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A strategy for assessing the efficacy of approaches to educational television as a development tool.

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A STRATEGY FOR ASSESSING THE EFFICACY OF APPROACHES TO EDUCATIONAL TELEVISION AS A DEVELOPMENT TOOL

BY

INDRAWANSA DE SILVA

A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
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ABSTRACT

A STRATEGY FOR
ASSESSING THE EFFICACY OF APPROACHES TO
EDUCATIONAL TELEVISION AS A DEVELOPMENT TOOL

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Indrawansa de Silva

This thesis examines a strategy for assessing the efficacy of approaches to Educational Television as a development tool. An historical research method was employed in order to arrive at a base upon which propositions for future strategies may be built.

Arguments are introduced concerning the efficacy of Educational Television, in general, and various ETV projects in different parts of the world are surveyed: American Samoa, El Salvador, Niger and India. The Samoan ETV project is examined in detail focusing on education before the introduction of ETV; the emergence of Samoan ETV; the project at work; teachers' and students' attitudes; and, the inevitable decline of ETV as it gave way to commercial television.

This thesis is concerned with examining stated objectives and how they marry up to historical fact. It is the contention of this thesis that the stated objectives for the introduction of educational television have not been

achieved at present. The reason for this failure, is, in great measure, due to inadequacies in the "Old Paradigm" for national development - the so-called "Western Model".

Several conclusions evolved out of propositions which are suggested by examination of historical facts: (a) technology requires a supporting infrastructure (b) financial resources must be available to provide the infrastructure as well as the technology (c) if financial resources are only available through extra-cultural sources, political and economic restraints will be placed on the development strategies (d) the most necessary ingredient in the development process is modification or change of attitudes at the general population level (e) attitude change cannot be forced. It can only come about if individuals see the utility in change and change <u>themselves</u> (f) the <u>nature</u> of television is such that whatever use the medium is put to, it appears to move towards being used as an entertainment, commercial form.

DEDICATION

To my Mother, Helen, and

my Wife, Priyani

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I gratefully acknowledge Dr. Stewart Ferguson, my chairman, for his contribution to this thesis. His clear, insightful, and practical manner of looking at things assisted me in ways that cannot be measured. Dr. Max Hedley's constructive criticisms on the content of this thesis are much appreciated.

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PREFACE

This thesis examines a strategy for assessing the efficacy of approaches to Educational Television as a development tool. An historical research method was employed in order to arrive at a base upon which propositions for future strategies may be built.

The original intention was to assess two case studies of developing nations that have introduced Educational Television. American Samoa and Niger were chosen to structure the study. They were ostensibly well-suited to my purposes, having introduced ETV projects in the mid-sixties. After nearly twenty years of experience, they appeared ripe for intensive investigation. Why did they introduce ETV? What did they experience? How did their objectives marry up with the results?

However, as easy as it was to find information concerning American Samoa, it was very nearly impossible to find any information concerning the case of Niger, particularly any recent developments. The assumption was that information about the Nigerienne project could be obtained from various international agencies that had supported ETV projects in the developing world. Indeed, the researcher travelled to Ottawa in hopes of tapping into such sources. Visits to the IDRC (International

Development Research Council) and CIDA (Canadian International Development Agency) proved fruitless. The Canadian Commission for UNESCO was approached to no avail. One remaining source was thought to be most likely to yield relevant materials - the Niger embassy. There, a spokesman for the embassy said that he was unaware that there existed an ETV project in Niger, at present. He was even uncertain as to whether any kind of television existed in his country. He suggested the French embassy as a source since the French had originally bank-rolled the project and supplied the hardware and software. The French embassy spokesman said that there was no extant material in Canada.

Hence, the original intentions of the project could not be realized. It appeared that American Samoa was the most documented ETV project in existence and that balance could only be achieved by examining several other projects in addition to the Niger case. Therefore, two new cases were included - the SITE project in India, and the ETV project in El Salvador.

A computer literature search was undertaken at the University of Windsor through its library facilities, tapping into the ERIC (Educational Resources Information Center) data base using the following key-words with the word Niger: education, educational television, television, and development. Only information pertaining to the first five years of the project was obtainable. There was *no*

information about the current state of Educational Television in Niger.

The researcher then travelled to East Lansing, Michigan to Michigan State University in order to search the SAHEL collection. The SAHEL collection is one of the most complete data bases on West African countries. Again, there were no relevant materials to be found.

Information on other ETV projects was more complete, particularly in the case of El Salvador. However, this information was often tainted by a lack of objectivity, written by individuals who had vested interest in the projects.

This long explanation justifying the research design is intended to act as a guide for scholars who attempt the same journey in the future. It is important to note that the absence of information is information in itself.

The structure of this thesis was largely determined because of the lack of critical information. Rather than give up a worthwhile exploration, the original theoretical questions were approached from another direction.

Chapter I introduces the reader to the area of Educational Television in developing nations. The justifications and purposes of the study are stated and are followed up by a review of the literature and research methods.

Chapter II introduces various arguments concerning the efficacy of Educational Television and surveys ETV

projects in different parts of the world: the Indian Satellite Television Experiment (Project SITE), the case of El Salvador, and the case of Niger. The investigation is necessarily incomplete because of the lack of existing or objective materials.

Chapter III examines the case of American Samoa in-depth. As stated, at the time of this writing American Samoa was the most documented ETV project in existence. This chapter examines the structure of education in American Samoa before the introduction of television (1900-1964); the emergence of Samoan Educational Television; the project at work; teachers' and students' attitudes toward ETV; and finally, traces the decline of Educational Television as it gives way to commercial television.

Chapter IV examines paradigms for national development. It must be noted that this thesis is not concerned with testing paradigms against the historical facts (the ETV projects). This thesis is concerned with examining *stated objectives* and how they marry up to historical fact. It is the contention of this thesis that the stated objectives for the introduction of Educational Television have not been achieved at present. The reason for this failure is, in great measure, due to inadequacies in the "Old Paradigm" for national development - the so-called "Western Model." Therefore, the theoretical framework is introduced in that part of the thesis concerned

with examining the reasons why stated objectives are not realized in historical fact. Chapter IV then examines the emergence of the "New Paradigm" and concludes by fitting development and educational strategies into a modified "Old Paradigm."

The final chapter offers several conclusions evolving out of propositions which are suggested by the preceding chapters. This concluding chapter isolates these propositions and evaluates them on the basis of the available data.

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CHAPTER I

INTRODUCTION

In newly emerged Asian, African, and Latin American nations, education has become a prime strategy in their quest for national development. The time devoted to discussing education problems by the United Nations Educational Scientific and Cultural Organization - UNESCO - over the past three decades indicates the perceived importance of the task. UNESCO became the most active body of the United Nations Organization, consuming the largest portion of the UN budget. Rene Maheu, a former Director-General for UNESCO, commented on the nature of educational problems facing the world in the early 1960s:

> The universal surge of progress of the second half of the twentieth century offers to education an inspiring challenge. In fact, mankind is passing through a profound mutation caused by three explosive factors: *the increase of population; the speed at which certain knowledge becomes outdated and technical progress advances; and political emancipation.* As a result, education must also undergo a radical mutation on a scale which can hardly as yet be fully appreciated. Many more people have to be educated for a continually increasing span of their lives so that they may absorb an ever-expanding and changing body of knowledge.[1] (Italics mine.)

The wide demand for education, however, had not been unique to developing nations. The increasing demand for education was manifest in nations all over the world, in

spite of their stage of economic development, for the reasons that Maheu has pointed out above. The gap between supply and demand in education is such that it may not be appreciably narrowed for several decades. This situation, which some scholars called the world educational crisis, led the planners to search for alternatives in order to balance the equation. As has been emphasized by UNESCO, these needs became apparent at a time when electronic media - radio, film, and television - were proliferating.[2] Although there was a choice of media available for the purposes of education, the uses centered largely on television during the course of the past quarter-century. As Professor Arnove has pointed out, "when foreign aid donors and educational decision makers in developing countries discuss instructional technology, they basically mean television."[3]

For developing countries, however, the need to enhance the quality and quantity of education was not merely a matter of education itself. The major problem which they were facing was *to develop their nations as a whole.* It is in this context that education was considered as a major element of the national development process. The millions of illiterates in developing nations were seen as one of the bottlenecks impeding the moving of masses towards modernization and developmental goals. In this context, UNESCO saw the new media as "a means of strengthening . . . and a means of shaking the whole web of traditional attitudes and

practices, thus contributing to the modernization and advancement of any educational system."[4] Therefore, from an optimistic point of view, the new media, particularly television, seemed to be the promise of the age.

However, the new technologies, basically products of the economically and technologically developed nations, were very expensive both in terms of cost and of skilled manpower, and thus, they came to economically poor nations under the auspices of developed nations. Pessimists also argued that foreign *values* were built into foreign technology and foresaw the continuing dependency of developing nations on the developed ones. Such terms as *cultural imperialism*, *domination*, *dependency*, etc., became key concepts in criticising the entire process. The new technological *Trojan horse* was seen as an extension of the social and economic structure of the society in which it was developed. Schiller noted:

> It is important to recognize that the technology of advanced capitalism is hardly likely to be appropriate for developing countries, and it is essential to understand that this technology is in itself an expression of the capitalistic structures and the strivings from which it emerged. The conceptions and designs for the hardware and the processes that accompany it are shaped by, and come out of, the production and social relations existing at the time.[5]

With few exceptions, developing nations received the medium of television as a tool for education, and the television systems already operating in developing nations were frequently justified on educational grounds.[6] The

history of Educational Television shows that most nations which introduced television gave education as the first priority for its use, but sooner or later the end result was predominantly commercial television. As Schramm et al. noted:

> television introduced for instruction is likely to have a community impact. *Once the transmitters are on the air, it is almost impossible to keep educational television from spreading into entertainment television.*[7] (Italics mine.)

This commercial trend of television was argued to be inevitable. The nature of television is commercial. The most talented TV personnel work for commercial television, and the most advanced technology being used is employed for commercial purposes. The high commercial orientation of television is inevitable, even in economically prosperous nations. For instance, in the United States, so-called *instructional* programmes such as Sesame Street and Electric Company, have to be re-run and PBS stations have to plead for funds in order to continue their services. On these grounds, it was argued that if

> the most prosperous, highly industrialized and professionally experienced countries of the world cannot produce an adequate amount of material, what chance would small, economically depressed countries have of producing several hours of material daily [frequently] in many languages.[8]

When the debate on Educational Television peaked in mid-1970, considering the cost effectiveness of ETV, some scholars were bold enough to recommend that "television

should almost never be used for instruction in low-income countries."[9]

The criticisms, however, went beyond the medium of television and/or the content it carries. By the early 1970s, the philosophical framework -- the Western model of development - which laid the psychological groundwork for such mentality, was also at issue. The Western model which was once believed to be "an inevitable baseline for . . . development planning"[10] did not accomplish its projected developmental goals. The gap between have and have-not nations kept widening rather than closing.[11] It was only a decade ago that the developing nations started to realize that "the industrially advanced nations largely controlled the 'rules of the game' of development."[12] As a result, the appropriateness of the advanced technology was considered - at least in the literature and in international forums - with skepticism.

Justification for the Study

It is in this context that I offer three major justifications for this study.

1. There is not any large-scale Educational Television project in any developing nation without considerable assistance being received from a developed nation. This assistance comes in the form of either hardware or software or, in most cases, both. While optimists expected an in-

crease in the quality and quantity of education, and thus a better life for people in the developing nations through the new educational media, pessimists foresaw foreign acculturation with the introduction of these new technologies. They also saw the technology as including long-term dependency on advanced nations. Now, after nearly twenty years of experience with many ETV projects, this work will examine the validity of these points of view.

2. Although the impact of television's *content* has had considerable study, less attention has been paid to the impact of *television itself*, i.e., television's *dictating* power as a medium of technological determinism - particularly in the course of education. Therefore, this study will also probe the deterministic nature of television.

3. There is an absence of any previous study that examines the Educational Television projects as a product of the widely held Western model of development.

Purpose of the Study

The purpose of this study is, therefore, to answer the question: After two decades of experience, how far have the Educational Television projects met their objectives?

A response to this question will be the product of the following efforts: (i) examining the background which led American Samoa, El Salvador, Niger, and India to select television as the medium to cope with the needs of education;

(ii) examining the impact, if any, of donor nations on the host; (iii) examining television's dominant commercial nature; (iv) examining ETV in the Western model's theoretical framework.

Research Methods

This study uses an historical research method with a view to arriving at a base upon which propositions for future strategies may be built.

REVIEW OF THE LITERATURE

The early literature of the subject is mostly dominated by the attempts made to justify or evaluate the "effectiveness" of television as an instructional medium. By the latter part of the 1960s, there seemed to be a new trend in the literature toward the socio-political implications of the use of Educational Television, coupled with an inter-disciplinary approach, mainly, political science, sociology, anthropology, etc.

The first comprehensive assessment of approaches to Educational Television projects occurred in 1967 as a series of case studies carried out under the sponsorship of the United States Agency for International Development (USAID). These reports were published by UNESCO's International Institute for Educational Planning (IIEP) under the direction of Wilbur Schramm in three volumes, namely, New Educational Media in Action: Case Studies for Planners

Vols. I-III. The three volumes covered almost all uses of educational media - radio, film, and television - world-wide until the mid-1960s. The volumes contained assessments of the Samoan and Niger projects which, by that time, were in their infancy. The volumes were followed by an overall summary report, also by IIEP: The New Media: Memo to Educational Planners by Wilbur Schramm, Philip H. Coombs, F. Kahnert, and J. Lyle. The Memo carried an in-depth discussion regarding: What problems are the new media being used to solve? How effective are they proving to be? How are they used most effectively? What do they cost? How should their use be planned?

The Academy for Educational Development (AED), a sub-division of the USAID which has been a major donor for several ETV projects in Latin American and the Pacific Regions, published a series of reports in the early 1970s summarising the new technology at work in education and community development in 'less developed countries.' The series was much more informative than critical because of vested interests.

In 1972, eight years after the initiation of the Samoan project, seventeen scholars, producers, and directors of on-going ETV projects convened at the East-West Center, including Max Egly, the Director of the Tele-Niger Project, Gerald S. Lesser, Chairman of the Advisory Committee for Children's Television Workshop (CTW), and Wilbur Schramm, Director of the Institute of Communication Research at

Stanford. The papers presented at the convention were published as Quality in Instructional Television, edited by Wilbur Schramm. The edition, in light of the on-going projects, tried to answer the questions: What are the characteristics of a good programme? How do we know? What jobs can television do best? What jobs clearly belong to other media?

In 1973, Schramm published an overall study of the nine-year experience of the Samoan ETV project entitled ITV in American Samoa: After Nine Years. In many respects, the study became the most comprehensive and up-to-date work on the Samoan project.

Arnove (1976) published the first critical analysis on the use of Educational Television in developing nations. This work was the first to take a broader look at the socio-political implications, the economics, and the cost benefits of Educational Television. Presenting three case studies (El Salvador, Ivory Coast, and American Samoa), the writer critically questioned whether the overall price that developing nations have to pay for new educational technology was worth any benefit they received from it. The analysis was the first of such, where the authors had no obligation to protect or praise the projects.

Mayo et al. (1976) published a comprehensive report on the El Salvador project from its inception to its present status. Schramm et al. (1981) published the

entire report of the Samoan project from its inception as ETV to its march towards a commercially dominated television.

Jorge Ricardo Werthein (1977), in an unpublished Ph.D. dissertation, Stanford University, entitled "A Comparative Analysis of Educational Television in El Salvador and Cuba," discussed the reasons these two nations became involved in ETV and the extent to which the approaches differed according to the social, political, economic, and cultural characteristics of the society making the adoption. Steven Jeffery Kless (1975) had done his Ph.D. dissertation, also for Stanford University, entitled "Instructional Technology and its Relationship to Quality and Equality in Education in a Developing Nation: A Case Study of Instructional Television in Mexico." Like Werthein, Kless also analysed the reasons for the developing nations introducing instructional technology systems. Comparing the cost and the effectiveness of the new "Telesecundaria" (TS) system, (ETV), which the Mexican government had begun (1966) with the traditional "Ensenanza Directa" (ED), Kless concludes that the "telesecundaria" appears to be a more cost-effective instructional system than the "Ensenanza Directa." Kless did not try to examine the impact of the system on society. Logoleo Faleali'i (1976) wrote his Ph.D. dissertation entitled "A Study of the Attitudes of Public School Teachers Toward Instructional Television in

American Samoa" for the University of the Pacific. His main concern was to examine the teachers' reactions to Educational Television. Faleali'i probed teachers' attitudes toward ITV through four aspects: (a) ITV as an instructional medium; (b) ITV as a teacher training medium; (c) ITV as a threat to classroom teachers' job security; and (d) ITV as a future instructional medium in American Samoa. George Gueulette's (1972) Ph.D. dissertation for Ohio State University entitled "Educational Technology in the Developing Countries: The United States Role" argues that since the U.S. is constantly developing the educational technology [hardware], it has increasingly become a center for their use and exportation. Therefore, many less advanced nations have accepted help to introduce and implement this technology for educational and consequent social, economic and cultural development. Although the topic of Gueulette's discussion was stimulating, the study was informative rather than critical.

In summary, this Chapter has introduced the area of Educational Television in developing nations, and offered justifications and purpose for the study. In addition, it has reviewed the literature and given a short explanation of research methods. The next Chapter introduces various arguments concerning the efficacy of various ETV projects world-wide - Niger, El Salvador, and India.

Notes

[1]Wilbur Schramm et al., The New Media: Memo to Educational Planners (Paris: UNESCO, 1967), p. 5.

[2]Ibid.

[3]Robert F. Arnove, ed., Educational Television: A Policy Critique and Guide for Developing Countries (New York: Praeger Publishers Inc., 1976), pp. xii-xiii.

[4]Schramm et al., Memo, p. 95.

[5]Herbert I. Schiller, Communication and Cultural Domination (New York: International Arts and Sciences Press Inc., 1976), p. 50.

[6]Stewart Ferguson, "The Implications in Satellite Television for Social and Political Change in the Third World" (Ph.D. Dissertation, Indiana University, 1977), p. 240.

[7]Wilbur Schramm, Lyle M. Nelson, and Mere T. Betham, Bold Experiment (Stanford: Stanford University Press, 1981), p. 191.

[8]Ferguson, "The Implications," p. 239.

[9]The Ontario Institute for Studies in Education, "Commentary on 'Applications of Instructional Technology in Latin America: Cost and Effectiveness'" by Leslie and Jamieson (Mimeographed), p. 14.

[10]Daniel Lerner, "International Cooperation and Communication in National Development," in Daniel Lerner and Wilbur Schramm, eds., Communication and Change in the Developing Countries (Honolulu: The University of Hawaii Press, 1967), p. 115.

[11]In its 1981 World Development Report, the World Bank reported: "Even under the relatively optimistic assumptions . . . the income gap between the richest and poorest countries will continue to increase; . . . even the number of individuals living in absolute poverty will rise."

[12]Everett M. Rogers, "Communication and Development: The Passing of the Dominant Paradigm," in Everett M. Rogers, ed., Communication and Development: Critical Perspectives (Beverly Hills: Sage Publications, 1976), p. 125.

[13]Despite the existence of a large amount of literature on ETV, there were hardly any studies on the subject in Master's and Ph.D. Dissertation Abstracts. Master's Thesis Abstract does not cite a single study on any ETV project overseas in their listings for 1961-1981. Nor does the Comprehensive International Dissertation Abstract. It was searched under the following headings: Mass Communications, Education, Niger American Samoa, Development, Developing Countries, Television, Educational Technology, Third World, Audio Visual, Case Studies for the period of 1961-1981.

CHAPTER II

THE USES OF NEW COMMUNICATION TECHNOLOGY FOR EDUCATIONAL DEVELOPMENT

This Chapter will introduce various arguments concerning the efficacy of Educational Television, in general, and survey three different ETV projects in the developing world: the El Salvador Project, the Niger Project, and the Indian Satellite Television Experiment (Project SITE).

When the nations of Latin America, Asia and Africa became politically independent, they were not freed from problems. High on the list of problems were the millions of illiterates, a result of the centuries old elitist educational structure. It was argued that mass illiteracy was a major obstacle to modernization and that it inhibited the development process. These newly emergent nations in the Third World considered schools as manipulable, and according to Professor Arnove, would enable them to

> (a) train and select the elite cadres of bureaucrats, technicians, professionals, and leaders required to manage more complex and specialized economic and political institutions; (b) transmit common values and develop a national identity and consensus among diverse, often conflicting, ethnic groups coexisting within the same territorial boundaries; (c) develop skills and outlooks in the population at large so that they could participate in the nation-building process.[1]

Commitment to this widely-agreed notion on education in the late 1950s and early 1960s could be seen in the portion education consumed from the national budgets of these nations. In some cases, education became the single largest expenditure in national budgets. This trend has not changed. For instance, in 1972, when El Salvador paid more attention to their education system, it consumed some thirty-six per cent of the national budget.[2] An educated population became the primary goal of developing nations in their quest for national development. As Ingle has pointed out:

> [E]ducation increasingly has become the largest item in the national budgets of many countries. Government officials and policy makers emphasize educational reform, both in the formal and non-formal sectors, as a key to national development. Lack of trained manpower, it is argued, constitutes the critical bottleneck to industrialization and modernization.[3]

However, the existing educational infrastructures of these newly emerging nations were not capable of meeting the felt need for better education. Quite literally, the need for education could not be materialized within the existing infrastructure. Indeed, there was a clear educational problem: the mass demand for education was set against a shortage of funds, teachers, classrooms, teaching materials - a shortage of everything except students. A sharp increase in popular demand for education besieged existing schools and universities.[4] Philip H. Coombs, Director for UNESCO's International Institute of

Educational Planning (IIEP), observed:

> Developing countries everywhere, struggling to meet their vast and urgent educational demands, are confronted by formidable obstacles: shortages of teachers, facilities and money; outmoded curricula and instructional materials; inadequate and over-taxed administrative structures; scattered populations hard to reach; traditions and inertias resistant to change.[5]

The problem was two-fold: these nations needed (a) more money for the educational system and (b) an efficient system which would facilitate the leap in a short period of time. But "money [would] be harder to get since education's share of national incomes and budgets [had] already reached a point that restricts the possibilities for adding on further increments."[6]

EMERGENCE OF EDUCATIONAL TELEVISION

Fortunately or unfortunately, new technology promised to solve many of the problems. It was the time when developed nations were in a stage of successfully using new technology for educational purposes. At that time, speaking for the possible uses of new media technology in education, Rene Maheu, the Director-General of UNESCO, noted:

> Fortunately the need for such changes in education arises at a time when media of communication - radio, television and film - and new methods and techniques of instruction, such as programmed learning, have come on the scene. The task now is to determine what is the appropriate place for these new methods and techniques in the educational process, in what way they can be interwoven into traditional ones, and what

> changes in educational research should accompany the revolution in the communication process.[7]

Among the three media - radio, television and film - Maheu pointed out that television became the focal point of consideration among the educational planners.

> Of all the media . . . television has aroused most expectations and hopes and has attracted more attention. . . . It was seen as the universal panacea for all educational ills.[8]

When the planners talked about the possible use of media for education, they were referring to television, despite the fact that television was by far the most expensive medium. Television seemed to be the promise of the age. Robert F. Arnove, however, argued that the decision to adopt ETV by developing nations was not a result of systematic prior planning. Rather "the decision to utilize television often [was] made on the grounds of expediency."[9] At that time, however, the situation was quite favourable for television. As Benveniste has noted:

> Young educational planners were confident that with available educational technologies, it would be possible to revamp and expand tired educational systems radically, to adapt them rapidly to the needs and realities of modernization and development. It was thought that centralization and mass distribution of these educational technologies could bridge the gaps created by vast numbers of poorly trained or unavailable teachers. . . . In short, it was hoped that education might be transformed in a short time by transmitting directly across the land the knowledge of the very few and very best well-trained teachers.[10]

Referring to the situation, the Centre for Educational Development Overseas (CEDO) research team noted:

> It appeared to offer many attractive features - the ability to synthesize all existing audio-visual aids in one medium; the ability to use the scarce resources of top quality teachers by having them appear on the screen; the ability to replace unqualified teachers by a television set; the ability to ensure uniform educational standards throughout a country; the ability to share and exchange programmes with other countries. All these aims were expressed by enthusiastic advocates of television.[11]

In such a theoretical backdrop, the uses of new technology were well backed by relatively large ETV projects at work in developed nations, particularly in the United States. For instance, the Hagerstown closed circuit ETV project[12] (1956), the Chicago Television College[13] (1965), and the Midwest Program of Airborne Television Instruction, MAPTI[14] (1960) were generally considered as successful uses of the medium. Speaking for those projects, the Institute for International Educational Planning (IIEP) reported:

> Over a number of years, it had already been demonstrated conclusively in the United States that television can be used effectively along with 'live' class-room instruction. Television can also serve large numbers of class-rooms simultaneously, provided only that the class-rooms are within the circle of transmission.[15]

Against this climate of optimism in the early 1960s, a formula had emerged. Both developed and developing nations saw advantages to be gained by TV use in development projects. Developed nations, such as the United States and France which had the technology in hand and were eagerly willing to test the applicability of it,

met these developing nations which were suffering from lack of technology and the capital to buy it. The result was the initiation of a number of large-scale ETV projects in Asia, Africa and Latin America where some nations, such as American Samoa, were bold enough to give over the reins of their entire formal education to new technology, particularly television.

When American Samoa's schools were first equipped with television in late 1964, it was the first large-scale ETV project in the world. But, by the end of the decade, Samoa was followed by Niger, Ivory Coast, El Salvador, Colombia and Mexico. In all these nations, television was intended to play a major role in their formal curricula.

In the beginning, Educational Television was not at issue, but rather, it was positively regarded, in general. The predictions made by those who pioneered early ETV projects clearly reflected what was expected from the technology. For instance, in 1966, only two years after the introduction of the Samoan ETV project, Governor Lee, the architect of the Samoan strategy said:

> While it is too early to measure effectively the total result of our educational venture, we believe that our students will soon be getting an education that is equal to that offered by good schools in the United States. *We believe that our system has enormous implications for the underdeveloped countries where the majority of the earth's people labor under the hardships of ignorance.*[16] (Italics mine.)

Governor Lee was not over-estimating the possible implications of the Samoan project on other developing

nations. The Samoan project was the focal point of the educational planners in the late 1960s, and was carefully watched by nations which had similar problems. Referring to the Samoan project, Wilbur Schramm noted that, "it was studied, and generally praised, by groups from UNESCO, the World Bank, New Guinea, New Zealand, India, Guam, Western Samoa and the trust territories."[17] The impact of the Samoan project had literally crossed the seven seas.

The promising era of ETV did not last long. A few years later, in the early 1970s, ETV was at issue. In contrast to the promise expected by optimists, pessimists argued about the harms of uncritical adoption of technology foreign to those nations. Although the arguments were raised from many fronts, the main concern was the nature of the technology. It was argued that the technology was not value-free or culturally neutral. Independent of the message content, the technology itself has its own culture which eventually could bring unanticipated results to those developing countries which do not have the appropriate infrastructure to absorb such technology. Thus, these nations may experience rising expectations which cannot be met. The result would be rising frustrations (this will be discussed in Chapter IV).

Attention changed from the effectiveness, or the change which ETV could bring to developing nations, to the price these new nations would have to pay for such change.

Referring to the Samoan experience, Professor Arnove observed:

> In those exceptional cases, such as American Samoa, where substantial change occurred in the school system with the introduction of ETV, the price was disruption of existing cultural patterns and forced acculturation into Western social systems.[18]

Furthermore, it was said that along with the hardware a country is importing the values, behaviours, attitudes, and organizational patterns that sustain a technological society and keep the hardware running.[19] Masland observed:

> There is a distinction to be made between change brought about by the introduction of a technological process, such as television, and change brought about by the educational content that television transmits. If a country accepts Western technology, it also receives something of that society's culture and values.[20]

Western acculturation was not the only concern of those who criticised the adoption of foreign technology. It was also argued that, in the long run, these countries run the risk of becoming dependent on technologically advanced nations to supply the expensive hardware which is unaffordable without heavy debt. According to Arnove:

> Over and above the cultural penetration that occurs with uncritical adoption of foreign technologies - and accompanying education packages - the danger exists that a country will be financially indebted to the donor country. In a number of the showcase countries, the initial expenditures on capital equipment and construction of a communication infrastructure could not be met without substantial foreign investment. When the technical assistance terminates, will the country be able to sustain the project on its own? If it can, what other priorities are sacrificed? . . . Substantial

> foreign involvement in the internal affairs of a country is the price most countries have to pay to establish a national ETV system. . . . Governments should question if the price is worth the advantage to be derived from using this technology.[21]

Adoption of Educational Television was said to be more a political need than a real need of the existing system. Political leaders who were appointed for a limited period of time usually wanted to make some visible change during their brief tenure which could help them gain lasting power. For this reason, they may not have wanted to get the most suitable or affordable medium for educational reforms, but rather, the most visible, or the one with the highest chance of producing fast results. It is in this context that Arnove noted:

> There is a certain symbolic value to establishing a national ETV system. It makes a country look modern; it leads people to believe that their government is doing something for them by offering new formal and nonformal education programs. At the same time foreign donors, who are pushing their technical assistance, have a showcase country to demonstrate the effectiveness of their technology.[22]

In order to adopt Educational Television, most nations have to change or develop their existing curricula. The planning of these changes was carried out by the planners or curricula specialists of donor nations. In the case of American Samoa and Niger, planning was almost exclusively in the hands of the Americans and the French, respectively. In El Salvador and Ivory Coast, where local planners did participate with the outside curricula specialists, it was

stated that the curricula reflected cosmopolitan values more than indigenous values, and often were mere transplants with some trimming and pruning of the standard curricula of the donor country.[23]

The language of instruction, too, was at issue. With the introduction of ETV, Samoan education became predominantly English and, in the case of Ivory Coast and Niger, it was French, the language of ex-colonial or trust power. This was argued against on the grounds that language is a major element of a culture. Referring to the Samoan case, Masland noted:

> In all cultures, language is one of the dominant threads, both as a shaper of cultural thoughts and patterns and as a means of teaching and passing on cultural knowledge and ideas. Thus the domination of the educational system in Samoa by the Americans, with the teaching emphasis on their language, their cultural ideas, and methods of ordering information, had far-reaching implications for the Samoans.[24]

Foreign education is acculturation. It involves the acquisition of a foreign language and language is culturally determined. Education itself compresses the knowledge and beliefs that a society considers worthy of dissemination and preservation, and this is, in large measure, the definition of culture.

CONCLUSION

Educational Television has already been with us for about three decades. It has been used by many developed nations in an attempt to solve many educational problems

which would not otherwise have been thought possible or may have taken decades to accomplish with conventional methods.

However, the use of ETV is not merely a matter of history. It is still being used and the debate continues. After decades, the tempo of the debate has not changed significantly. Now, however, we have the results of some on-going projects which could probably suggest some answers to the problems. Since there are nations which still do not have ETV, but are considering its introduction, these experiences may lead them towards a more practical approach to the medium, based upon the experiences of their peer nations.

In order to understand the nature of those ETV projects, we will discuss the ETV projects in Niger, El Salvador, and India, in general, and the American Samoan project in-depth. This approach is dictated by necessity, rather than choice, as the Samoan case is the only one where an in-depth study is available. This study was conducted by scholars who do not necessarily have an interest in writing a success story. The nations we make reference to are not the only ones in the developing world that are using ETV to overcome their educational problems, but they represent somewhat distinct cases and, at the same time, provide some examples of the application of ETV which have far-reaching implications for developing countries elsewhere.

THE CASE OF EL SALVADOR

El Salvador is the most densely populated country on the American Continents, occupying 8,200 square miles with a population of 4,485,000 (1979 est.). It has few natural resources, and the country's economy is based mainly on cash-crops. Poverty, malnutrition, poor health care, high growth rate of population (3.3 per cent) and limited arable lands are El Salvador's common problems. These problems are considered beyond solution by the existing agrarian economy.[25] Unemployment and under-employment in rural areas has caused thousands of El Salvadorans to migrate to cities searching for employment. The result is even more social unrest. This situation led leaders to believe that industrialization combined with commercialization of agriculture was the proper road to development.

The existing educational structure was regarded as a major obstacle to the nation's development. It was described as making human archives, rather than a critically thinking generation able to adjust to a changing society and to solve its problems in more creative ways.[26] It was in such an environment that El Salvadoran leaders decided on educational reform as the center for the developmental process. Ingle observed:

> Educational reform was at the heart of El Salvador's development policy. One of the chief assumptions behind the entire Reform was that the country's major bottleneck to development was the lack of a middle-level technical manpower. A readily avail-

> able pool of middle-level trained manpower became the government's objective. With such a labor pool, government planners felt that foreign industry and related commercial enterprises would be attracted to El Salvador. The ensuing industrial development would help to alleviate some of the socioeconomic problems faced by the country's growing population and the almost total dependence on an agrarian source of livelihood.[27]

EMERGENCE OF EL SALVADORAN EDUCATIONAL TELEVISION

El Salvadoran ETV has some unique features. Unlike many other nations, ETV in El Salvador was part of a comprehensive five-year educational reform proposed by the Ministry of Education after several years of planning. Educational experts outside the country described the proposed reforms as "systematic and thorough, touching virtually every aspect of the educational system."[28] Besides the introduction of Educational Television, the new Reform included a curriculum revision, new teachers' guides and student work books, and reorganization of the Ministry of Education itself, etc.

Generally, the new ETV project was praised by scholars who pointed out that "in contrast to many projects elsewhere, the decision to use television in El Salvador was neither imposed from outside nor taken in a precipitous fashion."[29] The idea to use television was, however, not an indigenous one. When Beneke, the new Minister for Education, was serving as the ambassador to Japan, he was impressed by Japan's use of television in the country's

educational system. In 1962, seven years before the actual initiation of the ETV projects, a team of engineers from NHK (Japanese Broadcasting Corporation) visited El Salvador to conduct a feasibility study at Beneke's request. The NHK team concluded: "El Salvador possessed almost ideal topographical conditions for the installation of a national television system."[30] As well, the country's linguistic uniformity confirmed the feasibility of such a system because virtually all El Salvadorans speak Spanish.

However, the idea of ETV was postponed because of its expense until the World Bank displayed some interest in El Salvador's plan in 1967. As a result, another feasibility study was done on behalf of the World Bank in 1967 and "reached the same favourable conclusions as the earlier Japanese study."[31] The expected World Bank loan, for reasons unknown, did not materialize. However, in the same year, when president-elect Sanchez Hernandez took part in a conference of Western Hemisphere presidents in Uruguay, it turned out to be a perfect opportunity to initiate El Salvador's idea of ETV. As Ingle has observed:

> A breakthrough in the planning came at the conference of Western Hemisphere presidents at Punta del Este in 1967. At this conference, president Lyndon Johnson invited a Latin American country to participate with United States assistance in an educational reform program in which television would be a major component for spreading the process of educational change. Further, he suggested that this project might serve as a model for other Latin American nations. El Salvadoran leaders seized the opportunity.[32]

Under the auspices of United States Agency for International Development (USAID), the National Association of Educational Broadcasters (NAEB) conducted another feasibility study as an outcome of the Uruguay conference. The NAEB team confirmed the findings of previous studies. The team was also impressed by the strong support within the Ministry of Education. Perhaps this was mainly because of its somewhat bitter experiences gained from the Samoan project, where there was no support from the Ministry of Education.

However, unlike the Samoan project, NAEB was not in control of the planning of the project, nor revising the curricula to go with the ETV. However, the decision-making process was not altogether smooth. According to McAnany:

> Substantial differences emerged during USAID's subsequent discussions with Salvadoran leaders concerning what kind of project would be undertaken. Reflecting the priorities of President Johnson's ETV Task Force, the USAID representatives encouraged the Salvadorans to give televised instruction as full a test as possible - *one that could become a genuine showcase for the rest of the hemisphere.* In accord with this view, USAID believed that television would have the greatest impact at the primary level, where six out of seven Salvadoran students were still enrolled. The Salvadorans felt that a project at the primary level would be difficult, given the costs of such a system and their country's lack of experience. They also put forward a strong case for beginning televised instruction with the Plan Basico, where they saw the greatest need.[33] (Italics mine.)

Eventually, USAID agreed to the El Salvadoran plan with a provision to extend it to other grades if the project proved successful. The El Salvadoran idea to use television only in grades 7-9 was part of their original Reform Plan "because they viewed the existing deficiencies at this level as major impediments to their goal of speeding economic development through the improved training and utilization of the nation's human resources."[34] This did not seem to be in USAID's interests, therefore, the conflict of interest was not a surprise.

In spite of the high priority given to ETV in Reform, schools received few televised lessons until February 1969. The delay was mainly caused by technical inadequacies and the lack of trained personnel. Although the productions were expected to be carried out by the El Salvadorans themselves, they were unfamiliar with the equipment since the studios were largely equipped not by them, but by USAID. Moreover, although they were not in control of planning, El Salvadorans did receive technical assistance from some sixty foreign advisers representing a number of countries and international agencies.[35] El Salvadorans later felt this assistance was not really necessary and should have been accepted more critically.

It is true that the original idea of ETV was free from outside influences and, to a considerable extent, the software was not foreign. But the project was not entirely independent. In terms of hardware and money, the

project had to depend on the United States. The hazards of such dependency were evident when El Salvador engaged in a war with Honduras in 1967. Because of that war, the U.S. froze its aid to both countries and delayed the approval of major loans, thus making the project fall behind schedule.[36] Stuart Wells observed the hazards of the reliance upon foreign aid and hardware:

> The problems created by a heavy reliance on foreign aid and personnel are magnified by technology systems. The large investment in sophisticated equipment increases the necessity to use foreign capital and foreign personnel. Many donor agencies promote technology systems and insist on the utilization of foreign personnel for program planning and evaluation. Furthermore, much of the equipment in the technology systems must be imported. If the recipient country is responsible for equipment replacement, a drain on resources may be created in the future and result in foreign exchange problems.[37]

TEACHERS' ATTITUDES TOWARD EDUCATIONAL TELEVISION

Through television, the new system was expected to depend more on 'expert' television teachers, giving more passive monitoring roles to classroom teachers. Having experienced the pros and cons of using classroom monitors in other cases such as Niger, UNESCO and USAID advisers urged El Salvadoran planners to reconsider the decision. The El Salvadorans eventually decided to give a larger role to classroom teachers. It is necessary to note that El Salvadornan teachers were far more educated and had more experience than the classroom monitors of the past,

particularly those recruited into the Niger project. This process has to be considered in light of the nature of the pioneers of the project and their objectives. The original idea of ETV in El Salvador did not come from educators but from businessmen and merchants.[38] Walter Beneke, the architect of the project who later became the Minister of Education, was a former businessman. From the point of view of the business sector, ETV was just a 'short cut' to achieving industrialization and development goals 'quickly'.

According to the Stanford Research team, the teachers' attitude towards ETV was favourable to television in the beginning years of the project, particularly the lower grade teachers.[39] The higher the grade, the less the teachers favoured television. Also, when teachers became familiar with the project they liked it less. This reaction of the teachers has been noted in other projects as well (compare with Table IV in Chapter III).

According to Wilbur Schramm, there were two major reasons for such changes of attitudes: 1) teachers, too, learned from the television lessons they were receiving from better TV teachers, and later, they felt more confident and felt a need for more control over the class; 2) at the beginning of any project, the teachers who were part of the pilot or test period felt privileged to be selected to this new venture. Regarding the Samoan experience, Wilbur

Schramm warned future users of ETV to prepare for the changes which would occur among the classroom teachers as a result of better TV lessons.[40]

Table 1

El Salvador Teachers' Changing Attitudes Toward Educational Television, 1969-1972

(Per cent agreeing)

Year	Students learn more with ETV	Class discipline harder with ETV	Students can't ask questions in ETV class
1969	73%	17%	36%
1970	70	14	39
1971	59	24	65
1972	56	26	69

Source: John K. Mayo, Robert C. Hornik, and Emile G. McAnany, Educational Reform with Television: The El Salvador Experience (Stanford, Calif.: 1976), pp. 124-125, 188-189.

Note: The questions asked in El Salvador were almost exactly the same as those asked Samoan teachers: "Students learn more with ETV than without"; "It is more difficult to maintain classroom discipline when using ETV"; and "There is a serious obstacle to learning by ETV because students cannot ask questions until the program has ended." To each of these there were five alternative responses: Completely agree, agree, undecided, disagree, completely disagree. The percentages here represent the responses "agree" or "completely agree."

Source: Wilbur Schramm, Lyle M. Nelson, and Mere T. Betham, Bold Experiment (Stanford, Calif.: 1981), p. 97.

Note: There were no figures indicating the number of respondents given in the original source. Sample selection and statistics were also absent.

STUDENTS' ATTITUDES TOWARD EDUCATIONAL TELEVISION

On the side of the students who received television lessons, the case is much different from the other projects. In Niger and Samoa, the students were not exposed to any kind of television at all before they received their first lesson on TV. Television went to those nations as a tool of instruction. But in El Salvador, where there was commercial television outside the schools, school-age children were exposed to imported cartoons, adventure series, and soap operas. Therefore, their tendency to compare the quality of the instructional programmes with the commercial programmes was inevitable. McAnany observed:

> The students entering seventh grade each year had no experience with ITV, and their television diet up to that time had consisted solely of imported cartoons, adventure series, and soap operas. *The initial ITV series, produced on low budgets in a crowded studio by inexperienced teams, could hardly live up to expectations based on the far more polished commercial programs.* Also, it may be that the successively lower levels of optimism expressed by each cohort at the beginning of seventh grade reflected some passing down of experience, in that students may have been warned by their older brothers and sisters that *television in the classroom was really more classroom than television.*[41] (Italics mine.)

Finally, it was stated that the popularity of ETV in El Salvador started to decline. But, according to McAnany, "despite slippage in program 'ratings,' learning results continued to favour students who received televised instruction over those who received all elements of the

Reform except television."[42] This finding, however, was not unique to the El Salvadoran experience. As Wilbur Schramm pointed out in general terms:

> *Given a reasonably favourable situation, a pupil will learn from any medium - television, radio, programmed instruction, films, film strips, tape recordings, or others.* This has been demonstrated by hundreds of experiments. *A pupil neither turns off nor turns on his learning when he moves his attention from a teacher to one of the media, or vice versa.* In general, the same things that control the amount of learning from a teacher face-to-face also control the amount of learning from educational media - among others, the relevance and clarity of the content, individual abilities, motivation to learn, attention, interest in the subject, respect and affection for the teacher, emphasis and replication of the central points to be learned, and rehearsal by the learner.[43] (Italics mine.)

The most important question in the El Salvador case is not whether the students who did get televised instruction learned more or not, but rather, to what extent did planners reach their prime objectives. Perhaps the results may run counter to what a nation wanted. Such was the case in El Salvador:

> [A]s students progressed from the seventh through the ninth grade, their hopes for more education and more prestigious careers continued to climb. This trend suggested that ITV and the other reforms were having positive effects on student motivation. *At the same time, it may be argued, ITV and the other innovations could have been generating hopes and expectations that could not possibly be fulfilled and that actually ran counter to the economic-development arguments first put forward in support of the country's Educational Reform.*[44] (Italics mine.)

What the planners and the leaders of El Salvador wanted was a technical labour pool from the grade 9

graduates which "would quickly stimulate needed growth in the economic and job-market sectors. Unfortunately, this has not happened."[45]

THE CASE OF NIGER

Niger gained its independence from France in 1960. It was said to be one of the poorest nations in West Africa. In 1962, two years prior to the introduction of the ETV system, the population was just over three million and only three per cent of it was urban. According to UNESCO figures, the total school population by that time was about 28,000 representing about five per cent of the school-age population.[46] Literacy was less than ten per cent.[47] According to the latest figures available, the population was 5,098,427 (1977 census), eight per cent urban, primary and secondary school enrolment 177,613 (1976), enrolment in higher education 541 (1975) and the GNP expended on education was three point two per cent (1976).[48]

Television came to Niger on the claim that it would be solely a form of instruction. Furthermore, Niger was the first African country to use television to give complete instruction to young children just starting their schooling.[49] Another reason to attract world-wide attention to the Niger project was its decision to use classroom monitors - many of whom had only elementary-school education.

In fact, the classroom monitor was the only live liaison between the well qualified TV teacher and the pupils.

Niger's problem was mainly a lack of qualified teachers. At the time when the ETV project was being planned, Niger had only sixty-six teachers who had completed higher secondary education within the whole country.[50] Besides basic classroom materials such as books, wall charts, specimens and supplementary supplies such as films, slides and science apparatus were in very short supply in the schools. Based upon such a situation, Max Egly, Director of the Niger ETV project, said: "A system had to be built up which would be capable of teaching a maximum number of children taking into account the shortage of qualified teachers and the lack of teaching materials."[51] UNESCO described Niger's response to the problem:

> Facing these challenges, Niger took a courageous decision. Despite the shortage of well-trained teachers it would not cut back its programme of expanding educational opportunities. As soon as possible it would move its best-educated teachers to the secondary schools where they have a special importance. It would use monitors in the elementary school classrooms, but assign some of its best teachers to provide a substantial amount of elementary-school teaching by television. And it would start the television in the very first year of school.[52]

The decision to use television was considered as the one possible way to tackle the kinds of problems Niger had been experiencing. In the project director's own words:

> [T]he impossibility of overcoming these difficulties [specified above] by conventional means led to the choice of television as the only solution to the problem, both quantitatively (by reaching a large number of pupils despite the small number of qualified teachers) and qualitatively (by making maximum use of the available supply of competent teachers).[53]

Niger was not excepted from the cluster of nations greatly impressed by the potentials of the television medium for education. The French planners of the Niger project wanted to use television in a way which would exploit its unique characteristics. As they described it:

> We did not confine ourselves merely to recording the teacher in front of his blackboard, but tried as far as possible to produce programmes that were entertaining as well as educational. Secondly, it was essential that the broadcasts should fulfull a direct teaching role. The monitors were to take on a supporting role.[54]

The whole approach was summarized with the statement: "where a class can be formed and a monitor provided, television will do the rest."[55]

However, unlike many other ETV projects, the Niger project was primarily designed as a pilot project. In the trial year, only grade one was televised, and one grade was added in each subsequent year.[56] Therefore, from an economic point of view "the costs of the Niger ETV experiment were extremely high because of the small number of students (800) who took part in the experiment."[57]

The French government was the major donor of the funding and the expertise to the project for the first five years. UNESCO observed the emergence of the project thus:

> The experiment originated from this twofold initiative when the French co-operation services, wishing to test the impact of school television in the African environment, agreed to carry out the experiment in one former French territory most in need of educational assistance. Research and planning were begun in the summer of 1963, both in Paris and in the Niger.[58]

The production center had a staff of 113 consisting mainly of local personnel,[59] but the substance of the matter goes beyond the figures. The local staff were in technical positions, such as cameramen, sound recordists, vision mixers, caption changers, floor managers.[60] These local personnel were recruited as assistants and were trained during the course of the project. Most importantly, however, the curriculum planning and decision-making process were exclusively in the hands of the French personnel.

There were some hostile attitudes to the project from the teachers and the people outside the project. It was said that nothing could replace the teacher, Nigerienne children were being offered a *cut-rate* education and what the French would not do at home they were doing in Niger using Nigeriennes as guinea-pigs. However, the project was generally praised on the grounds of its experimental approach and the positive results gained during the first years of the experiment. A UNESCO study reported:

> From our own observation and that of the teachers connected with the station, the pupils receiving the television instruction have much happier faces, were more spontaneous, and seem far more interested in attending school. In the classroom they are free and joyous, and sometimes seem to be absolutely enchanted.

> In complete liberty and of their own accord, they will often clap their hands and dance and sing. This does not create any problem of discipline, however, as the monitors know when it is time to restrain enthusiasm in a firm but friendly manner. Two points can be mentioned which will show the interest of the pupils in this method of instruction: unlike the other schools, there is no absence on the part of the pupils - there was none even during a recent epidemic. And not only do they come to school, but they come early in order to be sure not to miss the first television transmission . . . the balance sheet for this first experiment can be considered as being strongly favourable. The results obtained, in respect to what the pupils have learned, have proved to be very satisfactory.[61]

The Niger project was highly dependent upon the French for both hardware and software. The project's first five years, the experimental period, was carried on predominantly by France. Although it was in the blueprints of the project to train Nigeriennes to continue the project for a five-year term, in 1972 the project's future was uncertain mainly due to lack of funds. As Sidney observed in 1971:

> [T]he Nigerenne government has asked that the experiment be extended to the fifth primary year, but so far it has not expanded beyond the 22 schools. *No one knows what will happen after October 1972, the date the present experiment is now scheduled to be completed. The reports show that survival, as well as expansion, depends on foreign funding.*[62] (Italics mine.)

Now, almost a decade later, no one knows what has happened. Like many such projects, Niger started with worldwide attention. It was generally praised and viewed as a *model* for developing nations. However, decreasing interest from donor nations led to a subsequent loss of interest from researchers on the project itself; a situation different from many other projects.[63]

THE INDIAN SATELLITE INSTRUCTIONAL TELEVISION EXPERIMENT - PROJECT SITE

India was one of the first developing nations to utilize television for development. In 1956

> a joint UNESCO-USA project installed 20 television sets within a 24-kilometer radius of Delhi to test the potential of television as a tool for development. . . . Since then, each successive Five Year Plan has mentioned the role of television in Indian development, despite perennial criticisms of urban bias and superficial programming.[64]

Although India hasn't reached its developmental goals, over the past quarter century the medium of television itself developed considerably, despite India's motion picture industry which is the world's largest. Currently, India's television reaches fifteen per cent of its population.

> This may appear insignificant compared to 100 per cent coverage in the USA and 95 per cent coverage in Japan; but India's potential television audience amounts to 83 million people - almost four times the population of Canada.[65]

The nature of India's television changed considerably in 1975 with the advent of satellites to beam television programmes to community sets. The Indian ITV project, widely known as SITE - Satellite Instructional Television Experiment - is different from the ETV projects discussed in this study and many other such projects elsewhere. First of all, it was distinguished by the type of hardware it used. SITE used NASA's - National Aeronautical and Space Administration - ATS-F satellite provided under a bilateral agreement with the United States. Secondly,

the project was not exclusively designed to send televised lessons to schools. The uses covered by SITE involved formal as well as non-formal instruction viz. education, agriculture, health, family planning, nutrition, etc.

The nature of India's geo-demographic conditions requires a complex communication system. Its 630 million people speak 15 languages (one official and 14 national), 87 tribal languages and 51 dialects. They belong to six major religions and more than 3,000 sub-casts. India's interest in satellite communication dates back to the early 1960s. In 1966, a UNESCO panel of consultants on Space Communication, suggesting a satellite pilot project, commented:

> The prevailing conditions in India provide an immense challenge and a spectacular opportunity both for testing techniques and demonstrating the effectiveness of the telecommunications satellite while serving the priority needs of the area through a major contribution to development.[66]

As further development occurred, a group of Indian engineers visited the USA and France in 1967 "for an on-the-spot study and discussions with NASA and CNES in France on the technical feasibility of launching a pilot project of satellite educational television in India."[67] Realizing the feasibility of such a project, India signed a bilateral agreement with the US in which NASA gave access to its ATS-F satellite four hours a day for a period of one year for the project SITE.

The objectives of project SITE were ambitious. According to Mira Aghi, of the Indian Space Research Organization, the general objectives of the project were:

> To gain experience in the development, testing and management of a satellite-based instructional television system, particularly in rural areas, and to determine optimal parameters for the system.
>
> To demonstrate the potential value of satellite technology in the rapid development of effective mass communications in a developing country.
>
> To demonstrate the potential value of satellite-broadcast television in the practical instruction of village inhabitants.
>
> To stimulate national development in India, with important managerial, economic, technological, and social implications.[68]

As noted, the areas covered by SITE were broad. According to SITE planners, broadcasts were mainly in two sessions,

> one in the morning, meant for school children in the 5 to 12 year age group; the second in the evening, mainly for adults. The morning broadcast [was] broadly educational and [included] science, hygiene, geography, creative activities, etc. The evening broadcast [carried] specific instructional messages and also [aimed] at national integration through cultural programmes, plays, etc.[69]

In the wake of project SITE, people previously isolated from modern media received television programmes beamed by satellite to community sets in 2,300 villages. It was the most advanced technology available for communication, used to uplift the least privileged communities. Toni Voigt, a New Delhi-based freelance writer, described

the condition of the pupils who later received televised lessons through satellite:

> Most children walk to school each morning, usually without breakfast, their clothes torn and dusty, their feet bare. While a few lucky ones may own pencils and paper, most of them practise their alphabets by scratching the grounds with sticks.[70]

Into such a situation came satellite television under project SITE where children and teachers sat cross-legged and watched a whole new set of experiences. Voigt discusses the content of one of the new programmes designed for young children:

> For example, that of a child pointing to a house and singing: 'This is the house where I was born. It has a roof made of mud and thatch. In this home we live, eat, sit and laugh together. The house will change. The mud and thatched roof will not be there and through our effort it will become a pucca (fancy) one. Then there will be no fear of fire, and water and electricity will immune our home sweet home.'[71]

The planners of SITE believed that the "programme philosophy and production should be user-based and ought to address the needs and problems of the villagers."[72] In practise, however, the reverse happened. For instance, as one Indian journalist noted, and Voigt quoted:

> At the beginning, they (the oppressed) were eager to tell their story to the sympathetic producer and his sympathetic camera, . . . [b]ut shown, his oppressors were furious and still held all the aces. . . . Harjans (untouchables) and bonded laborors soon began to tell the TV people - 'Please leave us alone, we have enough trouble as it is.'[73]

Despite India's heavy investment in the project, it remained dependent on the hardware - the satellite. With the termination of the ATS-F's loan period, the project had to be discontinued. The reasons for terminating the satellite's loan were not officially given, however, it was believed to be political. Ferguson noted:

> According to the New York Times, the official explanation given to India was that the National Aeronautics and Space Administration could no longer spare the satellite. Unofficial sources in the State Department said the contract would probably have been renewed had the political climate been different.[74]

Although India was developing its own satellite, it was not available for use at the termination of the ATS-F. Overall, most important was the realization of the high demands of advanced technology. The lessons of the project SITE, as Programme Manager Professor Chitinis observed, were:

> Site has shown that it is possible to reach remote areas of India with high quality television signals day after day. This has been one application of advanced technology which has not penalized rural areas for their distance and isolation. We have diffused useful information and skills easily, quickly, and cheaply to many more people than ever before. We have hooked up different TV stations into a national forum. *But we have also learnt that an advanced satellite delivery system demands an advanced software system. A rapid and widespread expansion of software facilities and trained manpower is required.* Development agencies must have dedicated funds and competent persons to provide inputs for television programmes. Software design and hardware planning must be built around social goals. A concerted programme plan with clearly spelt out educational objectives must be prepared well in advance.[75] (Italics mine.)

In summary, this Chapter has demonstrated the failure of ETV projects in various countries for different reasons. In El Salvador, the failure was largely due to financial dependency on the United States. In Niger, failure resulted from financial, technical, and advisory dependence upon France. In India, the SITE project failed because of political reasons. In spite of the fact that the project had the necessary financing, software, and personnel, the hardware (satellite) was denied by the Americans for political reasons. The next Chapter offers an in-depth analysis of the American Samoan ETV project.

Notes

[1]Robert F. Arnove, "Sociopolitical Implications of Educational Television," Journal of Communication 25 (Spring 1975):144.

[2]John K. Mayo, Robert C. Hornik, and Emile G. McAnany, Educational Reform with Television (Stanford: Stanford University Press, 1976), p. 169.

[3]Henry Ingle, "Reconsidering the Use of Television for Educational Reform: The Case of El Salvador" in Robert F. Arnove, ed., Educational Television: A Policy Critique and Guide for Developing Countries (New York: Praeger Publishers, 1976), p. 114.

[4]Philip H. Coombs, The World Educational Crisis (New York: Oxford University Press, 1968), p. 3.

[5]International Institute for Educational Planning, New Educational Media in Action: Cast Studies for Planners, Vol. I (UNESCO: IIEP, 1967), p. 5.

[6]Coombs, Educational Crisis, p. 5.

[7]Wilbur Schramm et al., The New Media: Memo to Educational Planners (UNESCO: IIEP, 1967), p. 5.

[8]Centre for Educational Development Overseas, New Media in Education in the Commonwealth (London: Commonwealth Secretariat and CEDO, 1974), p. 215.

[9]Arnove, "Sociopolitical Implications," p. 154.

[10]Stuart Wells, Instructional Technology in Developing Countries: Decision Making Process in Education (New York: Praeger Publishers, 1976), p. v.

[11]CEDO, New Media, p. 215.

[12]See New Educational Media in Action: Cast Studies for Planners, Vols. I, II, and III.

[13]Ibid.

[14]Ibid.

[15]John E. Ivey, Jr., "MPATI: Airborne Instructional Television in the United States," in IIEP, New Educational Media, Vol. III, p. 177.

[16]Wilbur Schramm, Lyle M. Nelson, and Mere T. Betham, Bold Experiment (Stanford: Stanford University Press, 1981), p. 63.

[17]Ibid.

[18]Arnove, ed., Educational Television, pp. xi-xii.

[19]Arnove, "Sociopolitical Implications," p. 154.

[20]Lynne and Grant Masland, "Some Cross-Cultural Implications of Educational Television: The Samoan ETV Project," in Robert F. Arnove, ed., Educational Television, p. 191.

[21]Arnove, "Sociopolitical Implications," pp. 154-155.

[22]Ibid.

[23]Ibid., pp. 147-148.

[24]Masland, "Some Cross-Cultural Implications," p. 187.

[25]Mayo et al., Educational Reform, p. 6.

[26]Ibid., p. 21.

[27]Ingle, "Reconsidering the Use of Television for Educational Reform: The Case of El Salvador," p. 117.

[28]Mayo et al., Educational Reform, pp. 22-23.

[29]Ibid., p. 24.

[30]Ibid., p. 25.

[31]Ibid., p. 27.

[32]Ingle, "Reconsidering the Use of Television for Educational Reform: The Case of El Salvador," p. 119.

[33]Mayo et al., Educational Reform, p. 28.

[34]Ibid., p. 41.

[35]Ibid., p. 52.

[36]Ibid., p. 167.

[37]Wells, Instructional Technology, p. 157.

[38]Mayo et al., Educational Reform, p. 122.

[39]Ibid., pp. 124-125.

[40]Schramm et al., Bold Experiment, p. 64.

[41]Mayo et al., Educational Reform, pp. 89-90.

[42]Ibid., p. 164.

[43]Schramm et al., The New Media, p. 65.

[44]Mayo et al., Educational Reform, p. 164.

[45]Ingle, "Reconsidering the Use of Television for Educational Reform: The Case of El Salvador," p. 115.

[46]Robert Lefrance, "Educational Television in Niger," in New Educational Media, Vol. II, p. 12.

[47]Max Egly, "School Television in Niger," Educational Television International (June 1970):123.

[48]Martin A. Bacheller, ed., The Hammond Almanac 1982 (Maplewood: Hammond Almanac, 1982), p. 636.

[49]P. O. Okunrotifa, "Instructional Technology: Trends in the Developing World," West African Journal of Education (February 1974):65.

[50]Schramm et al., The New Media, p. 24.

[51]Egly, "School Television in Niger," p. 123.

[52]Schramm et al., The New Media, p. 24.

[53]Egly, "School Television in Niger," p. 123.

[54]Ibid., p. 124.

[55]Ibid.

[56]Ibid., p. 126.

[57]Martin Carnoy, "The Economic Costs and Returns to Educational Television," in Arnove, ed., Educational Television, p. 41.

[58]Lefrance, "Educational Television in Niger,"p. 15.

[59]Egly, "School Television in Niger," p. 125.

[60]Ibid.

[61]Lefrance, "Educational Television in Niger," pp. 33-44.

[62]Sydney G. Tickton, Recent Developments in Instructional Technology in the Developing World (Washington: Academy for Educational Development: ERIC Document Reproduction Service, ED 063735, 1971), pp. 7-8.

[63]As explained in the Preface, I was unable to locate any information on the present status of the project. Even more surprising, neither Nigerienne nor French diplomats seem to be aware of whether such a project exists.

[64]Toni E. Voigt, "Television in India," In Search, Vol. VIII (1981), No. 3:16.

[65]Ibid., p. 14.

[66]UNESCO, Planning for Satellite Broadcasting: The Indian Instructional Television Experiment, Reports and Papers on Mass Communication No. 78 (Paris: UNESCO, 1976), p. 9.

[67]Ibid., p. 10.

[68]UNESCO, Impact of Educational Television on Young Children, Educational Studies and Documents No. 40 (Paris: UNESCO, 1981), p. 49.

[69]UNESCO, Planning for Satellite, p. 11.

[70]Voigt, "Television in India," p. 18.

[71]Ibid., p. 20.

[72]UNESCO, Impact of Educational Television, p. 51.

[73]Voigt, "Television in India," p. 20.

[74]Stewart Ferguson, "The Implications in Satellite Television for Social and Political Change in the Third World," (Ph.D. dissertation, Indiana University, 1977), p. 174.

[75]UNESCO, Impact of Educational Television, p. 53.

CHAPTER III

THE CASE OF AMERICAN SAMOA

The seven islands of Eastern Samoa, an unincorporated territory of the United States, came under American hegemony in 1899. The Samoan islands stretch about 600 miles along a line in the Pacific, running approximately south-east to north-west, and lie some 12° to 15° south of the equator. They are about 4,150 miles from the continental United States - roughly 2,300 miles south-east of Hawaii, and 1,600 miles north-east of the northern tip of New Zealand. The islands are heavily forested with the typical South Pacific vegetation, kept green by an annual 200 inches of rain. The temperature seldom falls below 75°F (24°C) or rises above 90°F (32°C).

The American island group in the eastern part of the chain, consists of the main island of Tutuila; a small nearby island, Aunu'u; the Manu'a group of Ta'u Olosega, and Ofu; and Rose Island, an uninhabited coral atoll. The total land area of these islands is only 76 square miles.[1] The 32,395 American Samoans (1980 census) are United States nationals; they are not American citizens but may migrate freely to the United States.

> The Samoans are ethnically Polynesians with little mixture of other strains. Their language which is considered the oldest Polynesian tongue in existance, is closely related to the Maori, Tahitian, Maraquesan, Tongan, and Hawaiian languages. Many Polynesians legends have the world beginning in Samoa, and it is likely that the present Polynesian world did begin here, that these islands were the first of the Polynesian group to be settled by that hardy breed of mariners who are thought to have sailed large two-hulled canoes across thousands of miles of the open Pacific when the Egyptians were still building pyramids and the Europeans just beginning to venture cautiously out on the Mediterranean.[2]

In recent political developments, Samoans had their first popular elections for a governor in 1977, and Peter Tali Coleman, a Samoan by birth; became governor of the islands. In 1978, the Carter Administration signed into law an act of Congress giving the islands a non-voting delegate to the U.S. House of Representatives. On November 18th, 1980, Fofo I. F. Sunia was elected as the island groups first delegate to the House.

With an ever-rising growth of population, Samoa stands amongst the poorest nations on the earth. Its population growth rate of 3.8 per cent was considered as one of the highest.

> American Samoa's natural resources are few. They consist mainly of its people, a strategic location astride air and sea routes to the South Pacific, an equable tropical climate, and the natural scenic beauty of the islands,[3]

None of these is of much value in keeping the Samoan economy running smoothly. The population expansion limits Samoa's scarce lands thus forcing Samoans to import much of the food

they need. All of these factors, more or less, push Samoa more and more to depend on the mainland. "In spite of the territory's location in the South Pacific, thousands of miles from the mainland, American Samoa continues to be economically dependent on the United States."[4]

PRE-TELEVISION EDUCATION - 1900-1964

Formal education was not new to Samoa. By the time Samoan children were exposed to their first televised lesson in October 1964, Samoa had experienced formal education for more than half a century. In fact, education was in existence before the islands became a U.S. territory, and becoming a territory did not make any significant change to the Samoan education system until the introduction of ETV. The pre-territorial education, primarily handled by missionaries and churches, was basically oriented toward religious education. It, however, indirectly helped to raise the literacy among the Samoans. Wilbur Schramm observes:

> The chief purpose of church schools, conducted by Samoan pastors and catechists, was of course religious instruction. But they also succeeded in bringing about a high rate of literacy among Samoans in their own language. The translation of the Bible into Samoan was thus an event of educational, as well as religious, significance.[5]

The attention to the teaching of the English language, and the beginning of teaching lessons in English, were the notable changes of the Samoan educational system

in the early territorial age. "In 1904, with the establishment of the government school on Tutuila, near the naval station at Pago Pago, the teaching of English became a central focus of education,"[6] and thus, the groundwork for acculturation was laid. Observing the Samoan case, Masland has pointed out:

> In all cultures, language is one of the dominant threads, both as a shaper of cultural thoughts and patterns and as a means of teaching and passing on cultural knowledge and ideas.[7]

However, in spite of the U.S. interest, the quality of Samoan education remained unchanged significantly for decades, and by no means could it ever be compared to the mainland standards. Even the physical framework was poor, for instance, a hurricane - which destroyed the school buildings in 1915 - left Samoans without a school for seven years.

In 1921, what might be called a public school system was started, and a Board of Education was appointed by the governor. By 1924, there were elementary schools with 1,465 students and 36 teachers (see Table 2). In 1961, three years before the ETV project was initiated, there were 57 schools with 5,151 students and a total of 284 teachers. Only six per cent were foreign teachers.

Even though there were over 50 schools, few offered education beyond the fourth or fifth grade. In 1943, only two schools out of forty provided schooling beyond the fourth grade; one offered classes through the eighth grade, and the other, classes through the fifth grade. However,

Table 2

Growth of American Samoa's School System, 1904-1980

Year	Number of schools[a]	Enrolment	Number of teachers			Annual budget	Per-pupil expenditure
			Total	Samoan	Foreign		
1904	1	40	2	-	2	$ 1,000	$ 25.00
1914	2	144	-	-	-	1,764	12.25
1924	19	1,465	36	-	-	15,196	10.37
1934	19	2,280	50	43	7	19,429	8.52
1944	32	2,054	-	-	-	26,022	12.67
1954	55	5,139	175	170	5	247,186	48.10
1961	57	5,151	284	267	17	404,612	78.55
1964	46	6,653	388	293	95	1,975,507	297.00
1974	31[a]	7,687	460	410	50	8,592,503[b]	941.00[c]
1980	29[a]	8,067	670	566	104	10,082,055[b]	1,041.00[c]

Source: 1904-44, Pedro Sanches, "Education in American Samoa," Ph.D. dissertation, Stanford University, 1955, p. 82. 1954-61, Samoan Department of Education, annual report, 1962.

Note: The dollar amounts have been rounded to the nearest whole number. Some of these figures are at lower levels than cited in the text. There was a decrease in enrolment between 1922 and 1924 and in the number of schools and teachers between 1932 and 1934; both decreases were due to natural disasters, in one case a severe epidemic that swept the islands and in the other a hurricane that leveled many school buildings.

[a] The lower number of schools in these years reflects consolidations. In 1974 there were 26 elementary schools, 4 high schools, and 1 special education school; in 1980 the number of elementary schools was reduced to 24.

[b] Includes expenditures for food services and public libraries.

[c] Excludes expenditures for food services and public libraries.

of greater interest is not the quantity, but the quality of education. Schramm et al. observe:

> What passed as a curriculum for these schools was based on a series of hand-me-down mainland text books that had been discarded as out-of-date. Samoan children read about snow, rail roads, highways, and great cities with tall buildings. All this in a climate where the temperature rarely drops below 75°F, where there is nothing that fainly resembles a railroad, and where an occasional two-story building towers above the native houses. The world of Dick and Jane, in short, had no relevance to the Samoan youngster.[8]

David Gilmore, Director of Professional Training Services for the NAEB, who was part of the first American educational broadcasters team to go to Samoa, wrote:

> Students used hand-me-down American text books, where Dick and Jane lived in ranch-style brick homes with neat lawns, and Father drove home each day from his highrise office in his red convertible, dressed in a suit, tie, and shoes. Never was there a glimpse of the sea in these books; never a coconut, or a taro, resembling the Samoan environment.[9]

The Samoan school system barely had any formal curriculum. Moreover, almost all Samoan teachers hardly had any education beyond the seventh or eighth grade. They "themselves, products of Samoa's public schools, averaged only fifth-grade education."[10] The Samoan teachers understood and spoke English poorly, and this was the language of instruction.[11]

THE EMERGENCE OF SAMOAN EDUCATIONAL TELEVISION

The Samoan Educational Television project was the first one and, as such, made those tiny islands in the Pacific known to the world. Nothing much was written about Samoa until the setting up of its ETV project. The revolutionary educational leap began with the appointment of Governor Rex Lee in 1961. Lee, a bold personality, who deserves mention in each and every document written on the Samoan project, was different from most of his predecessors. In fact, Lee was the only appointed Governor who was in office for seven years; most of his predecessors held the position no more than two years.

By the time Lee was appointed, Samoans were suffering from the same problems which were faced by many developing as well as developed nations: the ever-rising number of school-age children as a result of population growth, and the growing public demand for education. The latter reason was quite clear in Samoa because

> by the time Lee arrived more than half the young people of the islands were forced to migrate to Hawaii or to the mainland in search of jobs. This, in turn, gave added emphasis to the need for fluency in the English language.[12]

In spite of these common problems, Samoa was also suffering from an educational problem unique to itself: an educational bureaucracy characterized by abrupt change. Schramm et al. noted:

> Each new governor and each new director of education invariably arrived with a new set of objectives and a reorganization plan, along with, more often than not, harsh words about the inadequacies of the previous administration. Changes introduced by one administration were summarily junked by the next, usually not more than a year or two later.[13]

Because of the educational system's ethos, Governor Lee decided to give the first priority to educational reforms. He believed this approach to be the best way to enhance the overall quality of Samoan lives. In his own words, Lee saw Samoa as "a community that was grossly under-educated but one that America needed to bring into the 20th century in a hurry."[14] Actually, acculturation to American cultural values was in the project's stated objectives.

However, there were some practical problems regarding the choices of proper approaches. According to Wilbur Schramm, there were four alternatives facing Governor Lee in 1961:

(a) to recruit several hundred fully qualified teachers from the United States.

(b) 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.

(c) to recruit a smaller number of teachers, say, 100, in the United States, and spread them throughout the system.

(d) to use television to carry the core of the teaching, and for adult education.[15]

None of the alternatives, except the use of television, would bring immediate results, and thus, they would not meet Lee's objective of bringing Samoans into the 20th century *in a hurry*. It was believed that "most traditional reforms would not produce a significant change for at least a full school generation, or 12 years."[16] Television was the most expensive alternative. To use modern technology was an impressive decision to take in the early 1960s. It was considered as the most promising way to do the job.

Under these circumstances, Governor Lee decided to pursue ETV and travelled to Washington with this *impressive* idea. In 1966, Lee wrote:

> I took the idea to Washington and presented it to Secretary of the Interior, Stuart L. Udall. He believed the idea was a unique and imaginative approach to our problem and worth of exploration. He gave his immediate and complete support.[17]

There were many supportive factors for the approval of Lee's proposal. For instance, Lee was not alone in pointing out the inadequacies and the poor standards of the Samoan school system. In December 1960, Senators Owen E. Long of Hawaii and Ernest Gruening of Alaska visited the islands under a request of a U.S. Senate committee "and their report to the committee was published by the following July, shortly before Lee's return to Washington to present his plan for reorganizing the educational system."[18] The Long-Gruening report was supported by a subsequent report from Dean Hubert V. Ererly of the University of Hawaii

School of Education. These reports certainly laid the groundwork for recognition of Lee's solutions to the existing Samoan educational problems elaborated by the reports and by Lee himself.

However, it may not be that the appraisal of Lee's idea was supported by those factors alone. It was, in fact, the right time for such an idea. At that time, in the early 1960s, what might be called a *technological revolution* was underway in the United States school system. The Midwest Program on Airborne Television Instruction - MPATI - Chicago Television College, and Hagerstown closed circuit ETV projects were in operation. The MPATI was started in 1959, and the Hagerstown project was started in 1956. In fact, one stated justification for the MPATI project was the feeling that "the United States [had] not utilized modern technology in the field of education as fully as it [had] in such other fields as medicine or engineering."[19] What MPATI actually did was to keep two DC-6 Douglas aircrafts, each carrying two Ultra High Frequencies (UHF) transmitters, on air broadcasting televised lessons to schools located over 144,000 square miles in five states (Illinois, Kentucky, Michigan, Ohio, and Wisconsin). In 1963/64, the MPATI had 1,300 member schools.[20]

The Hagerstown project was smaller and less complex, but older, and had served 6,000 students in 1956, 16,000 in 1958, 18,000 in 1961, and 20,853 students in 1965.[21]

Both of these projects were considered as successful experiments in using technology for educational ends. The use of the medium was not merely bound to national limits. The contemporary international scene was also favourably disposed to ETV. For instance, Britain, France, Germany, Sweden, Japan, and other affluent countries were all using television in one way or another to supplement school instruction.[22]

In the face of such impressive experiments, and in such a favourable environment, America was willing to show its technical capabilities to the world, and Lee's proposal was well suited to the circumstances. Professor Masland, who worked for the Department of Education in American Samoa for two years (1966-68), observed:

> When the South Pacific Commission announced plans to hold its annual conference for 1962 in American Samoa, U.S. government officials, already concerned about the U.S. image in Southeast Asia and realizing that regional, if not world, attention would be focused on Pago Pago, felt *this could be an opportunity to make the Samoan territory a showcase for the benefits of American influence.*[23] (Italics mine.)

The approval of the proposal by the Department of the Interior was followed by a grant of $40,000 which Lee used for a "feasibility study" to determine whether his idea of using television was a practicable one.[24] The National Association of Educational Broadcasters (NAEB), a leading exponent for the use of radio and television for educational purposes, agreed to help establish the project.

The NAEB team, after studying the situation, reported in early 1962: "ETV was seen as the fastest, most effective, and in the long run, most economical way of bringing the educational system up to desirable standards."[25] The NAEB team, however, went beyond the limits of television alone. According to Wilbur Schramm et al" "It called for a total revamping of the educational program,"[26] including the cirriculum. The NAEB's recommendations were confirmed by another study team, invited by Lee, from the University of California at Berkely. There were no documents available about this report but Wilbur Schramm was told by Lee that the team had been "encouraged [by] the proposed system being developed under NAEB auspices." With this back-up support, all signals were now 'go' for the most far-reaching modification of the Samoan educational system in more than sixty years of U.S. responsibility, and one of the boldest innovations undertaken in education anywhere in the world.[27]

THE PROJECT AT WORK

On Sunday, October 4th, 1964, the first signal of Samoan ETV was transmitted as a test, and a day later, two channels began regular educational broadcasts. A third channel, the last of the initial three channels, began regular service two months later. By that time, the system was technically capable of sending television signals even to the most remote villages of the American Samoan islands, and to parts of Western Samoa.[28]

However, before going further in describing the project itself, it is necessary to indicate that there was no television at all in American Samoa prior to the introduction of ETV, and therefore, the television medium went to Samoa as a form of instruction. On the other hand, it is also necessary to mention that the introduction of ETV was also coupled with the beginning of entertainment or commercial television.

Nevertheless, neither the planners nor the governor himself had stated any desire to promote commercial television. Even when they were asked whether their decision to provide entertainment programmes in the evenings would lead to a commercial-type television, they were positive it would not. In fact, the decision for giving thirty minutes or so to entertainment programmes at the beginning, in contrast to six to seven hours of instructional programmes was believed necessary to maintain the Samoans' interest with the medium. When Senator Warren Magnuson questioned if such a move would not "lead to an irresistable demand for entertainment-type programmes,"[29] Lee assured:

> Congressman, I am sure there would be some demand for this [entertainment]. On the other hand, *I do not think there is the commerce that could support a commercial type TV.* We might try also to get *a bit of entertainment in the evenings, such as 30 minutes of an old film or something else simply to entertain the people and to keep them interested in TV.* This would have to be pretty much of a voluntary proposition. We do not plan on buying this type of service.[30] (Italics mine.)

However, as was demonstrated by the Samoan experience itself, a commercial base is not a prerequisite for a commercial-type television. Rather, as eventually happened in American Samoa, a commercial base evolved as a result of commercial television.

However, as planned, television started to serve all the primary grades in the first year and, with three more channels in use, a complete high school curricula was added the following year - 1965. In 1965 there were six open circuit VHF channels in use, and that was the first time in the world that so much TV had been used for educational purposes. In this respect, the Samoan project was very different from Niger, El Salvador, Ivory Coast and other major ETV projects elsewhere. In Niger, as we have discussed in the previous chapter, ETV was initiated as a pilot project and the developments were mostly made upon the success of that project. In contrast, the Samoan project was launched as it was rigidly planned, assuming that the medium would do the job. As a matter of fact, during the first years of the project there were no plans for research and/or testings.[31] According to Governor Lee, the project had to operate for at least twelve years, an entire school generation, in order to allow for a proper evaluation.

As planned, the core of instruction was completely given to the television teachers, and all television teachers were highly trained U.S. personnel. The job of lecturing

belonged to the TV teacher.

> The classroom teachers, with few exceptions, (most of them Samoans) were challenged to consider individual differences in their classrooms and to bridge the gap between the television presentation and the student.[32]

Unlike many other projects, there was a great deal of television production generated. In the beginning years, the production rate sometimes reached 182 programmes per week, thus totaling 6,000 educational programmes per year! It was said that some teachers had to make twenty programmes per week, along with the writing of classroom materials. Schramm commented,

> many dedicated talented people worked in Samoan television, but when a teacher has to make 10 or more programmes a week, in addition to writing classroom materials, those ITV programmes are not going to win any prizes.[33]

The amount of work, on the other hand, kept any proper evaluations away from the on-going project. The burden mostly fell on the classroom teachers. The continuous flow of television made them impatient. Wilbur Schramm quoted a school teacher saying how she felt when some students needed special help with the TV lesson, or when they were not yet ready to take up a new topic.

> There was never time, there was always the next television programme to turn on, following the relentless schedule built centrally rather than in the classroom. The TV just kept coming.[34]

It seemed that planners were not receptive to the classroom teachers:

> As Samoan teachers learned from the new system, they began to ask for more flexibility and more responsibility in their own classrooms. *This request was often answered, not with encouragement or helpful guidance, but with a hardening of the central administration's position against deviation from the centrally planned instruction.*[35] (Italics mine.)

TEACHERS' AND STUDENTS' ATTITUDES TOWARD ETV

The teachers' and students' attitudes toward ETV are similar to the patterns found in many projects elsewhere. This is the case in both developing and developed countries. Teachers generally look at ETV as a threat to their profession, and often as a slur on their competence. "More often than not [teachers] subscribe to a traditional system of values. And they will resist changes that threaten their status and prerogatives."[36] It has been found that students' attitudes often run parallel to teachers' attitudes with respect to television. Schramm et al. observed:

> Again and again, observers of instructional television have noted how a teacher's attitude toward television affects the students' attitudes. If the teacher appears to look forward to the broadcast and to watch it with interest, the students are likely to do the same. If the teacher grumbles and greets the broadcast with some such statements as 'well, I guess we have to stop what we are doing and turn on the television again,' then the students too are likely to consider ETV an intrusion.[37]

As a result of a policy decision, there had not been any surveys carried out to evaluate Samoan teachers'

attitudes toward ETV until 1972. So there was no reliable evidence to see how teachers and students viewed the ETV project. The first survey had been conducted in 1972, and according to Schramm et al., "the higher the grade, the less favourable the attitude toward ETV. This was the case in 1972 and held true through 1976. It held for both teachers and students."[38] When students moved to upper grades, it was found that they were less favourable toward ETV and so were the teachers. As was observed in the second chapter, this is quite similar to the findings in El Salvador.

Typically, the teachers of upper grades have more formal qualifications and professional training than lower grade teachers, and thus, they feel that they need little or no electronic teachers coming to their classroom to help them. The teachers of lower grades, who have less or no training, are much more favourable toward television (see Table 3). These favourable attitudes, however, do not last long. These teachers are also learning from well qualified television teachers. As time passes these teachers, too, acquire new skills, teaching techniques and knowledge which they themselves want to apply in their classrooms, and they expect to be given more control over their classrooms. This is true in the case of El Salvador (compare Table 1 in Chapter II with Table 3), and also with the classroom monitors of the Niger project.

Table 3

Teachers' Attitudes Toward Educational Television in American Samoa, 1972

(Per cent)

Survey item and response	Grades 1-4	Grades 5-8	High school
Generally speaking, how well do you think children have learned from the television lessons presented this year?			
Good or excellent	86%	81%	38%
Television is used too much.			
Agree or Strongly agree	55	60	70
Television is used in the wrong way.			
Agree or Strongly agree	22	27	46

Source: Lloyd Clark, "Results of Instructional Television Survey," memorandum to Milton deMello, director of education, American Samoa, Pago Pago, June 1, 1972, pp. 3, 6-7, 10.

Source: Wilbur Schramm, Lyle M. Nelson, and Mere T. Betham, Bold Experiment (Stanford, California, 1981), p. 83. Note: There were no figures indicating the number of respondents given in the original source. Sample selection and statistics were also absent.

For students at the beginning stages, television "was a great adventure, as the introduction of television always is,"[39] but when they moved to higher grades, (a) television was no longer new, and (b) often under the influence of teachers who were less favourable toward television. Table 4 shows the correlation of students' grades and the attitudes toward television during the course of 1972-76 in American Samoa.

Table 4

American Samoa Students' Changing Attitudes Toward Educational Television Over Time and by Grade Level, 1972-1976

(Per cent agreeing)

CAN LEARN BETTER WITH TELEVISION LESSON

Grade or level	1972	1973	1974	1976
5	70%	67%	65%	75%
6	51	70	60	66
7	46	47	63	49
8	-	-	43	30

WANT TO HAVE TELEVISION CLASSES NEXT YEAR

Grade or level	1972	1973	1974	1976
5	66%	69%	68%	79%
6	49	59	60	64
7	48	44	59	52
8	-	-	40	25

Sources: Lloyd Clark, "Results of Instructional Television Survey," memorandum to Milton deMello, director of education, American Samoa, Pago Pago, June 1, 1972, p. 2; Instructional Television Division, Department of Education, Attitude Surveys, 1973, 2:1, 10, and 1974, pp. 48, 51; Marilyn Barry, "ITV Attitude Survey," report to the director of education, American Samoa, Pago Pago, 1976, p. 18 (mimeo.).
Note: During these years the Samoa schools were completing their transition from a system of levels to a system of eight grades. In 1972 and 1973 there were no eight level. Level 6 in 1972 comprised grades 6 and 7, and level 7 was grade 8. In 1973 level 7 comprised grades 7 and 8.

Source: Wilbur Schramm, Lyle M. Nelson, and Mere T. Betham, Bold Experiment (Stanford, California, 1981), p. 96.
Note: There were no figures indicating the number of respondents given in the original source. Sample selection and statistics were also absent.

Moreover, in Samoa, it has been found that the location of the school is a variable for attitude changes toward television. For example,

> a school in the capital city of Pago Pago, where a great deal of information circulates and where many visitors come, must have felt less need for school television than a remote school on the north shore of Tutuila, accessible only by boat.[40]

UNHEARD OPPOSITION TO ETV AT HOME

Quite literally, it was the Americans, not the Samoans who wanted Educational Television in American Samoa. According to American standards, the Samoan school system was backward and, therefore, in need of change. "Samoans had little say in [television's] use or in the content it transmitted."[41] There was little evidence to support the idea that ETV was discussed with the Samoan leaders at any length. It had never been taken into account as to what extent the introduction of television would affect *fa'a Samoa* (Samoan way of life), *aiga* (the family group), or *matai* (the head of the extended family group). The entire venture was viewed from a Western point of view; the assessment was coloured by American values. For instance, on the occasion of the dedication of the new television system, Governor Lee noted and Schramm et al. quoted thus:

> Some friends have asked me why we wanted to disturb the peace and tranquility of our islands with the world news. The concept of a sheltered and primitive Polynesian community, happily enjoying simple pleasures, may not have been too unrealistic early

> in this century when man traveled the South Seas by sail and steam. The world was simpler then. *In our jet-missile-and-satellite age, however, there can be no real sheltered community, not even in the South Seas.*[42] (Italics mine.)

But the short-cut to the *jet-missile-and-satellite age* was not welcomed by the Samoans. The seeds of opposition to television were planted when the idea of television was being shaped. For instance, Brother Herman, a Catholic priest, who had spent a lifetime among the Samoan people, commented while watching the first flicker on the television tube, "At last the palagi [outsiders] has his nails into the heart of the Samoan."[43] The brewing opposition to television from Samoans, however, was given no attention nor was it publicized. Samoans were often found to show opposition in informal ways. When Schramm and his colleagues first visited the islands, in 1966, they were "accosted by [a] stately looking Samoan who wanted them to know that the people of Samoa were strongly opposed to television."[44] He "turned out to be the brother of the high chief who later became the first Samoan Director of Education."[45]

The Samoans became even more dubious when the decision was taken to continue Fia Iloa, the *superior* stateside school which was "supposedly for the children of U.S. personnel serving in Samoa plus Samoan youngsters who had had at least part of their education in mainland schools."[46] Fia Iloa enrolled approximately one-half Samoans who were from influential backgrounds, "political pull and personal

influence apparently playing a considerable role in admission."[47] Above all, Fia Iloa did not use television in any of its classes. This decision was rationalized on the grounds that the major purpose of TV was to teach English, an ability that students of Fia Iloa had already demonstrated. Samoan people, on the whole, did not accept this rationalization. Schramm observed:

> Whatever the reasons, in practical terms, exempting this school from the use of television created an impression among Samoans that television instruction was some-how *second best-not good enough for the stateside 'quality' school*, but good enough for the regular public schools in Samoa.[48] (Italics mine.)

The new ETV system, however, went beyond the limits of education itself. The mainland planners felt that the Samoan school children were not getting a good breakfast. Therefore, school breakfast and lunch programmes were introduced. Eventually, this changed the Samoans' eating habits, and thus challenged the existing cultural values which indirectly made Samoans more opposed to television. Masland described this situation in detail:

> Through the Department of Education changes began to occur in Samoan life. In the belief that Samoan children were not getting a good breakfast, and that local foods and eating habits were not nutritionally sound, school breakfast and lunch programs were instituted. The children were introduced to the foods which *Americans [felt were]* essential to good nutrition; foods that were considered more appealing, that provided variety in the diet, and that were available under U.S. government food programs. Unwittingly, the Americans were changing the food tastes of the Samoan children, to the consternation of older Samoans. The Samoans do not look for variety in foods, but expect to eat relatively few kinds of goods

> regularly. Certain foods, such as taro, have a cultural, emotional significance, much as bread does in some Western cultures. *Many Samoans were concerned to find their children getting away from the traditional Samoan foods and developing a desire for European foods. They saw this as a weakening of Samoan cultural identity. In addition, the taste for European foods made the Samoans dependent upon imported tinned goods, sold at high prices.* Money was needed for such foods, which meant leaving the traditional Samoan way of life to enter the money economy of the Europeans and half-casts traders. To find work and to be near the stores, Samoans often left their villages to live with relatives near town.[49] (Italics mine.)

The opposition to television was not by any means limited to average Samoans. The personnel of the Department of Education, and the stateside teachers working in Samoan schools were also opposed to the idea of television. According to Governor Lee, he found "no enthusiasm among the personnel of the Department of Education or among the stateside teachers,"[50] when he first suggested the idea of using television. Their first reaction, according to Lee, was "respectful silence."[51] Since the idea of television came from the top command, with all their blessings, individual and institutional opposition remained unheeded for a time.

THE DECLINE OF EDUCATIONAL TELEVISION

In 1967, Governor Lee resigned and left the islands. Lee was succeeded by Owen Aspinall, and it was said that Lee had tried to prevent Aspinall's appointment for some personal reasons. Eventually, Aspinall won the race, and,

in turn, his target was Lee's accomplishments. Schramm observed:

> Once inaugurated, Aspinall began quietly to downplay Lee's accomplishments and to undermine and dismantle some of the projects [Lee] had started. . . . One of Aspinall's first targets was Lee's pride and joy: the educational television system.[52]

Under Aspinall's pressure, the NAEB and the Department of Education had to cut back the hours of television instruction, discontinue some, and modify others. In fact, he himself re-structured the project according to his own preferences. Against this bureaucratic confusion, the NAEB decided to withdraw its personnel in 1969. After the NAEB withdrew, Aspinall tried to hand-over the project to the University of Southern California which he once engaged for an evaluation. However, the Department of Interior Affairs in Washington did not grant Aspinall's request. Finally, the contract was given to the University of Hawaii, but "eventually that contract too was allowed to lapse, in late 1971, and the system operated from that time forward with only occasional education and technical, chiefly commercial, consultants brought in from Hawaii and the mainland."[53]

Aspinall's short tenure was succeeded by John M. Haydon, a Seattle advertising executive. Like many of his predecessors, Haydon arrived with a fresh team of advisors and started to formulate new policies for the islands - including education. Haydon went to Samoa with the pre-

assumption that 'ETV is not a success story.' Before Haydon "had hardly settled down in Samoa, the new governor was quoted in the Honolulu Advertiser as pronouncing the instructional television system as an 'utter and complete failure.'"[54]

In 1969, with these drastic changes and unrest, many of the founders of the ETV project resigned and left the islands. This included Director Cobb and his wife, Millie, who Schramm called "two of the stalwarts of the television group."[55] Haydon appointed a new director, University of Hawaii's Vice-President Richard Balach, and after four months dismissed him, leaving the system without a director for approximately one year.[56] In the fall of 1970, a new director, de Mello, was appointed, a well-known anti-ETV figure.

Haydon and de Mello's joint venture against ETV was well backed by the "Wolf Report," issued by Wolf Management Services - an organization commissioned by the U.S. Department of Commerce to recommend an economic development programme for Samoa. The Wolf Report criticised the ETV system as a failure on the grounds of Samoa's current manpower and political needs. Moreover, the Wolf Report questioned the effectiveness of television as a teaching tool. It was in this favourable context, that the Governor and the Director laid the groundwork for drastic cutbacks of ETV. The number of hours of television instruction was

reduced drastically. Above all, they returned to early 1960s thinking by adding 40 stateside teachers to replace television in the classroom.[57] With all these new approaches and experiments, what remained in the late 1970s was one series of educational programmes, 40 minutes of Oral English.

THE RISE OF COMMERCIAL TELEVISION

As has been noted previously, the introduction of the Educational Television system was coupled with the introduction of home television as well. But, in the beginning, out-of-school television was allotted the least time in the evenings, only on a single channel. As planners said, it was only to give Samoans a bit of entertainment and bring information on health, agriculture, and public affairs. In the beginning years, the KVZK-TVs out-of-school productions were under the control of the Department of Education (DOE) and financed by the DOE budget. The DOE personnel were responsible for making community programmes for evening viewing. In 1966, the second year of the Samoan ETV project when the schools were fully fed with television instruction on six channels, DOE was too busy to make any programmes for home viewing. Thus, most of the programmes had to be imported from the mainland to fill the evening hours. These imported programmes viz. "The Micky Mouse Club," "Cheyenne," "Hawaiian Eye," "Bonanza," and Disney Movies attracted huge audiences in Western Samoa, as well

as in American Samoa where they had easy access to American Samoa's broadcasting. Schramm observed:

> These [the popularity of mainland programs] proved a great attraction, and the sales of television sets boomed. . . . As the popularity of the evening service increased and more and more people bought sets, it was the imported programs that grew in number and the commercial network programs that drew the audience.[58]

Despite Governor Lee's vision of *30 minutes of an old film or something else*, by 1978 three channels were providing entertainment programmes averaging about seventeen hours a day, predominantly with imported American programmes (see Appendix 1 for sample evening schedule for 1966 to 1980) such as "Star Trek," "Bonanza," "Perry Mason," "I Love Lucy," "Kojak," and ABC's "Wide World of Sports." The imported programmes also included some PBS programmes such as "Sesame Street," "The Electric Company," and "Mister Rogers," for children. The viewing habits of Samoans were found to be similar to those on the mainland. "Yet all the evidence available from those years indicates that the audience-pleasers in Samoa were the same mass oriented programs that were leading the mainland ratings."[59] It has been found that the PBS programmes attracted very few teenagers. According to a sample survey done by Schramm and others on sixty youngsters between fifteen and nineteen, it has been found:

> 'The Adams Chronicles' attracted not a single viewer during the survey week from among the teenagers. Nor did 'Masterpiece Theatre' or

> the poetry program 'Anyone for Tennyson.' 'Washington Week in Review' had one viewer out of 60; 'Evening at the Symphony' had two. And so it went.[60]

In contrast, Samoan teenagers' viewing habits were found to be the same as their counterparts on the mainland.

> Television dominated their [Samoan teenagers] media time, and American commercial television dominated that. It bathed them in *American entertainment, American news, American behavior, and the values* depicted in dramatic programs and by favorite entertainers. Thus, if exposure to television from another culture has any substantial effect on young people's values, role concepts, and social behavior in a traditional culture, some of that effect ought to be visible in American Samoa.[61] (Italics mine.)

It has also been found that by the second half of the 1970s there were about 3,800 television sets in the territory, approximately one for every eight people, and most of those were colour TVs. But it was said that some ninety-three per cent of Samoans had ready access to television.[62] This access, however, "is not surprising considering the close family relationships and open Samoan fales [huts with no interior or exterior walls]."[63] In order to meet this ever-growing demand for entertainment shows, Samoa had naturally depended on the U.S. networks. KVZK-TV finally signed a contract with ABC and NBC. These contracts "among other things *prohibited the station from deleting material of any sort.* This meant that all programs from those two sources [ABC and NBC] would include commercials, whether relevant to Samoa or not."[64] (Italics mine.) As a

result, the station received no revenue from the advertising, nor did the station pay for the programming.

These package programmes from the U.S. networks, with built-in commercials, made some drastic changes on American, as well as Western Samoan lifestyles. In the wake of these commercial programmes, stores reported sharp increases of sales of goods which sat on store shelves for years, and an increase of brand-name items advertised on the air such as mouth-washes, potato chips, soft drinks, etc. Barry Siegal, a journalist for the Los Angeles Times who visited Samoa in 1979, quoted a store-owner who was planning to build a new supermarket because of the business boom:

> Pepto Bismol never sold here before at all. Now it sells like hotcakes. Also things like Bufferin, Nytol, and Sominex. And the great thing is, we . . . don't have to pay for the advertising.[65]

Thus, the commercial base did not support a commercial-type television in Samoa, but rather, commercial television generated a commercial base.

With the rise of commercial television, the idea of selling the station to a commercial station first arose in 1976. But, "the legislature raised a howl and the idea was quietly shelved."[66] However, KVZK-TV was educational only on paper. David Gillmore, one of the NAEB team members who helped establish the system, re-visited the islands in 1976 and observed:

> If the official status of the station is 'educational,' its climate is commercial. . . . John Anderson [Station Manager] lets you know that it's a dollars-and-cents, cost-per-unit operation these days.[67]

Even though the station wasn't sold for commercial use, the station's control was taken over from the Department of Education and given to a station manager, a professional broadcaster directly responsible to the Governor's office. Under the new management, the ETV project was driven more toward commercial-type TV. Gillmore quoted the Station Manager saying:

> When I arrived here, the place was terrifically overstaffed. We had over a hundred employees, *most of them education types*. Now we're down to a trim twenty or so. Much more efficient operation.[68] (Italics mine.)

All programmes, imported and made locally, were in colour, except for, in the station manager's own words, 'the old ITV stuff.' Quite interestingly, in order to rerun their out-dated programmes, the Department of Education requested one more channel from the station manager and he responded by saying: "a little arithmetic showed they could squeeze everything into three [channels] so we gave 'em three."[69] Before Gillmore left the station, he witnessed a programme being shown,

> As I left the studio, the lobby monitor was tuned to channel 4. 'Days of Our Lives' was the current offering. 'Do you have any sexual experience?' one woman was asking another. Dramatic pause. 'Do you mean, am I virgin?' . . . The screen faded to black, then up on the spots: Chef Boy-ar-dee Pizza, Sears decorator rugs, Pepsi.[70]

The world's most fascinating ETV project, which once made about 182 programmes per week for six channels, the most made anywhere, which offered only twenty-eight hours

out-of-school service on a single channel, resulted in three channels of commercial television - about 174 hours a week, every day, late afternoon until late evening. As Schramm noted, "*The balance of education and entertainment had been reversed.*"[71] (Italics mine.)

In summary, Chapter III has examined the case of American Samoa in depth. It was found that the ETV project failed for various reasons. First, the need for ETV in American Samoa came from outside its borders. It was a need prompted by American and not by indigenous factors and ETV was, therefore, not supported by the Samoans. Second, the project was too dependent upon one man's influence, Governor Lee, and when he left, the project lost its foundation. Third, the American Samoan case demonstrates how the commercial aspects of the medium overwhelmed its educational potential.

We can now see how the four Educational Television projects ended in failure. Financial, technical, political and psychological factors contributed, singly or together, to the collapse of the various projects examined up to this point. However, one underlying factor emerges common to all four projects - dependency on the developed world for hardware and software. This dependency was largely created out of a misconception that 'development could be achieved by imitating Western development without the necessary evolution that accompanied it.' This misconception grew

out of ideas expressed by the "Western Model" of development. It appears that all projects were doomed from the start because of their dependency on the developed world and because of their belief in the "Western Model" - a product of Western thought.

The next chapter will examine the "Western Model" of development and the emergence of the "New Paradigm." It will be shown how the "Old Paradigm" (Western Model) contributed to the various failures. This chapter will then propose a modified "Old Paradigm" that can accommodate development and educational strategies.

Notes

[1]Martin A. Bacheller, ed., The Hammond Almanac (New Jersey: Hammond Almanac, 1982), p. 476.

[2]Wilbur Schramm et al., Bold Experiment, p. 19.

[3]Ibid., p. 13.

[4]Ibid., p. 15.

[5]Ibid., p. 16.

[6]Ibid.

[7]Masland, "Some Cross-Cultural Implications," p. 187.

[8]Schramm et al., Bold Experiment, p. 19.

[9]David Gillmore, "Education in American Samoa - The Way It Was; The Way It Is," Public Telecommunication Review 5 (March-April 1977):33.

[10]Masland, "Some Cross-Cultural Implications," p. 180.

[11]Schramm et al., Bold Experiment, p. 107.

[12]Ibid., p. 20.

[13]Ibid., p. 21.

[14]Ibid., p. 26.

[15]Wilbur Schramm, "Educational Television in American Samoa," in Schramm et al., eds., New Educational Media in Action: Case Studies for Planners, Vol. I (Paris: UNESCO, IIEP, 1967), p. 16.

[16]Schramm et al., Bold Experiment, p. 25.

[17]Ibid., pp. 26-27.

[18]Ibid.

[19]John E. Ivey, Jr., "MPATI: Airborne instructional television in the United States," in Schramm et al., eds., New Educational Media in Action, Vol. III, p. 177.

[20]Ibid., pp. 180-182.

[21]Serena Wade, "Hagerstown: a pioneer in closed-circuit televised instruction," in Schramm et al., eds., New Educational Media in Action, Vol. I, p. 62.

[22]Wilbur Schramm, Philip H. Coombs, Friedrich Kahnert, and Jack Lyle, The New Media: Memo to Educational Planners, p. 15.

[23]Masland, "Cross-Cultural Implications," p. 180.

[24]Schramm et al., Bold Experiment, p. 31.

[25]Ibid., p. 33.

[26]Ibid.

[27]Ibid., pp. 39-40.

[28]Ibid., p. 45.

[29]Ibid., p. 61.

[30]Ibid.

[31]Wilbur Schramm, ITV in American Samoa - After Nine Years (Bethesda, Md.: ERIC Document Reproduction Service, ED077189, 1973), p. 45.

[32]Schramm et al., Bold Experiment, pp. 69-70.

[33]Schramm, ITV in American Samoa, p. 48.

[34]Schramm et al., Bold Experiment, pp. 72-73.

[35]Ibid.

[36]Robert F. Arnove, ed., Educational Television: A Policy Critique and Guide for Developing Countries, p. 12.

[37]Schramm et al., Bold Experiment, pp. 97-99.

[38]Ibid., p. 92.

[39]Ibid., p. 108.

[40]Ibid., p. 101.

[41]Masland, "Cross-Cultural Implications," p. 191.

[42]Schramm et al., Bold Experiment, p. 44.

[43]Ibid., p. 65.

[44]Ibid., p. 77.

[45]Ibid.

[46]Ibid.

[47]Ibid.

[48]Ibid.

[49]Masland, "Cross-Cultural Implications," p. 193.

[50]Schramm et al., Bold Experiment, p. 75.

[51]Ibid.

[52]Ibid., p. 78.

[53]Ibid., p. 80.

[54]Ibid.

[55]Ibid.

[56]Ibid., p. 81.

[57]Ibid.

[58]Ibid., p. 149.

[59]Ibid., p. 153.

[60]Ibid., p. 157.

[61]Ibid., p. 158.

[62]Ibid., p. 149.

[63]Ibid., pp. 154-154.

[64]Gillmore, "Education in American Samoa," p. 36.

[65]Schramm et al., Bold Experiment, p. 151.

[66]Gillmore, "Education in American Samoa," p. 37.

[67]Ibid., p. 38.

[68]Ibid.

[69]Ibid.

[70]Ibid.

[71]Schramm et al., Bold Experiment, p. 148.

CHAPTER IV

PARADIGMS FOR NATIONAL DEVELOPMENT

The preceding chapters have dealt with the attempts made by four developing nations to overcome their educational problems with the help of a new technology which is foreign to their social and economic infrastructure. These attempts have been seen as a vital part of their quest for industrialization and modernization, and the achievement of national development goals. These attempts, however, cannot be isolated from the debate started by Daniel Lerner and carried on by Wilbur Schramm, Karl Deutsch, Inayatullah, de Sola Pool, Everett M. Rogers, Eisenstadt, Oshima and others on developmental paradigms. The contributors and contributions to the debate during the course of the last three decades were numerous.

In this context, this chapter will discuss primarily the application of new technology, specifically Educational Television in developing countries as a product of the development mentality grown out of the widely held 'Western model'[1] of development evolved in the 1950s and 1960s. In order to formulate a theoretical framework for such an argument, we will first discuss the elements of the developmental paradigm, its so-called rise and fall, the criticisms, and the emergence of the new paradigm.

THE OLD PARADIGM OF DEVELOPMENT - THE WESTERN MODEL

As Eisenstadt has pointed out,

> it was only mid-twentieth century that questions about the nature and quality of modern life again came into the forefront of social science, combined with new analytical approaches and new methodological tools of inquiry.[2]

This development, as mentioned in the second chapter, was very closely connected with the great upsurge of interest in the development of developing societies. "The major focus of interest of these concerns was on how to bring about changes in the underdeveloped societies, how to 'develop' them."[3] As a result, the number of studies related to development in all the social sciences proliferated.

In the early stages, these studies mainly elaborated the characteristics of traditional and modern societies, and tended to stress the distinction between a modern and a traditional society.[4] Thus, these studies highly correlated development and modernization. In fact, modernization was considered as a key factor of the development process. The transition of traditional society to a modern society was considered as the prime step toward the sequence of development. In attempting to explain the conditions and mechanisms of transition from a traditional to a modern society, Eisenstadt said,

> social scientists developed the paradigmatic framework of assumptions and concepts - the initial model of modernization - that has greatly in-

> fluenced, almost dominated, the first stage of the studies of modernization.[5]

It has generally been accepted that the beginning of what is now called the old paradigm was born out of Lerner's The Passing of Traditional Society, and Rostow's The Stages of Economic Growth. In his work, Rostow described five stages of economic growth: (a) the traditional society; (b) the preconditions for take-off; (c) take-off; (d) the drive to maturity; and (e) the age of high mass-consumption. A traditional society's moving point toward a modern society, and thus to the "sustained growth," was called the "take-off." The basic index of growth was based on the Gross National Product (GNP).

Lerner suggested a sequence of institutional developments leading to "take-off": urbanization, literacy, extension of mass media, higher per capita income, and political participation (voting). Moreover, Lerner emphasized that the growth in one of these spheres stimulates growth in others, that is,

> increasing urbanization has tended to raise literacy; increasing media exposure has gone with wider economic participation (per capita income) and political participation (voting).[6]

A psychological prerequisite for modernization, according to Lerner, is the development empathy.[7]

The 'old paradigm,' primarily developed on the aforementioned assumptions - also known as the 'Western model' - has dominated the social scientists' view on modernization,

or development, for over two decades. However, besides its wide popularity, as Rogers pointed out in the mid-1970s, "there is no single place in the literature of development where the dominant paradigm of development has been concisely and clearly described."[8] Rogers went beyond criticising and extracted the major elements of the dominant paradigm:

> 1. Economic growth through industrialization and accompanying urbanization, approximately equivalent to passing through the Industrial Revolution. It was assumed that development performance could be quantified in economic terms: GNP, per capita income.
>
> 2. Capital-intensive, labor-extensive technology mainly imported from more developed nations.
>
> 3. Centralized planning, mainly by economists and bankers, in order to guide and speed up the process of development.
>
> 4. The causes of underdevelopment lay mainly within the developing nation, rather than in their external relationships with other countries.[9]

During the mid-1960s, speaking for the development paradigm, Lerner rejected the 'Western' label of the model. The Western model, Lerner said:

> . . . is the analytical exposition of the historical experience gained by the Western nations during these centuries of their modernization. It seeks to convey this experience in ways that will be useful in helping Eastern nations to reduce costly errors and avoid painful pitfalls in the course of their own development. . . . The significance of the Western model is, therefore, its generality as a development model, not its particularity for the geopolitical region called 'the West.'[10]

The precise function of the Western model, therefore, was said to show the picture of the developed West to the developing East in order to let them know 'what they may become.'[11] In other words, a 'picture of their own future' would supposedly raise the expectations of the masses in these developing societies to want more, and so lead them toward being more productive. In this respect, mass media were considered as powerful motivating factors of the 'revolution of rising expectations.' Lerner stated it thus:

> I would hypothesize that, more than any other single factor, the mass media are the motive force in the 'revolution of rising expectations' which has become visible in the world during the past two decades. They are teaching people to value empathy and to learn from vicarious experience how to apprehend and evaluate the new and strange.[12]

In his well-known work, Mass Media and National Development, Schramm endorsed this assumption saying that, "the essential point is that without stimulating people to strive for a better life and for national growth, development is unlikely to occur."[13] But even at the same time, the 'danger' of the rising expectations had been considered by numerous scholars. Lerner himself pointed out the need of balancing the 'Want:Get ratio.'[14] Schramm noted that, "when a government seeks to raise the aspirations of its people, it must consider how far it can go toward satisfying these aspirations."[15] But governments have less control over the media. This is true, despite the fact that governments in most developing countries

control the media legitimately. It is the 'hidden' content of the media, and the nature of the technology which carries the message. As McLuhan states, 'the medium is the message.' The proliferation of the media inevitably depicts the good things of life that are available elsewhere, as we said, directly and/or indirectly. "It is only natural that people should learn to want these things, which range from material commodities such as motor-bikes to more 'spiritual' matters such as higher education for their children."[16] President Sukarno once remarked on the 'revolutionary' influence of Hollywood films on Indonesians. Lerner and Schramm quoted Sukarno thus:

> [T]hey [Hollywood producers] were 'unconscious revolutionaries' because, in nearly all of their films, somewhere or other there appeared a refrigerator. Indonesian moviegoers were naturally curious about these big white boxes and found out what purpose they served. They were delighted with the idea of a box that would keep foods cool and, following the consumer mentality, wanted one for themselves. Said Sukarno: 'So you see that, in a hot country like mine, a refrigerator is a revolutionary symbol. *In two hours any of your films can stimulate desires for more refrigerators than Indonesia can produce in 20 years.*'[17] (Italics mine.)

The author has had similar experiences in his home country (Sri Lanka) where the Soviet mobile propaganda film units go to slum areas quite often to show 'free movies.' People gather by the hundreds in open places with a piece of newspaper or a small bench to sit on and watch 'movies' which are mostly in Russian, rarely with narrations in the

local language. The films are about the glory and the victories of socialism and communism and the benefits being experienced by Soviet workers, peasants, and children. In some cases, they also show documentaries, for example, the Soviet Communist Party's 22nd Congress, all in extremely attractive brilliant colours - in a country which has no facilities for local colour film production. The audience does not understand a single Russian word, and has no concern for socialism or communism, counter to the underlying purpose of these presentations. Nevertheless, they learn about the world beyond them and about new lifestyles. Quite often, people try to mimic the lifestyle depicted in these productions, though not according to the communist philosophy.

However, in the mid-1960s when the Western model was accused of increasing the materialistic consciousness of the masses in developing nations, it was counter-argued that materialism, to a certain degree, was another motivating factor in the development process. In the course of Western development, materialism was praised for its motivating role:

> It is well to recall that the humble people of the West became materialistic because they saw opportunities to live a better life: to be fed rather than hungry; to be well rather than ill in health; to be better rather than worse housed and clothed. As they learned that these human desiderata could be obtained by human effort - that these material wants could be satisfied - they turned 'materialist.' This meant simply that they learned to 'help themselves' to produce these good

> things of life for themselves and their children. The philosophy of materialism, so construed, is a rich and humane philosophy. It is the philosophy which says that human desires for health, comfots, knowledge are neither sinful nor unattainable - that it is good to strive for these material values and to achieve them by one's efforts. It is beautified, especially, by its concern that one's children should do even better than oneself - by striving, by achieving.[18]

CRITICISMS OF WESTERN MODEL

However, there were some strong criticisms of the Western model. Inayatullah, who argued for a 'non-western' model of development, criticised the Western model as non-creative, and imposed upon the people of developing nations. He accused the academics and intelligentsia of those developing nations of uncritical adoption of the Western model. Inayatullah noted,

> the intellectuals, finding their previous diagnosis to a large extent incorrect, hold now their own society and culture responsible for its decadence and are ready to reject it, transform it, change it and in extreme cases destroy it.[19]

He did not hesitate to equate cultural imperialism with the modernizing process:

> When political and bureaucratic elites of [developing] countries, as well as the intellectuals themselves, show great concern to modernize their societies, obviously the danger of being charged with cultural imperialism does not exist, and a permissible climate for changing the values and culture of the developing countries prevails.[20]

It was further argued that all of history is not inexorably moving toward the same destiny and same value system as Western man. Inayatullah emphasized that the adoption of the Western model of development would contribute nothing but dependence:

> It is ironic that, while the West itself has developed through innovation in science, technology and social organization, providing new responses to new challenges, it expects that the non-Western world should only imitate or adopt Western institutions and should not disturb the creative monopoly of the West. But imitation does not and cannot release the creative energy in the imitator. It only perpetuates his dependence on the model. Even if the non-Western world could achieve some material development by imitating the West, it could only solve its pecuniary problems and could not make any contribution to world culture. This will certainly ensure homogeneity and uniformity of culture in the world, and it may satisfy the godly craving of Western man to shape mankind in his own image, but it will not necessarily enrich the culture of mankind.[21]

However, as Rogers has pointed out, "implict in the ruling paradigm were numerous assumptions which were generally thought to be valid, or at least were not widely questioned, until about the 1970s."[22] When most of the architects of the Western model convened at the East-West Center to take stock of the outcomes of their model, the results were not as impressive as had been hoped for. As one scholar expressed it, "'the trickle down' model received a bad report card in 1975."[23] Looking back at what it had achieved for the past two decades, Rogers noted, "little real development has occurred by just about any standard."[24] Schramm summed up the situation in these words:

> [W]hile the developing regions have not been growing poorer in absolute terms, they have been falling farther and farther behind the industrialized world. Per capita food production rose 20 percent in the more developed countries (as against 3 percent in the developing areas). The number of physicians per 10,000 also grew faster in the more developed countries, and is now three times as high as in the less developed countries (LDC). The gross national product of the industrialized countries rose rapidly during the decade, and at its end was almost five times greater than that of the developing regions. The exports of the developed countries grew five times faster than that of the LDC during the ten years and made up about 81 percent of the world total at the end of the decade. A rush to the cities (55 percent growth in urban population) in developing regions created special stresses on their economies and the quality of their urban life. . . . Thus the economic and social development in the ten years was less than had been hoped for.[25]

However, in the mid-1970s it was eventually accepted that the Western model had failed to bring development to the so-called Third World Nations. In many cases, it had not only failed but also reversed the development process. The picture of what they might become had reversed. As Lerner and Schramm observed:

> As people in the poor countries were being shown and told about the 'goodies' available in developed countries, they were also being taught about their own inferiority - at least in terms of wealth and well-being. Recognition of the disparities between the rich and poor countries produced among some a sense of hopelessness, among others a sense of aggressiveness. Both apathy and aggression usually are counterproductive to genuine development efforts.[26]

Rogers added:

> [M]ost convincing of all, was the discouraging realization that development was not going very well in the developing countries that had closely followed the paradigm. However one might measure

> development in most of the nations of Latin America, Africa, and Asia in the past 25 years, not much had occurred. Instead, most 'development' efforts have brought further stagnation, a greater concentration of income and power, high unemployment, and food shortages in these nations. If these past development programs represented any kind of test of the intellectual paradigm on which they were based, the model has been found rather seriously wanting.[27]

The Western model was not only criticised by non-westerners, but the criticisms also came from its founding fathers as well. For instance, as a result of the way the world has actually worked during the two decades since the emergence of the Western model, e.g., the rise of the oil-rich countries, massive urbanization, unequal distribution of wealth - the creators of the Western model have been forced to re-consider it. In an interview with the Iran Communication and Development Institute, Daniel Lerner agreed that the theory of per capita income based on an old concept of capitalist economists' 'trickle down effect' may well work in

> Western countries where a very substantial middle class and a substantial service sector existed and could benefit directly from any increase in the national income. However in countries without a substantial middle class and service sector, per capita income becomes inadequate.[28]

Answering the questions: "Are there any other changes you would make in your model? Do you have any new thoughts on the subject?," Lerner responded:

> I would no longer consider urbanization as the number one step. In fact, I would start with literacy and media exposure and then move towards

> participation. I am inclined to find better indicators for the above factors. I would like to develop a psychological indicator for political participation, something like 'empathy,' which I would use throughout the Middle East. The most important change that I want to make is not to call the whole process 'modernization' anymore but rather 'change'. . . . I would think of the factors not as indicators of modernity but as 'propensity to change,' or readiness to try new things.[29]

With the inevitable acceptance of the failure of the Western model, the question of "What is development?" had been reconsidered. As a result, development was redefined. The rigid economic oriented index (GNP) of development has shifted to the more broad concept of 'quality of life.' This shift clearly reflects on the answers given to the question 'What is development?'.[30] In the mid-1970s, the GNP was considered as a good measure and a starting point for analysis of economic growth but not as a development goal.[31] Summarising the new approach, Schramm said: "things are not as simple as had been assumed, and the generality sought by the old paradigm may not now be possible. Back to the old drawing board."[32]

WHY THE DOMINANT PARADIGM FAILED

The recognition of the inefficacy of the Western model in developing countries is not merely due to the objectivity of those who formulated the model, but rather, because the model's inefficacy has been proven: The failure of the Western model, however, must be examined

against the historical setting in which it emerged and also against the contemporary global socio-political context where the model failed to be effective. It may help to follow the four major elements of the Western model elaborated by Rogers which have been quoted earlier in this chapter.

The rapid economic growth in Europe and the United States as a result of the industrial revolution has been considered as development or "at least the driving engine of development,"[33] of the Western model. Thus, it was thought that the developing countries in Asia, Africa, and Latin America, which had primarily agricultural based economies and rural populations, should by-pass the industrial revolution by transferring their economies from lagging agricultural to industrial, which would also be coupled with urbanization. In doing so, these nations were expected to catch up with Western development without delay. In fact, this formula for development had been accepted by many developing countries. In the 1960s and the 1970s, large-scale industries such as steel mills, manufacturing, hydro-electric dams were given first priorities in Development Plans of developing nations. Agricultural development was given secondary place and agriculture was also 'industrialized' by forcing capital-intensive methods. The huge labour force, replaced by machines, eventually migrated to cities thus making what Herbert Gans called, 'urban

villagers.'[34] The 'tin can cities' of the new urban poor made little or no contribution to development. Rather, what was created was social unrest and chaos, which is counter-productive to development.

These unexpected outcomes, as was realized a decade or so later, were due to many historical reasons. First of these was the mistaken view or misinterpretation of the evolution of the industrial revolution. Although we call it industrial revolution, it was a product of centuries of evolutionary process which molded the social and psychological infrastructure of the Western nations to absorb such change. In other words, industrial revolution is the quantum leap of the centuries-old evolution which set the groundwork for it. As the economist Oshima has pointed out:

> In the West, growth and structural changes took place slowly, over several centuries. There was ample time for institutions and values to adjust to technological and economic changes.[35]

There was no such base in the developing nations to absorb such rapid institutional change. What the West accomplished in centuries could not necessarily be duplicated in a few years, nor even decades.

Secondly, the colonial background of the Western countries was underestimated and sometimes disregarded when mapping the Western model. Most present-day developed nations in the West were aided by colonies during the course of their development process, but "obviously, the

contemporary states of Latin America, Africa and Asia do not have colonies."[36] Besides, most of the nations in these regions are still suffering from what they have inherited from colonialism, and still depend on international economic ties. As Rogers observed, it took time to come to this realization:

> Gradually the newly independent nations began to realize that political freedom was a different matter than economic independence. The end of colonialism did not necessarily mark the end of financial dependence on the industrially advanced countries. Often it increased such dependency.[37]

The introduction of capital-intensive technology was regarded as a necessary part of the Western model. The formula for such a transfer was thought to be simple:

> More-developed nations possessed such technology. Less-developed nations had less of it. So the implication seemed plain: Introduce the technology to the less developed countries and they would become relatively more developed too.[38]

But this process was more complex than was expected by planners. On one hand, technologies which were supposed to replace the labour were expensive, foreign, and would not meet the real needs of these societies. These highly populated developing nations which already had excessive labour did not need such capital-intensive methods as the West needed under their situation with a shortage of labour. Dr. Oshima, an Asian economist, elaborated the situation citing the Asian example:

> Western growth took place under conditions of relative labour shortage, so that Western material and social technologies tended to be highly capital-intensive and labor-saving. I have attempted to show elsewhere that the great population density of Asia, especially in the fertile river valleys, is the historical product of the large labour requirements of monsoon paddy-rice agriculture. This agriculture requires many times the labour necessary for growing wheat and maize in the West because of the need for transplanting seedlings during the planting season instead of broadcasting seeds and also because of the use of knives and sickles for harvesting instead of the larger scythes found in the wheat culture of the West. It is this great population density that distinguishes Asia not only from the West but from the rest of the world. The destruction of handicrafts by the emergence of Western industrialization transformed this density into a labour surplus. Monsoon Asia's material and social technologies thus are founded on labour intensity.[39]

On the other hand, adoption of such rapid changes could threaten the existing social order of these developing societies making for chaos rather than any progressive change. In the dawn of this capital-intensive phobia, an Agricultural Development Officer was sent to a farming area of the author's home country to convince farmers to replace water-buffalos by tractors on farms. After listening to the Officer's long speech on the advantages of using tractors, an 'illiterate' and 'traditional' farmer respectfully questioned: "Honourable Sir: Would these tractors give milk for our children, eat the grass which is freely available in our lands, and bear offspring?" This social reality, however, was disregarded by the Western model. Anything counter to the modernizing

process was considered as traditional and considered as something to be changed by modernizing, and this "became a priority task of various government agencies."[40]

Moreover, the philosophy behind the Western model is that the main causes of the lack of development lay within the underdeveloped nations rather than being external to them.[41] This *within-blame* assumption was widely held not only by the architects of the Western model, but also by the intellectuals and planners within the developing nations. One major reason for such a belief, however, was due to the fact that "Many of the planners were educated in the United States or Europe or at least their teachers had been."[42] And those who were able to get a degree from a Western university were more often from the elite classes of their home countries. They may hardly have had any understanding of how their own societies interact so they were at a disadvantage in trying to develop and change their societies. Often they spoke a foreign language, ate imported food and had been to many parts of the world to acquire the skills needed to design development projects for their home country. In some cases, the home country was more foreign to them than was Europe.

EMERGENCE OF THE NEW PARADIGM

In the beginning of the 1970s, several notable changes occurred in the global economic and political order

which eventually proved powerful enough to challenge the within-blame assumption, and the origins of the Western model. The establishment of OPEC following the Yom Kippur War in 1973 "demonstrated that certain developing countries could make their own rules of the international game, and produced some suddenly rich developing nations."[43] In fact, the oil crisis divided the developing world into two groups: 'oil exporting' developing nations and 'oil importing' developing nations. Secondly, the Non-Aligned movement became more powerful as a political pressure-group against the Western as well as Eastern powers, and pushed for a 'New International Economic Order' and for equal distribution of wealth. Thirdly, world power, concentrated in the hands of the United States since the Second World War started to crack, at least in the United Nations General Assembly. The voting behaviour in the U.N. General Assembly at Stockholm, Bucharest and Rome World conferences illustrated this power shift.[44]

These changes were coupled with the criticisms forwarded by radical economists such as Schumacher. In his widely-read book, Small is Beautiful, Schumacher launched an attack on high technology "advocating 'intermediate technology' as a more useful contribution to development in Latin America, Africa and Asia."[45]

New developments in the global economic and political arena, and intellectual critiques made developing countries

realize that the causes of underdevelopment were external to developing nations as well as internal.[46] It is in this context that by the mid-1970s it was concluded "that the dominant paradigm had 'passed,' at least as the main model for development in Latin America, Africa, and Asia."[47] It was realized that "there are many alternative pathways to development."[48] As has been elaborated by Rogers, the old paradigm's main elements were more or less replaced by the alternatives shown in Table 5.

FITTING DEVELOPMENT AND EDUCATIONAL STRATEGIES INTO THE THEORETICAL FRAMEWORK

The problems which arose in evolving a theoretical framework for development and consequently deriving strategies for development, seemed to grow out of two misconceptions. The first of these misconceptions concerned an implicit assumption that if the products and efforts of development or industrialization could be produced, then somehow, the processes of development would be activated. This is tantamount to building a house from the chimney down. Ironically, when this form of reasoning is observed in traditional societies it is called superstitious belief or sympathetic magic. The GNP is an end result and not a prime mover. In the proposed applications of technology, it is easy to fall into the same trap and ignore the fact that technology is a product of the industrial state as well as its architect. Ignoring such a connection assumes

Table 5

Emerging Alternatives to the Dominant Paradigm of Development

Main elements in the dominant paradigm of development	Emerging alternatives to the dominant paradigm	Possible factors leading to the emerging alternatives
1. Economic growth	1. Equality of distribution	1. 'Development weariness' from the slow rate of economic development during the 1950s and 1960s
		2. Publication of the Pearson Report
		3. Growing loss of faith in the 'trickle-down' theory of distributing development benefits
2. Capital-intensive technology	1. Concern with quality of life	1. Environmental pollution problems in Euro-America and Japan
	2. Integration of 'traditional' and 'modern' systems in a country	2. *Limits to Growth*
	3. Greater emphasis on intermediate-level and labor-intensive technology	3. The energy crisis following the 1973 Yom Kippur War
3. Centralized planning	1. Self-reliance in development	1. The People's Republic of China experience with decentralized, participatory self-development (widely known elsewhere after 1971)
	2. Popular participation in decentralized self-development planning and execution (e.g., to the village level)	2. 'Development weariness'
4. Mainly internal causes of underdevelopment	1. Internal *and* external causes of underdevelopment (amounting to a redefinition of the problem by developing nations)	1. The rise of 'oil power' in the years following the energy crisis of 1973-1974
		2. Shifts in world power illustrated by voting behavior in the UN General Assembly and in the UN World Conferences at Stockholm, Bucharest, and Rome
		3. Criticism of the dominant paradigm by radical economists like Frank and other dependency theorists

that the Massachusetts Institute of Technology could be assembled by by-passing the mechanics' institute from which it evolved, or that Einsteinian mathematics is possible independent of Euclid or Newton.

The application of electronic technology to education development must confront this cause/effect issue head on. A culture's educational system, whether traditional folk education or otherwise, is a prime characteristic of the culture. If an educational system evolved in another culture is imported, it brings its culture with it. This is not necessarily a matter of cultural imperialism. If cultural imperialism results, it is because of the nature of culture and not of some conspiracy. Nor is this necessarily a bad thing, considering cultures develop by absorbing outside influences. Theproblem arises in ensuring that an absorption process takes place and not an inundation.

The factor governing the difference between inundation and absorption is time, and the second misconception comes about as a result of ignoring or forgetting the part played by time in the historical development cycles. As already noted, the industrial revolution was hardly an overnight phenomenon. An analogy may demonstrate the importance of recognizing the critical part that time may play in a process. Knowing that plants grow under the stimulation of light, water and heat does not necessarily

imply that greatly increasing the heat, light and water will make them grow instantly.

The significance of time as a variable in the development process can be seen when we juxtapose the concepts of technological determinism and technology as a product of culture. Ignoring the element of time, these two concepts are mutually exclusive. However, technological innovation comes about as a logical consequence of the environment in which it is spawned. Technological innovation, then, becomes a new element in this environment, and cultural adaptation has to occur in order to accommodate this new element. In this regard, the nature of the innovation dictates the terms of the adaptation. This is technological determinism. As has already been pointed out, the time necessary for this adaptation can be considerable. Also, the adaptation may involve considerable structural change in the culture. What is frequently overlooked in comparative cultural studies is that the pre-industrial culture of Western society was as different from *modern western culture* as the present traditional society is now different from it.

The problem arises because development is change and in some regards the need seems to be to change, but yet to stay the same. Too much change is inundation, and can be a case of throwing the baby out with the bath water. The question then, is how to construct a theoretical or

philosophical base; how to assess the consequences of different course of action, and, how to determine the optimum level of compromise between the desirable and the practicable.

Notes

[1]According to Lerner, the term 'Western model' is even more recent - a post World War II coinage. It became current among social scientists looking for some way to characterize the urban, industrial, literate, participant societies of Western Europe and North America (the Atlantic nations), and seeking to make vivid the differences between these developed nations and the underdeveloped new nations emerging everywhere else in the world; see, his chapter entitled "International Cooperation and Communication in National Development" in Communication and Change in the Developing Countries (1967), p. 112.

[2]S. N. Eisenstadt, Tradition, Change, and Modernity (New York: John Wiley and Sons, 1973), p. 11.

[3]Ibid.

[4]Ibid.

[5]Ibid., p. 13.

[6]Daniel Lerner, "International Cooperation and Communication in National Development," in Communication and Change in the Developing Countries (Honolulu: University Press of Hawaii, 1967), p. 114.

[7]Wilbur Schramm, "End of an Old Paradigm," in Communication and Change the Last Ten Years and the Next (Honolulu: University Press of Hawaii, 1976), pp. 45-46.

[8]Rogers, "The Passing of the Dominant Paradigm - Reflections of Diffusion Research," in Lerner and Schramm, Communication and Change, p. 49.

[9]Ibid.

[10]Lerner, "International Cooperation," p. 114.

[11]Ibid., p. 120.

[12]Ibid., p. 124.

[13]W. Schramm, Mass Media and National Development, p. 131.

[14]Lerner, "Technology Communication and Change," in Lerner and Schramm, The Last Ten Years (1976), p. 292.

[15]Schramm, Mass Media and National Development, p. 131.

[16]Lerner, Schramm, "Looking Forward," in Lerner and Schramm, The Last Ten Years, p. 341.

[17]Lerner, "Technology," in Lerner and Schramm, The Last Ten Years, p. 293.

[18]Lerner, "International Cooperation," p. 113.

[19]Inayatullah, "Towards a Non-Western Model of Development," in Lerner and Schramm, Communication and Change in the Developing Countries (1967), p. 100.

[20]Ibid.

[21]Ibid., p. 102.

[22]Everett M. Rogers, "Communication and Development: The Passing of the Dominant Paradigm," in E. M. Rogers, ed., Communication and Development (California: Sage Publications Inc., 1976), p. 122.

[23]Lerner and Schramm, "Looking Forward," p. 343.

[24]Rogers, "New Perspectives on Communication and Development," in Communication and Development (1976), p. 7.

[25]Schramm, "An Overview," in Lerner and Schramm, The Last Ten Years, p. 2.

[26]Lerner and Schramm, "Looking Forward," p. 342.

[27]Rogers, "Communication and Development," p. 130.

[28]Iran Communication and Development Institute, "Modernization Revisited," Communications and Development Review (Summer-Autumn, 1977), p. 4.

[29]Ibid.

[30]Answering the question, "What is development?" in 1969, Rogers said: "Development is a type of social change in which new ideas are introduced into a social system in order to produce higher per capita incomes and levels of living through more modern production methods and improved social organization." (See, Rogers with Svenning, 1969.) In 1975, Rogers answered: "Development is a widely participatory process of social change in a society, intended to bring about both social and material advancement (including greater equality, freedom, and other valued qualities) for the majority of the people through their gaining greater control over their environment." (See, Rogers, 1976:133.) In 1975, Schramm answered: "Development is the process through which a society moves to acquire the capability of enhancing the quality of life and its people, primarily through the solution of its problems." (See, Schramm and Lerner, 1975.)

[31]Oshima, "Old and New Strategies - An Economist's View," in Lerner and Schramm, The Last Ten Years, p. 53.

[32]Schramm, "End of an Old Paradigm?" in Lerner and Schramm, The Last Ten Years, p. 48.

[33]Rogers, "Communication and Development," p. 122.

[34]Lerner, "Technology," p. 290.

[35]Oshima, "Development and Mass Communication - A Re-Examination," in Lerner and Schramm, The Last Ten Years, p. 28.

[36]Rogers, "Communication and Development," pp. 122-123.

[37]Ibid.

[38]Ibid.

[39]Oshima, "Development and Mass Communication," p. 27.

[40]Rogers, "Communication and Development," p. 123.

[41]Ibid., p. 127.

[42]Ibid.

[43]Ibid., p. 129.

[44]Ibid., p. 127.

[45]E. F. Schumacher, Small is Beautiful: Economics as if People Mattered (New York: Harper and Row, 1973).

[46]Rogers, "Communication and Development," p. 128.

[47]Ibid., p. 129.

[48]Ibid., p. 131.

CHAPTER V

CONCLUSIONS

There are several propositions which are suggested by the preceding chapters. This concluding chapter will isolate these propositions and evaluate them on the basis of the available data. Propositions which are suggested are as follows:

(a) Before a technology can be used in a society, the supporting infrastructure must be in place. A supporting infrastructure must include human resources - people, their skills, and most importantly, their attitudes.

(b) Financial resources must be available to provide the infrastructure as well as the technology.

(c) If financial resources are only available through extra-cultural sources, political and economic restraints will be placed on the development strategies.

(d) The most necessary ingredient in the development process is modification or change of attitudes at the general population level.

(e) Attitude change cannot be forced. It can only come about if individuals see the utility in change and change themselves.

(f) The nature of television is such that whatever use the medium is put to, it appears to move toward being used as an entertainment, commercial form.

As noted in Chapters II and III, the four nations discussed in this study viz. American Samoa, El Salvador, Niger and India received needed technolgy for educational uses from technologically advanced nations. In the case of Samoa, the new technology was imposed upon them when the Americans - not American Samoans - thought it was needed. Although the situation may not have been so extreme in other nations, the perceived need for technology grew out of examples set in developed nations and not directly out of indigenous factors. None of these nations underwent the massive technological changes which the Western nations experienced. So the new technologies, which are products of centuries of experience acquired by Western nations, hardly fit into the socio-economic and cultural infrastructure of the newly emerging nations, which are mainly agricultural based economies. As pointed out elsewhere, any technological innovation could be identified as a product of the very culture from which it emerged and carries the birthmarks of that particular culture. It was shown in the Samoan and El Salvadoran experiences that, in spite of the content which is broadcast, the dominant and demanding nature of technology is inevitable.

As has been shown in many cases, a supporting infrastructure for technology must include the human resources, i.e., people, their skills and, most importantly, their attitudes. In fact, many developing nations did not have the skilled personnel needed for carrying on the projects that were mounted. Therefore, like hardware, planning was also in the hands of donor nations. As has happened in El Salvador, the interests of donor nations considerably differ from the needs of the recipient nations. This remains as one of the key factors for the failure of many projects. More often than not, donor nations' interest lays in showing their technological superiority through the 'showcase' countries. Indeed, developing nations can use new technology without having a proper infrastructure. However, they do so with an immense risk to societal goals. The use of technology is much more than installing a new computer system. There has to be enough indigenous work for such technology and there also has to be an indigenous feeder system to make the optimal use of such technology.

It is true that there have often been a number of feasibility studies done before the installation of new technological systems. In some cases, such as in El Salvador, there was more than one study conducted. As we can now see, the projects did not achieve the objectives the feasibility studies predicted as the potential of new technology. This was due to two factors: first, the major

concern of the feasibility studies was the technological and engineering potentials of using such technology. Secondly, almost all those studies were carried out by the agencies which would get, or already had, the contract to carry out the projects, and so those studies were overwhelmed by vested interest. The studies carried out by outsiders did not address the feasibility of such projects *within the whole societal framework.*

One of the major characteristics of new technology is its cost. There is hardly any developing nation - except the present-day fourth world nations - which can afford such technology. Therefore, technology has to come from the technologically and economically advanced nations. The financial dependency for technology put receiving nations at risk to political and economic considerations of the donor nations. For instance, after realizing the need for educational reforms through the use of new technology, El Salvador had to postpone the idea until they gained interest from the United States to finance the project. The Samoan project could never have materialized without American financial aid. Such was also the case with Niger. The risk of such dependency was evident when El Salvador became involved in war with the Honduras. In the wake of that war, the U.S. froze the aid, thus postponing the project for a considerable period. Niger did not know what to do after the termination of the five-year

experimental period which France financed. The Samoan project was considerably altered when the new governors found different interests for financing and thus cut the Department of Education's budget. Moreover, even though it was not publicly stated, the termination of NASA's ATS-F satellite loan to India's project SITE was due to the tenuous political relations between India and the U.S.

Modification or change of attitudes seemed to be the most essential element of the development process. Attitude change should not be forced or undertaken on a short-term basis. The Western man's favourable attitudes toward new technology has grown-up with the growth of the technology itself. Technology is a *product* of Western development not the *cause* of it. During the course of Western development, people saw and felt the advantages and utility of the growing technology in their daily life. Microchips became as familiar as disposable razors, and thus a part of day-to-day life. This change cannot be introduced overnight or even in decades. Short-term strategies to accelerate development are dysfunctional. It is impossible to *teach* or force people to change their attitudes. What a development plan should provide is a favourable environment in which people can *learn* the advantages and the utility of change and then change themselves.

In conclusion, the objective of this thesis was to devise a study which might suggest appropriate strategies

for incorporating electronic educational technology into national development plans. In the face of the complexity of the problems, and of the very disappointing results of past attempts, it would seem presumptuous and foolhardy to attempt an itemized cook-book type of approach. There are, however, patterns which emerge from the cases we have investigated and these patterns strongly suggest that what has been called the "bottom up" approach is likely to be the most fruitful. The literature clearly suggests that the success of a project is in proportion to the amount of care and preparation that has been given to the receiver end of the transaction. Even in the most advanced of the technological societies, this is the case. During the period in which the MPATI project took place, it was an extremely elegant concept from the technical point of view. In real terms, the project was a failure as much as the Samoan project and for similar reasons.

Television plays an insignificant part in *formal* education in developed societies. It may play a major part in the *informal*, and perhaps more effective social education process. However, in terms of *planned instruction* this is, in large measure, very much as it has been for decades.

It is ironic that the Sesame Street project which has been lauded as extremely effective, has been seen as creating problems in the way it produces a highly precocious nursery population which the formal schools are not equipped to handle.

The conclusion, then, seems to be that the problem has to be approached in a holistic way. A great deal of work has to be done on investigating ways of activating change from the bottom up. This involves participation or perhaps more importantly, initiative from the bottom end of the transaction, namely, the population at large. This may be much easier said than done as apathy is a functional attribute in an environment in which one perceives oneself as having no influence.

APPENDIX

APPENDIX 1

Sample Home Television Schedules of KVZK-TV, American Samoa, 1966-1980

Sample Week of KVZK's Home Television, 1966

Monday, March 7

7:00 P.M. Mickey Mouse Club
7:30 What's New
8:00 Let's Learn English
8:15 Top of the News
8:35 Cheyenne
9:30 Top Star Bowling
10:30 News Digest

Tuesday, March 8

7:00 P.M. Mickey Mouse Club
7:30 What's New
8:00 Olaga Manuia (Healthy Living)
8:35 Hawaiian Eye
9:30 Cultural Affairs
10:30 News Digest

Wednesday, March 9

7:00 P.M. Mickey Mouse Club
7:30 What's New
8:00 Let's Learn English
8:15 Top of the News
8:35 Andy Williams Show
9:30 Public Affairs
10:30 News Digest

Thursday, March 10

7:00 P.M. Mickey Mouse Club
7:30 What's New
8:00 Film Shorts
8:15 Top of the News
8:35 Adventures in Paradise
9:30 Cultural Affairs
10:30 News Digest

Friday, March 11

7:00 P.M. Mickey Mouse Club
7:30 What's New
8:00 Let's Learn English
8:15 Top of the News
8:35 Disney Cartoon Parade
9:30 Bonanza
10:30 News Digest

Saturday, March 12

7:00 P.M. Great Adventure
8:00 Olaga Manuia (Healthy Living)
8:15 Disney Movie
10:00 America
10:30 Light Time

Sample Evenings of KVZK-TV's Home Television, 1967-79

Tuesday, March 15, 1967

Channel 2

7:00 P.M. Friendly Giant
7:15 News (in Samoan)
7:30 You Are There
8:00 Soifua Fa'asamoa (Samoan Living)
8:30 Garry Moore Show
9:15 News (in English)

Channel 4

7:00 P.M. News (in English)
7:15 Friendly Giant
7:30 Twentieth Century
8:00 What's New
8:30 Cheyenne
9:15 News in Review (English)

Tuesday, March 16 1971

Channel 2

5:00 P.M. Sesame Street
6:00 What's New
7:00 Talofa Tamati (Welcome Children)
7:10 Man and His World
7:35 ABC News
8:05 News in English
8:20 The Great American Dream Machine
9:50 Thirty Minutes with....

Channel 4

5:00 P.M. Sesame Street
6:00 Misterogers
7:00 Talofa Tamaiti
7:10 Flintstones
7:35 ABC News (English)
8:05 News in Samoan
8:25 Ta'u Mai (Tell Me)
8:55 Olaga Manuia (Healthy Living)
9:15 Bonanza

Tuesday, March 5, 1974

Channel 4

3:45 P.M. Misterogers
4:15 Sesame Street
5:15 Electric Company
5:45 News in Samoan
6:00 News in English
6:15 ABC News
6:45 Big Time Wrestling
7:45 Adams Chronicles
8:45 NBC Tuesday Night at the Movies
10:15 Police Story
11:15 Johnny Carson Show

Tuesday, March 11, 1975

Channel 4

7:15 P.M. NBC Nightly News
7:45 NBC Premiere Movie
9:45 Police Story

Channel 5

3:15 P.M. Misterogers
3:45 Villa Allergre
4:15 Sesame Street
5:15 Electric Company
5:45 KVZK Evening News
6:15 Zee Cooking School
6:45 Olaga Manuia (Healthy Living)
7:00 Sports Corner
7:15 Big Time Wrestling
7:45 America
8:15 Arabs and Israelis
8:45 PBS Special of the Week

Tuesday, March 16, 1976

Channel 2

3:00 P.M. Misterogers
3:30 Sesame Street
4:30 Electric Company
5:00 Zoom
5:30 Gettin' Over
6:00 Consumer Survival
6:30 Washington Week in Review
7:00 Book Beat
7:30 Big Time Wrestling
8:30 Masterpiece Theatre
9:30 Tala'ese'ese (News)
10:00 Images of Aging

Channel 4

3:40 P.M. Days of Our Lives
4:40 Wild, Wild West
5:30 Tala'ese'ese (News)
6:00 NBC Nightly News
6:30 Josie and the Pusi
7:00 Movin' On
8:00 Police Woman
9:00 Dean Martin
10:30 Tonight Show

Tuesday, February 21, 1978

Channel 2

3:00 P.M. Sesame Street
4:00 Electric Company
4:30 Misterogers
5:00 Villa Allegre
5:30 Lowell Thomas Remembers
6:00 Infinity Factory
6:30 KVZK Evening News (repeat)
7:00 On Island
7:30 Performance at Wolf Trap
9:00 Hollywood Television
10:30 Over Easy

Channel 4

3:00 P.M. To Say the Least
3:30 Days of Our Lives
4:30 Another World
5:30 KVZK Evening News
6:00 NBC Nightly News
6:30 Hollywood Squares
7:00 Wheel of Fortune
7:30 NBC Special
8:30 NBC's Big Event
10:30 NBC Tuesday Movie of the Week

Channel 5

7:30 P.M. Happy Days
8:00 Laverne and Shirley
8:30 Three's Company
9:00 Soap
9:30 Family

Sample Week of KVZK- TV's Home Television, 1980

Monday, February 18

Channel 2

4:00 P.M. Sesame Street
5:00 Electric Company
5:30 Villa Allegre
6:00 Studio See
6:30 3 .. 2 .. 1 .. Contact
7:00 Footsteps
7:30 The Voyage of Charles Darwin
8:30 Every Four Years
9:30 Masterpiece Theatre
10:30 Over Easy

Channel 4

4:00 P.M. Days of Our Lives
5:00 The Doctors
5:30 KVZK Evening News
6:00 NBC Nightly News
6:30 Hollywood Squares
7:00 Wheel of Fortune
7:30 Little House on the Prairie
8:30 National Association of Theatre Owners Presents the American Movie Awards

Channel 5

7:00 P.M. KVZK Evening News
7:30 Laverne and Shirley
8:00 Angie
8:30 Stone
9:30 Family
10:30 Barney Miller

Tuesday, February 19

Channel 2

3:30 P.M. Sesame Street
4:30 Electric Company
5:00 Villa Allegre
5:30 Zoom
6:00 As We See It
6:30 3 .. 2 .. 1 .. Contact
7:00 Korean Hour
8:00 Camera Three
8:30 American Short Story
9:30 PBS Special
10:30 Over Easy

Channel 4

4:00 P.M. Days of Our Lives
5:00 The Doctors
5:30 KVZK Evening News
6:00 NBC Nightly News
6:30 Hollywood Squares
7:00 Wheel of Fortune
7:30 NBC Tuesday Night at the Movies
10:30 Tonight Show

Channel 5

7:00 P.M. KVZK Evening News
8:00 Goodtime Girls
8:30 Winter Olympic Games

Wednesday, February 20

Channel 2

3:30 P.M. Sesame Street
4:30 Electric Company
5:00 Villa Allegre
5:30 Studio See
6:00 Once Upon a Classic
6:30 3 ..2 .. 1 .. Contact
7:00 Pavarotti at Juilliard
7:30 A'oa'oga i Amerika Samoa (Education in American Samoa)
8:00 Pearl
8:30 Nova
9:30 World
10:30 Over Easy

Channel 4

4:00 P.M. Days of Our Lives
5:00 The Doctors
6:00 NBC Nightly News
6:30 Hollywood Squares
7:00 Wheel of Fortune
7:30 Real People
8:30 Different Strokes
9:00 Hello, Larry
9:30 The Best of "Saturday Night Live"
10:30 Tonight Show

Channel 5

7:00 P.M. KVZK Evening News
7:30 Eight is Enough
8:30 Winter Olympic Games

Thursday, February 21

Channel 2

3:30 P.M. Sesame Street
4:30 Electric Company
5:00 Villa Allegre
5:30 Zoom
6:00 3 .. 2 .. 1 .. Contact
7:00 Taiwan Hour
8:00 The Advocates, in brief
9:30 PBS Special
10:30 Over Easy

Channel 4

4:00 P.M. Days of Our Lives
5:00 The Doctors
5:30 KVZK Evening News
6:00 NBC Nightly News
6:30 Hollywood Squares
7:00 Wheel of Fortune
7:30 Buck Rogers in the 25th Century
8:30 NBC Special: Steve Martin
9:30 Quincy
10:30 Tonight Show

Channel 5

7:00 P.M. KVZK Evening News
7:30 Mork and Mindy
8:00 Winter Olympic Games

Friday, February 22

Channel 2

3:30 P.M. Sesame Street
4:30 Electric Company
5:00 Villa Allegre
5:30 Studio See
6:00 As We See It
6:30 3 .. 2 .. 1 .. Contact
7:00 A'oa'oga i Amerika Samoa (Education in American Samoa)
7:30 Washington Week in Review
8:00 Wall Street Week
8:30 Milwaukee Symphoby Orchestra
9:30 The Prime of Miss Jean Brodie
10:30 Over Easy

Channel 4

4:00 P.M. Days of Our Lives
5:00 The Doctors
5:30 KVZK Evening News
6:00 NBC Nightly News
6:30 Hollywood Squares
7:00 Wheel of Fortune
7:30 Doug Hennings' World of Magic
8:30 NBC Friday Night at the Movies
10:30 Midnight Special

Channel 5

7:00 P.M. KVZK Evening News
7:30 Winter Olympic Games

Saturday, February 23

Channel 2

2:30 P.M. Zoom
3:00 Villa Allegre
3:30 Once Upon a Classic
4:30 Free to Choose
5:30 PBS Special (repeat of 2/21)
6:30 Washington Week in Review
7:00 Footsteps
7:30 PBS Special
9:00 Mystery

Channel 4

9:00 A.M. Bay City Rollers
9:30 Godzilla/Globetrotters' Hour
10:30 Fred and Barney Meet the Shamoo
12:00 Daffy Duck
12:30 P.M. Casper and the Angels
1:00 NBC Golf
2:30 BCAA Basketball
5:30 Fagufagu Atu (Becoming Aware)
5:45 KVZK Weekend News
6:00 NBC Nightly News
6:30 American Samoa Red Cross Chapter
7:00 NBC News Special
7:30 CHiPs
8:30 BJ and the Beat
9:30 Prime Time Saturday
10:30 Tonight Show

Channel 5

4:30 P.M. American Bandstand
5:30 ABC's Wide World of Sports
7:00 The Ropers
7:30 The Love Boat
8:30 Wrestling from Hawaii
9:00 ABC Saturday Night Movie

Sunday, February 24

Channel 2

3:30 P.M. Amazing Grace Bible Class
4:00 Rev. Rex Humbard
5:00 Oral Roberts and You
5:30 Mafutaga Fa'ale-tusi-Paia (Bible Study)
6:00 Pavarotti at Juilliard
6:30 Music and the Spoken Word
7:00 Sauniga Lotu (Church Service)
7:30 Nova
8:30 American Short Story
9:30 Masterpiece Theatre
10:30 Christopher Closeup

Channel 4

1:00 P.M. NBC Golf
3:00 Sportsworld
4:00 NBC Special
5:30 Manatu fou mo le faama'i lepela
(New Findings on Leprosy)
5:45 KVZK Weekend News
6:00 NBC Nightly News
6:30 Meet the Press
7:00 Disney's Wonderful World

Channel 5

3:30 P.M. Winter Olympic Games
6:00 All-Star Wrestling
7:00 Winter Olympic Games

SOURCE: Wilbur Schramm, Lyle M. Nelson, and Mere T. Betham, Bold Experiment (Stanford: Stanford University Press, 1981).

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VITA AUCTORIS

Indrawansa de Silva was born in Colombo, Sri Lanka on the 14th of April 1952. He attended Ananda College, Colombo and completed grade 10. He completed his Advanced Level studies in Bomiriya Maha Vidyalaya, Kaduwela, in 1973 and entered the University of Sri Lanka (Vidyodaya Campus) in 1974. There, he studied for the Special Degree Programme in Development Studies specializing in the field of 'Development Oriented Communication Research' which he obtained with a Second Class Upper Division standard in 1978.

In high school, he was the Head Prefect and the Chairman of the Literary Association. He won the UNESCO prize for oratory at the Inter-School Oratory Competition in 1971, representing his school.

During his tenure as an undergraduate student, he was elected as both the President of the Students' Council and the President of the Arts Faculty Students' Union in 1976/77. He was also the President of the Inter-Campus Student Federation for the same period - an office representing all Universities in Sri Lanka comprising a student body over thirty-five thousand. He was also the Captain of the Campus debating team for the year 1976. As President of the Students' Council he had the privilege of being a member of the University Senate.

In 1979, de Silva won the Canadian Commonwealth Scholarship and Fellowship to follow a post-graduate degree in Communication Studies at the University of Windsor. During his tenure as a graduate student, he worked as a media intern at the Department of Individualized learning, at the University of Michigan in Dearborn, Michigan, U.S.A., from January to May 1981. He was responsible for assisting in the creation of an individualized learning programme - Project REACH - based on televised instruction. His duties included producing, directing, scripting, and contributing to the technical set-up and maintenance of several television productions intended for in-house instructional use, as well as for future broadcast over local cable carriers.

For the academic year 1981/82, he worked as a teaching assistant for the course 'Television Theory and Practicum' which involves current television theory, script writing, creative and administrative concerns of the medium and the implications of the various production styles and techniques for programme content.

De Silva was awarded a Masters degree in Communication Studies in June 1982.