teams of foreign experts who are given hastily invented designations, but who start responding to those designations so completely and unquestioningly that they begin to organize their whole work world in terms of those designations. As a result, some jobs do not get done simply because these do not seem to be covered by any of the designations. No coordination takes place because nobody is designated as the coordinator. The team thus becomes completely atomized[17] and is rendered ineffective.

Lastly, the 'advisor-advisee' problems may also be discussed here as small group problems. The advisor-advisee relationship is seldom if ever well formalized--mutual expectations of each other often remain nebulous. Often the advisors advice may not be accepted by the advisee or may not be followed through and the dyadic relationship may fall through with no organizational mechanism existing to put it back on the rails again.

Configurations-Related Implications:
The Institutional Level

The organizational implications of the introduction of ETV/ITV are the most important and would often make or mar a project according to whether or not they have been considered by the change maker.

In our example of the introduction of ETV in India we see that many organizations are involved in the process of diffusion (See Table on Page 27) and that they are placed in a complicated network of relationships, formal and volitional and across different levels. (See Figure on Page 24)

There are organizational implications here in terms of the following:

1. Invention of new roles.
2. Developing new sets of relationships between the new and the existing roles within organizations.
3. Developing new schedules and patterns of work.
4. Developing new incentive systems for accommodating and encouraging performance of the new functions.
5. Fulfilling new coordination needs between role specialization levels of hierarchy and the producer and the user of programs.
6. Institutionalizing new roles, role relationships, incentive systems and organizational structures.
7. Developing inter-organizational coordination mechanisms (temporary systems like committees and task forces, and more permanent systems like government and quasi-government corporations or commissions).

New roles like the TV teacher, the content specialist, the producer-director emerge within the educational/extension system when ETV/ITV is introduced. This means generally new incentive and reward systems and new status systems resulting in the need to create appropriate mechanisms of cooperation within the organization. Organizational mechanisms and structures thus have to be created to cope with the new organizational functions and functionaries and their new work schedules and performance styles. Lastly, when many government agencies are involved in a project (in India, for instance, there are many departments and ministries involved) there is also the difficult, but important question of inter-ministerial cooperation, never an easy task to accomplish.

On the part of the donor system the most important organizational need is to promote with the ETV leadership in the host country the institutionalization of the innovation and the accompanying organizational structure. This may mean a detailed analysis cooperatively with the adopter system of what specific organizational unit might be the best organizational home for the innovation and whether

it may not be sensible to put eggs in more than one basket—maybe by giving TV studios to different departments like Education, Agriculture, Health, etc., thereby 1) testing many different organizational climates, 2) developing conditions for a creative, competitive atmosphere, 3) decreasing needs for inter-departmental coordination, 4) taking production closer to the ultimate consumers, and 5) being able to make expert inputs closer to where they will be utilized. ETV/ITV is an innovation which, like many other significant innovations in education, must be organizationally-mediated. Organizational aspects are crucial. They must be consciously and competently handled by allocating suitable expertize, time, and resources. Institution building and organization development must be part of the innovation package.

Configurations-Related Implications:
The Cultural Level

Taking again the example of ETV in India for purposes of making the discussion concrete we should be able to anticipate some important implications at the cultural level.

First of all perhaps one should ask if the recipient culture is pictorially oriented and would easily learn the graphic conventions of ETV/ITV. More importantly in the case of India, how the culture with its long and rich pictorial tradition and with its own highly developed pictorial idiom could contribute to communication by TV.

The sociological implications are again many and far reaching. If a community TV set is installed, and this is the suggestions most often made in regard to rural television, it would bring together at least physically people of different ages, sexes, and castes. This may mean new social relationships in the community. These relationships may be cohesive or may reinforce existing factions.

ETV will be a new source of socialization for the village community wherein a TV set is installed. It will provide new models of identification and new aspirations. It will teach new skills--relational, social, and political. It possibly will bring a new sense of time, and a new rationality; and all this at the cost of the sacred and the magical.

It may bring new accessibilities to information and yet, as it often seems to do, may favor the already advantaged in education and information. It may bring new patterns of work and new life styles, but these may be those of the middle class.

It could abolish, once again in man's history, the difference between the literate and the illiterate in terms of acquiring, handling, and using information. Thus in the hands of a good innovator and with accompanying socio-political changes it could genuinely become a source of deschooling societies![18] It may homogenize whole regions or it may articulate caste language, and group identities. It may strangle the traditional folk arts and music or may create new opportunities for creative expression.

All these possible effects need to be anticipated and for some of them interventions need to be planned to avoid merely random consequences. Some of the consequences may indeed involve high risks and may not only destroy the chances for diffusion, but also the communities themselves through conflict, future shock, or a collapse of community values without anything new taking their place.

There are also political implications for the nation state. The introduction of ETV may bring an inflation of hopes and devaluation of trust in the government. Communication messages like monetary currencies lose their value when promises are not fulfilled in the market place.

In the introduction of ETV satellite countries may find not only challenges to their cultural identities, but also to their sovereignty through the emergence

of multi-national audiences being satisfied by programs from one or more cultures with greater lure and polish.

Linkages-Related Implications of ETV/ITV

Linkage is defined as the state of initiator(s) and target(s) being in a mutual stance of being able to receive or reject information and/or influence from each other. [We use the word linkage in place of communication to underscore the idea that the mere production of messages by a communicator would not complete the communication act.]

Linkage (or linkage networks) may then be seen as networks of channels both personal and impersonal which will determine whether the possible or desired information and influence could actually be transported to and delivered on target(s) through reading, writing, printing, talking, listening, picturing, broadcasting, demonstrating, viewing, observing, upholding, threatening, coercing.

Linkages may be viewed as linkages <u>within</u> configurations (L_W) and linkages between configurations (L_b). Again, linkages may be seen as being <u>operational</u> (or formal) chains and <u>volitional</u> (or formal) chains, the latter established or disconnected at will by personal volition of the configurations involved.

Linkage-related implications of ETV/ITV can be made bare by the process of linkage-typing, by presenting <u>graphically</u> (a) linkages existing between and within initiator and target configurations, (b) linkages which may be dormant and could be energized, (c) linkages that may have to be created anew between and within configurations engaged in an innovator-adopter relationship, and (d) in some cases,

linkages that may have to be severed to isolate resistance to diffusion.

Often, linkage-typing would be accomplished concurrently with the process of configuration-typing. However, linkage-typing has its own heuristic outputs. In the case of our example of India, let us look at the figure on page 24.

Some of the linkage needs and problems are immediately visible. First, there is the need to create a linkage system that would bring together all the different ministries and departments to make cooperative decisions on behalf of the National Government.

The lack of formal linkages between the Federal and the State levels should also be clear. The lack of horizontal linkages between the State level departments of education, health and extension and the local radio stations should be obvious. Also, the fact that the local radio stations being linked vertically to All India Radio in New Delhi are more oriented to the center than to regional needs.

The lack of horizontal linkages which would inhibit sharing of experiences across school systems and communities should also be clear from the linkage-typing.

Questions of linkages between TV and Radio services for instance, and of congruence of language systems of those who produce the programs and of those who will use them could also be generated from linkage-typing. The language question is an important one. In India we have a long history of producing programs that use good Sanskritized Hindi but which often are not understood even by the high school leaver.

Environment-Related Implications of ETV/ITV

Environment defined as a system of physical, social, and intellectual forces and conditions in which configurations are located is an important determinant of the diffusion of innovations within those social configurations. In a supportive environment an innovation may spread like wildfire. On the other hand in an inhibiting environment much more sophisticated interventions may be necessary and much greater resource inputs needed even for modest diffusion results.

In the early and mid-nineteen-sixties the intellectual environment for TV in India was certainly less than supportive. Most legislators in the Indian parliament were talking of the high costs of TV and suggesting that a poor country like India should not be investing in TV. Persuading the Indian elite of the usefulness of ETV/ITV was of no avail.[19]

The environment has since become supportive. How this change occurred over a period of years should in itself be an illuminating historical commentary on contemporary India but the American manned moon shots with TV broadcasts from the moon, the satellites in space, decisions by neighboring countries to adopt TV, the general industrial progress in India with a self-consciousness about industrial power that proved useful in two wars with the neighboring Pakistan all had something to do with the creation of the new environment of support.

The purely physical aspects of the environment should not be neglected by the diffusionist. Innovations not only need the proper intellectual climate, but also the right physical climate to take root. The tropical climate with its long and torrential monsoons should tell us some things about installation of community sets, reception, and program schedules. In summer a TV set in most parts of India

could be an instrument of torture if rooms were to be darkened but cooling was not possible. An ETV-er has to keep these things in mind and accommodate for these implications.

Resource-Related Implications of ETV/ITV

Resources are the most basic, the most obvious yet the most neglected ingredient in planning diffusion strategies. Change makers in the social sector (as contrasted with those in science, technology, and defense) have gotten so habituated to their poverty that they don't often ask for what they might need, considering that they know what they might need in the first place. Consultants and experts who in their home countries would at least be realistic in making budgets for the tasks to be performed, when they go to the Philippines (or some other place) would want a national TV system for the country for a few hundred thousand dollars, neglecting the detail that 90% of what they are providing for might go towards their salaries and for studio equipment. Undoubtedly, the personnel and production costs in the US are not the same as in the Philippines or India or Kenya yet budgets must not only be realistic but should also provide generously for wastages and for risk monies. Who said innovating is economic?

The adopter system also must be careful about the resource implications of the innovation being offered to it. The gift of the elephant may offer the recipient no joy rides but certainly make him poorer with all the hay to buy.

The following tabulation may be used in working out the resource-related implications of an innovation both for the innovator and the adopter configurations:

(See Next Page)

TABLE 3
Resource-Related Implications of Innovations

Resources (CIMPIT)	Innovator System	Adopter System
Conceptual/ Cognitive		
Influence/ Goodwill		
Material		
Personnel		
Institutional/ Organizational		
Time		

Conceptual/Cognitive Resources

What are the conceptual/cognitive resources that the innovator system is in command of? How much do the innovators know about the technology of educational change (making educational diagnoses both at the technical and the political levels, inventing educational solutions, building consensus and conviction, evaluating impact) and of the systemic and cultural realities of the adopter system and of their own? Do they know the techniques of resource planning and management and of resource multiplication by judicious use of knowledge systems near and far?[20]

How much do the new employees within the adopter system brought to work on a TV project know about equipment and its operation and, more importantly, about the medium's possibilities. It might be remembered that in the US an M.S. in Radio and Television is awarded after approximately 36 hours of graduate credit in the area. Needed conceptual (and motor) skills may have to be built from scratch through training programs that do not depend only on the apprenticeship model.

Influence/Goodwill Resources

Influence (goodwill in business parlance) is an important resource and a commodity needed both by innovator and adopter systems. Influence can be generated and applied both at the systemic level and the individual level. The innovator system as a system may be able to use influence that comes to them through the diplomatic frame of their work. Because of the diplomatic nature of technical assistance ETV-ers may also find that their influence may sometimes disappear overnight like camphor from a hot surface. The evaporation of the influence of American educational and cultural institutions in India after the American diplomatic initiatives during the Indo-Pakistan War in 1970 would be a case in point.

Influence is also generated and applied at individual levels. Individual experts may come to acquire and exert tremendous influence because of their social and economic statuses, their known expertise in the field of their work and because of their interest and their commitment to the peoples they have come to serve.

Influence resources are in turn needed by adopter systems for use with the ultimate adopters in the school systems and the communities. Clearly, influence

resources need to be built up and well managed. This is not important only for the success of a project current at the time, but also for the projects to follow. Projects leave footprints behind: present successes improving the chances for the projects to come; and failures making it difficult to fight community cynicism and to generate enthusiasm for participation.

Material Resources

Implementation of diffusion projects does require material resources. In international projects innovators typically request matching funds from the recipient country. That is a sacred ritual, supposed to be indicative of host country commitment and desire for self-reliance! As part of the game of grantsmanship recipient countries may often promise what they would not be able later to deliver. Why should donors insist on matching funds when it is clear that those funds would not be forthcoming? Why not at least provide for back-up funds to cover situations where promises for matching funds are not fulfilled?

In the case of ETV/ITV the resources needed by the adopter system are indeed sizeable. Notwithstanding the claims made by ETV-ers that ETV is ultimately cheaper, costs on ETV in the short run are always additional costs. The so-called redeployment of existing resources, always part of the argument wherever ETV/ITV is being sold to the Third World countries, does not take place since the option does not really exist. In the Third World we cannot reduce teaching jobs by using ITV because reducing jobs is not Development! We cannot even use ITV as an alternative way for expanding education because in a world that has not been deschooled[21] expansion of education must always be in terms of more school buildings, more classrooms, and more teachers. ITV can be seen only as an improvement in quality and should in fact be seen as such, as an investment in quality. (ITV could be

used for expanding both education and employment through a strategy that trains para-professional monitor teachers in short courses in training schools, and links them with a master teacher on television. The inservice training of these monitor teachers could again be handled through television.)

Production of TV programs needs money too. Country after country in the Third World, after TV was in, had nothing to put on the waves, and has ended up broadcasting American programs--the inevitable Lucy, Bonanza and Mission Impossible. The same can happen in ETV/ITV.

Preparing classrooms that can be darkened will also require resources and some part of the system must make those resources available. Even buying tables or suitable stands for the TV sets is going to absorb resources.

The infrastructure of the social system in which ETV/ITV is being installed may not always be adequate. When there is no good mail or train service the project may need landrovers or jeeps, that is, it may in fact be creating a private infrastructure for private use, at great costs. ETV/ITV broadcasts, but some things have to move on the ground. There has to be some distribution by mail; there is going to be some moving around; bringing people together; obtaining support and services of various kinds.

Personnel Resources

Personnel resources can be discussed separately from material resources since money cannot always buy services of trained personnel. This is especially true in some of the African countries. The manpower is not around to be employed even when there is money in the budget. An African country on Independence Day found itself with half a dozen university graduates in the Secretariat. How would such a system produce scriptwriters, program directors, content specialists, medium researchers?

Institutional/Organizational Resources

At the system level innovator and adopter systems need institutional resources--organizational experience and institutional backup. There are instances of foreign projects collapsing because the local USAID or UNESCO/UNDP office did not provide institutional support to its own project. Also the organizational experience and the institutional backing available to the adopter system is an important resource. Where this is not available institution building may be an important part of the diffusion package.

Time as Resource

Finally time is resource. Time is budgeted badly almost always. Innovators may want to do too much with too little in time resources or may consider time as an unlimited resource. Also the two systems involved, the innovator and the adopter, may have different concepts of time and a 'time consensus' may have to be developed by using techniques such as Perting which can be used not only for managing but also for communicating.

Some Guidelines and Conclusions

Developing diffusion strategies for ETV/ITV in the Third World should be a matter of optimizing C,L,E, and R factors of a particular situation and developing a good mix that is rooted in a well articulated value system of means and ends. The guidelines for ETV-ers both within the donor and the adopter systems have indeed already been presented--they are part of the analysis included in the foregoing.

Select Guidelines
For the Innovator System

The innovator system of ETV-ers must start with the acceptance of the diplomatic framework within which they will be most often working. ETV-ers should realize that the diffusion transaction is never likely to be all rational, but that they may have to impose a rational model on an existing political model and serve both models at the same time.

The innovator system should begin with a planning grant and a planning period. During such a period of time a model like the Configurational Model (CLER Model) could be usefully employed to get a realistic view of the size of the diffusion job involved. Understandably, the planning process would not merely be an analytical process but will involve collection of valid data within and about the adopter system. Such data should be collected and information developed from it for use in project planning. The project should be both logically (technically) and sociologically (politically) feasible.

The planning process must respond to two key concepts--behaviorism, and institutionalization. Diffusion planning, that is, must plan for behavioral changes in those involved as innovators and as adopters and it must involve institutionalization of new roles, motivational patterns, and organizational structures. It must also be remembered that to have an impact on a situation, a large enough resource allocation must be planned for.

The innovator teams should be appropriately designed based on careful task analyses. There should be inventing of roles rather than of mere designations. Selection of consultants and experts should be handled most seriously. A team of ETV-ers, in addition to educators, field organizers, ETV specialists, might usefully include a person with change-related expertise. The total project might be divided into series of smaller projects and each smaller project timed and budgeted separately.

If evaluation is to be conducted an evaluation policy must be developed and funds and personnel assigned to the evaluation task. What is not planned for and paid for should not be expected to happen.

Select Guidelines
For the Adopter System

The insights about the diffusion process emerging from the previous analysis can be used by the adopter system as well as for enlightened adoption. The following may serve as some useful guidelines.

The adopter system, again, must begin with the realization that ETV as an innovation should not only fulfill adopters' needs, but also the needs of the donor system. Also that political elites acting on behalf of the adopter system may have made decisions to adopt ETV/ITV for the 'wrong' reasons and thus technical and political realities must both be part of the reality to be responded to.

The adopter system need not rationalize ETV/ITV as a saving in expenditure but promote it as an opportunity for improving the quality of education in schools or as an effort to educate the nation outside of the four walls of the classroom.

The adopter systems must also insist upon planning grants and planning periods. The money for thinking through things is almost always well spent. Valid information about the system must be created even if the politicians decide to neglect it or even misinterpret it.

The recipient country should not promise matching funds that it cannot later find. The adopter system should not only compute the costs of maintaining a project, but also the costs of terminating a project. Funerals do cost money.

The recipient country/adopter system must give a very careful look to the qualifications and experiences of foreign experts it chooses to bring into the country to work on the project.

The adopter system should, early, build a training policy for its staff. Emphasis should be on non-degree training programs so that inputs are made in institutions rather than in individuals who may leave for better prospects, to work for others who did not pay for their training.

The adopter systems should develop strong software orientations. There might be a law against broadcasting anything or a certain proportion of programs not produced within the country, at least for the first five years.

Diffusion and change must always involve some social disruption within organizations, groups, and communities. Adopter systems must pay special attention to anticipating most of these disruptions and must provide reintegrative social mechanisms.

Adopter systems must multiply resources by getting business and industry interested in the ETV/ITV projects. Industry may be invited to sponsor educational and entertainment programs and these programs need not be American style.

ETV/ITV systems must never talk down to their audiences. There should be honest treatment of issues, and no simple-minded resolutions which might create political cynicism and miseducation of the masses.

Lastly, two way communications must be created with ETV/ITV systems from the very beginning. Communities must participate in the production of programs. They must often see themselves on the ETV/ITV screens.

Conclusion

ETV and ITV present the Third World a medium of communication and education with truly immense potential. It can at the same time be a flexible medium doing different things for different communities and nations. While the Third World needs TV it needs the First World as well. Going it alone does not seem possible. And to-

getherness need not be absolutely selfish, cynical, destructive, and homogenizing. Mutual purposes can be established; alternatives can be develcped.

C5C

APPENDIX

Unpacking ETV/ITV As An Innovation

Since innovation diffusion could usefully be seen as <u>teaching</u> of an innovation by an innovator system to an adopter system, Bloom's taxonomy of educational objectives could be usefully employed to this process of unpacking an innovation.

It should be indicated, however, that the examples of ETV/ITV components given in the following while they may not be <u>purely</u> cognitive, attitudinal or skills-related, they do have predominently informational/conceptual, attitudinal or skills-oriented characteristics.

TABLE 4
Unpacking ETV/ITV in Terms of
Cognitive, Attitudinal, and Motor Components

Cognitive Components	1 Developing understandings in the usefulness of ETV/ITV in education and extension (and in achievement of larger political and social objectives). 2 Developing understandings in the possibilities of the medium at various levels and in various sectors of education and formulation. 3 Developing conceptualizations for integrating television teaching with other teaching or within extension systems. 4 Developing understandings about developing and installing new instructional patterns, and information systems. 5 Developing understandings about designing and installing management systems in regard to technical and professional facilities needed for introducing ETV/ITV.

	6	Developing manpower and professional sub-systems to actualize all the preceding components.
Attitudinal Components	7	Imparting new attitudes towards technology.
	8	Imparting new attitudes towards machines.
	9	Imparting new attitudes towards "cinema", (TV set may be seen as a purveyor of films which in India, for instance, have a bad name among an orthodox, but a large section of the population).
	10	Imparting new attitudes towards foreign aid.
	11	Imparting new attitudes towards foreigners, their work habits, and social/relational styles.
	12	Imparting new attitudes towards teacher and extension worker.
	13	Imparting new attitudes toward teaching-learning and extension as processes.
Skills-Related Components	14	Developing skills in preparing TV messages.
	15	Developing skills in installation, operation, and maintenance of equipment and studios.

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FOOTNOTES

[1]H.S. Bhola, "The Configurational Theory of Innovation Diffusion," Indian Educational Review, Vol. 2, No. 1, (January, 1967), Pages 42-72. ERIC Document ED.011.147.

[2]Everett M. Rogers and F. Floyd Shoemaker, Communication of Innovation: New York: The Free Press, 1971, (Chapter 2).

[3]More recently the process of development in the Third World has been discussed as part of a common historical experience. See Ronald Robinson (Ed.): Developing the Third World: The Experience of the Nineteen Sixties. Cambridge of the University Press, 1971.

[4]Most of the words used in describing the policy in television in education and development in the developing world are borrowed from Joel Bernstein's speech and written testimony.

[5]Draft Program and Budget for 1973-74 (General Conference, Seventeenth Session, Paris 1972, 17C/5.) Unesco, Paris, 1972, Page XIII.

[6]Draft Medium-Term Outline Plan for 1973-78 (General Conference, Seventeenth Session, Paris 1972, 17C/4.) Unesco, Paris, 1972, Pages 181-83.

[7]The Ford Foundation in the 1960's. New York: The Foundation, 1962. Pages 5-6.

[8]H.S. Bhola, "Notes Toward a Theory--Cultural Action as Elite Initiatives in Affiliation/Exclusion," Viewpoints, Vol. 48, No. 3, (May, 1972), Pages 1-37.

[9]Paulo Freire, The Pedagogy of the Oppressed, New York: Herder and Herder, 1970.

[10]For a more detailed discussion of the 'diplomatic frame' aspects of innovation diffusion across cultures see, H.S. Bhola, "Limitations and Possibilities of Educational Diplomacy: A Theoretical Framework," Viewpoints (Special Issue on International Dimension of Higher Education) School of Education, Indiana University, Bloomington, Vol. 47, No. 5 (September, 1971). Pages 77-100.

[11]H.S. Bhola, "Disseminating Information for Utilization: An East African Experience," ERIC/CRIER Newsletter, Vol. 5, No. 1, (December, 1970).

[12]See also Egon G. Guba and Daniel L. Stufflebeam, Evaluation: The Process of Stimulating, Aiding, and Abetting Insightful Action (Monograph Series in Reading Education, Indiana University, Bloomington, 47401), No. 1, (June, 1970). And, H.S. Bhola, "Making Evaluation Operational in Functional Literacy Programs," 1972. Page 39, ERIC Document ED.064.574.

[13]Ronald Havelock and others, Planning for Innovation Through Dissemination and Utilization of Knowledge; Ann Arbor, Mich.: Institute of Social Research (Chapter 11, Page 10).

[14]See Paul C. Hayes, "The Effect of Planned Change on the Local School," Theory Into Practice (Special Issue on Planning for Educational Change) Vol. V, No. 1, Pages 46-50; H.S. Bhola, "Limitations and Possibilities of Educational Diplomacy: A Theoretical Framework," Viewpoints (School of Education, Indiana University; Special Issue on International Dimensions of American Higher Education) Vol. 47, No. 5 (September, 1971) Pages 77-100; and John A. Wilson," Some Organizational Effects of Performance Contracting--A Case Study of Change", Ph.D. Dissertation (School of Education, Indiana University) 1972, 145 pages, as examples of the application of the configurational theory.

[15]Margaret Mead, Culture and Commitment: A Study of the Generation Gap. (Doubleday Paperback, 1970).

[16]As indicated elsewhere, TV is easily equated with cinema which with some sections of the Indian population does not find favor. One important reason being that most actors and actresses on the Indian screen in the early days of the cinema came to be associated with castes that traditionally provided musical entertainment at social functions and sometimes mistresses to the wealthy. Thus in many families going to the movies might still be seen as going to a whore house! It should be mentioned, however, that these prejudices are fast disappearing and films have already come to be the most popular form of entertainment in India, both for the young and the old.

[17]We have advisedly used the words team and group interchangeably. The advisory teams headed by Chief Technical Advisors or Chiefs of Party often seem to fall between a group and a bureau. We have found it convenient to discuss this problem of team work as a group problem.

[18]Ivan Illich, Deschooling Society, New York: Harper & Row, 1970.

[19]H.S. Bhola, "Why We Need TV," The Hindustan Times. New Delhi, March 31, 1966.

[20]See Ronald Havelock and others, Planning for Innovation, University of Michigan, Institute for Social Research, 1969, which discusses change primarily as a problem of knowledge utilization.

[21]Ivan Illich, op. cit.