

THE THIRD PARENT

Growth and Development of Indian Electronics Media

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P R E F A C E

It is as much a matter of surprise to me, as to many of my friends, that I actually wrote this book. But for the profound change that took place since 1984 in my working life, I could as well have been pursuing my first love – Engineering Management, visualising and designing state-of-the-art electronic products and concurrently honing my skill in structuring an organisation to efficiently produce and market them. The thrust of an ideal corporate philosophy in my opinion, is to have ‘sound’ products at its core and a motivated organisation of creative work force to design, manufacture and sell them.

All began with my decision to relocate myself in Delhi on a full time basis and assist our former Prime Minister, Shri Rajiv Gandhi, in developmental and policy making activities in areas relating to Electronics and Informatics. The new responsibility took me away from Industry shopfloor for five long years till I returned back, rather happily, to my old desk at the end of 1989.

My job in Delhi involved working on a very large canvas with a nationwide perspective. Scope of my work was national planning for electronics and related modern technologies. It was a challenge to create framework of policies based on defined objectives. It involved steering our national efforts in the use of modern technologies in a direction that would enable us a nation, to speed up development and extend the benefits of faster growth to every section of our society. It meant harnessing the new knowledge for aiding efficiency in industries and on farms; reducing hardships adding to the comforts for all the people through appropriate use of Information Technology in planning, in administration, in communications, in health care etc.

This was a challenge and I had to spend all my time in studying the problems at every level and seeking lasting solutions to them. What helped immensely was my conviction that one should not get lost in absorbing pastime of criticising others. That would then have left me with no time to work creatively to find solutions. The key phrase was ‘In search of solutions’. I shelved away all my personal interests and decided to put my best foot forward for the job on hand.

One amongst this wide spectrum was the use of mass media for national development – for wholesome entertainment, for removal of adult illiteracy, for introducing radical improvements in primary school education, etc. Mass Media like Television should be used for giving wide exposure to creative people, to people with a message, to great teachers, to our skilled artisans etc. allowing the people at large-literate and illiterate alike-to have easy access to television. Very large sums of money had been spent and are being spent with almost total lack of objective based planning. Thoughts and actions within the Government are generally far apart. Doordarshan’s plans related to just the hardware expansion, both for a wide coverage of geographical areas and for better equipped studios. This by itself, also lacked imagination. Plans are basically financial and administrative in nature. Technological innovativeness and engineering cost effectiveness had no place. But even more disastrous was total lack of software plan. No one was answering one fundamental question, “ Who says what, how, to whom, with what effect and for what purpose”. The Doordarshan totally lacked and perhaps still lacks in fundamental concepts like sequencing, visual planning, code of conduct and ethical standards. It continues to treat its creative people non-creatively. This state of affairs is due to total lack of software planning.

Doordarshan is widely accused of favouring those in power. That criticism primarily originated from those who were not in power but wanted to be. History has shown that after tables were reserved, Doordarshan’s operations underwent no change-certainly not in a positive direction. Education is still incipiently and carelessly managed. News are still uninspiring and straightjacketed. No worthwhile policy framework, for software, is at any discussion state, even today.

During the last six months, I always feared that *The Third Parent* might become stale by the time it is published. But the country is today at a standstill. Certainly it is in that state for the last two years. That gives me a hope that my primary purpose in writing this volume could still be served. It could provide anchor points to planners and administrators. Concern about mass media is widely felt but much of it is out of the lack of a clear vision and comprehension. I sincerely hope *The Third Parent* will fill the void and enable one to see light within its covers.

It is because of Shri Rajiv Gandhi who got me involved in matters relating to media, that I could venture to undertake the study leading me to write this book. Primarily, therefore, I thank him for being instrumental in arousing my curiosity to take up the study.

While this book is in the final stage of printing, I am deeply grieved by the untimely demise of my dear friend Rajiv Gandhi in the hands of some cruel assassins. This book was to have been released personally by Rajiv as its very publication was due to the treasure of inspiration provided to me by Rajiv himself. I therefore dedicate this book to his memory in respectful homage to the departed soul.

The *Third Parent* would not have been possible without Mr. Ramnarayan Patro. Without his parental criticism, encouragement and guidance, I would have never put sustained effort to pen this down. Many more friends and well wishers have helped to brush up the contents and the text. Amongst them I should express my grateful thanks to Mr. Shrikant Potnis, Ms. Nitya Rao and Dr. O.P. Kulshreshtha.

- P. S. DEODHAR

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Chapter 1

INTRODUCTION

This study constitutes analysis and available options for growth and development of Indian Electronics Media. The work aims at optimum utilisation of global technological advances in electronic audio-visual programme generation and distribution to gain maximum socio-economic benefits to the society.

In a large, populous and predominantly illiterate country like ours, electronics media provides tremendous reach for disseminating audio-visual information which is universally understandable even by those who are illiterate or located in remote areas. Success of satellite based broadcasting of television programmes is already wellknown. Other media options like cable TV and video also offer newer avenues and advantages for wider viewership and local language programming.

In a secular multilingual country with diverse cultures, different religions and traditions and varying lifestyles, role of nationwide television is vitally important – it can help in bringing the country together giving closer understanding amongst its people. Television has had a great impact on homogenisation of a heterogenous society in the United States of America. Television played an important role in providing a common denominator to multi-lingual, multi-racial American society which led to certain uniformity in societal reaction to situations or events, in developing common responses in personal and social communications, in better appreciation of people with diverse beliefs and lifestyles. Nationwide television could serve like a cultural melting pot.

In spite of the fact that there would be uncertainties about the nature and the pace of change, advances in production and distribution of audio-visual programmes through Electronics Media are distinctly moving towards continuously improved performance and progressively falling prices. Broadcasting and telecommunication technologies are covering and making it feasible and economical to offer additional services in new ways several technical limitations of the past like spectrum scarcity have been overcome. This would initially lead to demand for new services such as additional channels, cable TV, better quality picture and stereo sound, low cost DRS sets etc.

With improved and lower cost satellite delivery systems becoming available, international programmes telecast via satellites have brought India under their footprint. In such cases, even if Government were to take action, it would be impossible to stop members of the public from receiving them. One cannot stop a radio-receiver owner from tuning into international programmes. Same will be true of satellite telecasts beamed to India. It will be impossible to implement a law which might expect a dish antenna to be beamed towards anything other than INSAT. Equivalent of boot-legging would then start in Television entertainment.

Direct payment-subscribed-television programme services are also now feasible, opening a new vista for programme delivery. The proliferation of video tape rentals through subscribed video libraries is the evidence of the demand and such technology now exists. Subscribed Entertainment TV channels can fully support and pay for additional channels exclusively used for education, with no burden on public funds.

The Government had invested in Satellite delivery system for television with a specific understanding to use it mainly for education. Commercial entertainment however prevailed over the original promise. Opportunity now exists to have a dedicated satellite for Educational Television. It can also have several channels to fulfill every linguistic need. Further, tremendous cost saving is possible due to very low cost DRS sets with small size inexpensive antennas. Each of the million schools (today's count 6,00,000) could be covered through large number of channels dedicated to educational programmes in local language, both for formal and non-formal education.

With increasing economic development, growing family income and with lowering electronics prices, audio-visual for information and entertainment through Electronic Media will become an important commercial activity. This industry will create large revenues and larger still if tax policy is structured to stimulate market.

Use of video for stored audio-visual information for education and entertainment is growing continuously. Formal and non-formal education will be growingly dependent on video for classroom aid, supplementing and aiding teachers and helping them to take into their classrooms, supplementing and aiding teachers and helping them to take into their classrooms, factories and farms, expertise to give insights into various aspects from anatomy to atomic physics and to enrich education by embellishing it with right kind of visuals.

Low noise transmission of high quality visual and stereo sound will be possible with cable delivery system. Cable TV will be having growing demand to meet the curiosity and range of tastes of Indian audiences and demand for such delivery systems will influence the shape of the services in future.

There is some international evidence to suggest that even in developed countries which offer a large number of channels and variety of services, a few services are considerably more popular than the rest and attract very wide viewership. Thus even in a very open environment, there exists a chance that those with massive resources, not only in monetary terms but also in terms of selective access to high cost productions, would enjoy the widest viewership. Thus there is a need to have regulatory safeguards, such as on media ownership to ensure that opportunities are released to provide the viewers with a broader and more varied choice. This is specifically valid if for any reason one opts to privatise this sector, where mere monetary expectations may prevail with no qualms about public accountability.

Bearing in mind related aspects which would influence our policies, the study suggests various options open before us. The most important reason why India has broadly failed to benefit from or to take a leadership position in electronics-related technologies is the delay, indecisiveness, fear, ignorance and resultant procrastination of the planners in particular and the Government in general.

Chapter 2

TELE-VIDEO AND COMMUNITY

When one considers in the context of the contributions of electronics technology to the lives of common people in India, the benefits outstrip the handicaps. People are happier and better off because of electronics. Fact that electronics is a glamorous, magical modern technology should be less important to us than to answering in affirmative the question, 'Is it good for us?' It is less important if it merely makes some Indians wealthier, but the importance is underscored when it should also be making our people's lives fuller and happier. Radio, recorded music, stereo systems, Televisions, Video recorders and even telephones have all made life less stressful and more rewarding, adding to comforts, and bringing entertainment of outstanding technical quality into the privacy of our homes which was earlier available only in public halls.

Electronics has democratised entertainment. What was earlier available only to the rich and the privileged is now accessible to the common people with modest means. Any Indian with a radio or a music system can today command a range of musical repertoire and a level of performance quality that even Akbar the great would have envied in his time. Colour TV and now Video, not only brought to them entertainment and information like nothing else could. One of the greatest historical events that will eventually prove to be a turning point in the lives of people of India is the launch of the 'Insat' satellite and resultant nationwide TV coverage which we could otherwise not afford and certainly not so soon. It is interesting to note that all developments in this technology have been progressively making the products better in performance, higher in efficiency, smaller in size, compact and portable and, best of all, cheaper in price.

Traditional media people consistently underestimate television's culture-changing effects, mainly because they overlook certain characteristics that are so obvious that one takes them for granted. The most important feature of television is its ability to deliver simultaneously into the intimate environment of millions of homes, touching lives of the entire household, ideas mingled with powerful drama. Dr. George Gerbner, Dean at the Annenberg School of Communications of University of Pennsylvania in the USA has established through extensive research that the aggregate flow of reiterated formulae, formats and ritualisations "cultivates" the social environment almost as farming cultivates the natural environment. He further states that due to the pervasiveness of television, characteristic images of the world become the most familiar aspects of the shared cultural environment within which minds are fertilised and nurtured.

Sociologist Daniel Bell of Harvard University in Cambridge, Massachusetts, found that the way people decode television's images, sounds and symbols has changed fundamental modes of processing images and ideas, "axial principles", that shape the entire social system. Even more important and profound impact is on the behaviours of children. Child development specialist, Dorothy E Cohen at the Bank Street College of Education, New York city has documented the extent to which TV characters and scripts dominate childhood imagery. The US Surgeon General's Office has affirmed this evidence, showing that what children see and hear on TV is easily incorporated into their attitudinal and behavioural repertory. Even year old children are commonly watching TV screen for as long as an hour and show preferences for some images over others. Before toddlers can string a sentence together they can sing commercial jingles, recite the slogans and even the background sounds. Such is the power of this new media.

Because of all such reports, the entry into the Indian households of Television and Video, the two enormously powerful and hypnotic gadgets for audio-visual entertainment, has become a matter of concern to many thoughtful citizens. Careful study of the reports from the Western world, and specially the United States, as stated above, regarding the deep influence of the TV and video programmes on their young generation would indeed make one to introspect. It is no wonder that Indian parents are worried about the effects of Television and Video on their own children. This is true specially because they have little chance of controlling the child's exposure to various vulgar and trivial images produced by professionals who are experts at spectacle creation and who 'manufacture' tantalising fantasies sometimes with a total disregard to the social consequences of their experiments in visual arts. In USA and Europe, colour TV and videos have been extensively used over the last 30 years and more. Their effects on the young as well as the old have also been studied in great detail. It is, therefore, worthwhile for us to look at some more reports rather closely in order to estimate, what is in store for our society and what preventive measures we ought to take.

John Goodlad, in his book entitled, 'A place Called School' points out that TV, over a period between 1960 and 1980, moved from the 8th place to the 3rd place out of 10 in terms of influencing the youths aged 13 to 19. He says, average American child spends 10% of his or her time watching TV.

Marie Winn in her thought-provoking, 1983 book 'Children without Childhood' acknowledges that TV is enormously powerful, hypnotic form of entertainment and further states that parents have little chance of controlling their child's exposure to every variety of human brutality and violence, aberrant models of adult indulging in wisecracks, and array of other larger-than-life, and phoney characters and various other socially undesirable programmes.

It is interesting to note that in many serials on the U.S. and the British TV, adults are shown not taking their work seriously. These superfluous images of adult men indulging in childish buffoonery as also other forms of violence, delinquency and permissiveness are known to become permissible models are adult behaviours in the eyes of adolescents.

In his book *The Effects of Television*, the English researcher J. Halloran summarises experimental evidence on the effects of the community of 'Violence on Television'. It is interesting to note that, in majority, it supports the view that observing violence on the mass media is a contributing factor to subsequent aggressive behaviour, though it is not a determining factor. Other evidence suggest that violence on TV has both provocative and cathartic effects. The book distinguishes between different forms of violence, different levels of its portrayal and various groups of viewers. It also separately records immediate and long term effects.

Raymond Williams in his highly rational style has the differentiated between 'authorised' and 'unauthorised' violence. He observes that the law may punish you if you kill or assault someone out of a domestic rivalry of internal political struggle. He, too, however, agrees that the society should discourage violent behaviour.

Jay G. Blumler in his study on *Television in Politics* published in 1968 outlines the effects of Television watching on political behaviour. It showed, that in Britain as well as in the U.S., TV has little discernible influence either on voting or on the rating of political leaders. Newer studies have found some measurable influence on information about party policies and on the pursuance of those with initially low party political attachments. The most interesting and significant observation, however, brings out a striking fact that Television has created personalities of TV interviewers who have, in a sense, become political figures having developed measurable influence on viewers. The study further reveals that many political leaders do depend and believe that it is important to have Television coverage.

Television, in any case, has always been put to manipulative use everywhere, sometimes politically, but many more times commercially and socially. Historical study of broadcasting reveals that it has been a new and powerful media for social integration and control. Probably that is why the word "Mass Communication". But still Radio, Television and now Video have all been designed to be used in individual homes. Concept of community TV or Video in our own country could be the first to make it a shared media for mass communication in a more appropriate sense.

Radio, Television and Video are, primarily, media for information dissemination which also have been used for home entertainment. Occasionally entertainment is 'used' to lure people to accept information, through either the news or a commercial advertisement. There is also a belief amongst some media-men that TV entertainment can also be used for education and training. This myth has been finally shattered by a study sponsored by the US Government. It clearly brings out that this often attempted cocktail of amusement and social education has rarely, if at all worked on viewing population. Entertainer or actor or a fiction writer is too theatrical to be accepted by the society as a preacher, even if the message is camouflaged. One can conclude that even the illiterate masses in India will accept advice and guidance only from the people who are known to practise what they preach and whom they perceive as being transparently sincere. In fact with respect to adult illiterates, who are fully functional citizens like any one else who is educated, we cannot talk of 'teaching'. We can only 'share' with them what we know, like we would with an ignorant literate. Concept of 'teaching' smacks of a sense of superiority which, I wonder, how many of us, literates, could really claim, given the fact that many distinguished illiterates are today community representatives in Legislative Assemblies and in the Parliament or are successful businessmen and social leaders. How can we forget that even in Vedic times, the very first prayer that a Guru and his Sishyas together chanted was that they all would together learn in co-operation? "OM, SAHANA VAVATU, SAHA NAU BHUNAKTU SAHAVEERYAM KARAVAVAHAI TEJASWINAVADHITAMASTU MAVIDWISHAVAHAI". Here is the most classic example where the teacher desists from dominating over the pupils. We should not forget this truth. Leo Buscaglia, the great American thinker and a delightful communicator in his book 'Living, Loving and Learning' says, "I don't teach in this class, I learn in it, we get together on a great big rug and sit down and rap for two hours". The key is to 'share'.

Ineffectiveness of mixing 'entertainment' on TV with teaching of morals and other social values, is pointed out in a few studies reported the world over. For example, National Committee on Reforms of Secondary education appointed by the US Government in 1973 made the following observations :

1. Commercial TV leads children to synthetic as opposed to analytic modes of learning.
2. When knowledge is obtained from commercial TV, the line between reality and fantasy is unclear.
3. Any education through TV that clashes with the expectation of the children is rejected and is therefore, ineffective.

Commercially motivated programmes demand that they hold the attention of the viewer and, therefore, provide novelty that invades private and adult worlds. These ultimately result in diminishing respect for adults. Marie Winn says that through TV, children gain entry into a confusing adult world that cannot help but shake their confidence and trust in those elders who once seemed good and powerful. Children always grow up expecting their parents to be perfect and later become very disappointed, disillusioned and upset when they find out that these poor human beings are not so in reality. Gilbert Sewell in his 'Necessary Lessons' published in 1983 agrees that TV cuts at the margin between childhood and adulthood by revealing secrets, mysteries, contradictions and tragedies once considered unsuitable for children. It, therefore, hastens the end of childhood. When children start imitating sophisticated behaviour and language which they hear and see on TV, they give an impression that they are more matured than they really are and, therefore, expect to get treated as such. Adolescent children many times believe and assume that society condones the behaviour of people as seen on TV since they are permitted to see such programmes.

Against all this background, one also has to bear in mind the fact that any attempt to conceal information from the children or the budding adults, arouses more curiosity in them and they will at any cost, try to unravel the mystery and try to deduce from incomplete pieces of scattered information gathered from here and there. That too carries the risk of imparting wrong knowledge and even makes suspicious with equally disastrous results.

Therefore, one has to find a line between the two extremes. Experiments have shown that it is certainly possible to do so. The golden rule is –

- There should be no secret between the grown-ups and their juniors. There MUST be openness to an extent that the juniors do not perceive that anything is being hidden from them.
- Normally fantasies which are smaller or larger than the real life, should be avoided. However, if it becomes unavoidable, the fact of its being so should be clearly made known to the viewer.

We often talk of words being weapons and advise them to be used with care. We compare words with arrows and point out that just as an arrow leaves no mark on the bow, words are rarely remembered by the one who spoke them. Arrows or the words hurt the target. This universally accepted wisdom is often preached but rarely practised.

If we recognise the power of spoken words or warn everyone to be careful with them, what should be our attitude towards audio-visual media and specially its use in mass communication like the Doordarshan or the Video? If we call words, 'the weapons', we should consider television an atomic weapon. "Inflammable, not to be loosely shunted", it is inscribed on Petrol Wagons. Caution is necessary because Doordarshan has entered living rooms and bedrooms, has invaded school rooms and the rural homes and watching it has become almost addictive pastime for young children and the old alike.

TV is often condemned as an Idiot Box. But this is no Idiot Box. It is a double edged weapon. It can be the healing knife of a surgeon or a stabbing weapon of a killer. It can be a tool for building a vibrant nation or it can turn out to be destroyer of family ties and of relationships between the young and the old. It can become a reason for 'cultural degradation' or a catalyst for uniting the nation through bonds of understanding and appreciation amongst the people of various regions created by audio-visual communication. The important advantage of television is that anyone can watch and listen to television without any training. Doordarshan, today, gives unmediated access to information to anyone who has an access to the medium. Power of media and its manipulative nature or its inexhaustible appeal to children is so unique that some studies have indignantly labelled it as a 'third parent'. Formerly priests, teachers or gurus were regarded as a third parent' but in the Western world, TV seems to displace them as the most influencing factor in shaping the young lives. In fact today efficacy of conventional teaching itself is being questioned. A teacher is now really a facilitator, a person who puts things down and shows students how exciting and wonderful they are. Anyone who wants to learn will learn. Enforcement or compulsion won't work. TV thus, appears to be an insidious teacher.

When we are discussing effects of Television or Video programmes, we have to direct our attention to the interests and attitudes of the controllers of the medium. We need to pose a question "Who says what, how, to whom, with what effect and for what purpose?" Television, today, is a major factor in socialisation. Its controllers are exercising a particular social function. In this process, concepts like stimulating understanding, value-judgement and involvement of the programme developer have to be carefully understood. Effects, after all, can only be examined in relation to real intentions and these will often have to be as sharply distinguished from declared intentions as also from assumed and indifferent general actuality. When intentions get diffused and approach becomes officious wherein creative forces get neglected, procedures override objectives and speed of action gets arrested due to bureaucratic lethargy, the results are seen to be disastrous. In a country like India, where broadcasting has to remain a public service or a nationalised body with state ownership, making Doordarshan a dynamic resilient and innovative organisation becomes a Herculean task. When the Government strikes a bargain between public good and commercial interests of advertisers, it tends to lose on both the counts. One way or the other, Television objectives and management has been a matter of dispute, debate and dissatisfaction the world over. In West European countries like Germany, France, Italy etc., there has been direct state regulation of broadcasting since the beginning. Even in Britain, TV has been considered a 'public service' and 'public interest' has always been the theme. But it must be remembered that 'public interest' and 'state interest' are not always the same. Finally it should depend on a consensus version of 'public' or 'national interest', a consensus which is openly arrived at and made subject to regular open review rather than consensus that is assumed and then rigidly practised.

The Television in the United States which has predominance of commercial channels is often quoted as an example of free television. Federal control like F.C.C. was established only due to lack of technical standardisation and monitoring with the resultant chaotic situation. There is no state control on programming except for a broad ethical code. But do the U.S. TV broadcasts constitute 'Free Television'? Facts pointed out in many US studies reveal that independent TV is not all that free. Programme content that depends purely on commercial viability is always totally populist and in turn promotes cultural degradation. State ownership is merely replaced with far less desirable market-regulatory control by private ownership with no public responsibility. Even on Doordarshan, commercial compromises that it has to make while choosing vehicles like sponsored programmes, have given to us a mixed fare of occasional good programmes supported by some socially conscious sponsors and few mediocre ones, which in some ways, are socially harmful and show scant respect for viewer intelligence and social consequences.

Video proliferation is even more dreadful for the parents to worry about. Besides the fear of continuous exposure of adolescents to unreal and provocative life in movies, Indian and specially the uncensored western, the uncontrolled availability of 'blue' movies has made many of them quite nervous. Even 'free trade' city states like Hongkong or Singapore have strict control on blue video. We in India, however, are more tolerant of free expression but mostly by default. Like one liberated Indian said to me the other day, "we have 'digested' Kamasutra since centuries, what can the blue video do to us"?

What should, then, be our own approach to Video and Television? Is there a way by which these two uniquely powerful and intimately personal communication media, which have entered our homes, which have invaded our privacy, which have resultantly become a matter of concern to many of us, could be harnessed to achieve larger objectives such as social transformation? Television and Video have one unique characteristic in common. It is a remotely and repeatedly reproducible audio-visual medium which demands no skills from its viewers-listeners except an understanding of the spoken language. It gives information directly almost without any cerebral processing. To learn from written words not only demands knowledge of written script, but it also necessitates comprehension and cerebral coordination. Written words like Jet Aircraft or tornado or dinosaur have no relevance to any uninformed, but an audio-visual depicting any of these provides almost totally complete communication with any one who can see and speak the language. It is here that these media score over the written word. And it is this uniqueness that can make Doordarshan and video the most important tools for us to build a harmonious and progressive nation of well-informed people. SITE experiment conducted around Ahmedabad for use of Television via satellite for Information and Training has established two indisputable facts. Firstly our rural illiterate poor are not merely financially poor, they also are information poor and their economic position can vastly improve with their easy access to appropriate information. Secondly, it is known that these adult illiterates are intelligent and are receptive to acquiring information through TV. The experiment, in fact, proved that they are information hungry.

As we have seen so far history of broadcast and telecast programming and its effects on Western society has given us a number of pointers on what could be our own approach on programming. Unfortunately, besides the SITE and some valuable work in a couple of South American countries comparable research studies have not yet been undertaken, either in magnitude or in depth, in our own country or by other nations with large scale poverty, illiteracy and inadequate development. In our own country, for centuries, the communities have been propagating information and knowledge in 'Guru-Sishya Parampara' through formal and informal learning methods like apprenticeship or discourses by social and religious leaders. In the last couple of centuries, with the advent of print media, formal education through schools and colleges has offered a more organised educational pattern on a mass scale.

For the first time in India, we have a centralised access to a communication medium, that is, entering into the privacy of millions of Indian homes. The novelty, the glamour and the power of this media is such that even the literates are preferring it over the books, much to the dismay of intellectuals. The media is luring viewers and families who often escape or delay a meal just to watch an interesting programme. Growing number of children who have access to TV are preferring TV-watching to home-work adding to parental worries. Even the offices often wear a deserted look whenever TV is showing a cricket match. During the SITE experiment, one saw as many as 200 villagers flocking around and getting glued to a small TV screen, night after night. In private homes, TV has become almost an escapist media being used to avoid arguments within the family. Communication amongst family members is also eroding. Indians are already known to be passive by nature. Doordarshan is adding today to non-participatory passive viewing of discussions and debates on TV. Exciting sports are just being watched. In a sense the community is taking in whatever is being dished out, good or bad.

What could then be our strategy? Television and Videos have come to stay. Ingress of these technologies into our lives in future is a foregone conclusion. We do, however, have a choice to use this tremendous tool given to us by the Electronic technology for more imaginative applications. This tool can help us to attract our children into their class rooms. Glamour of television and appropriate use of audio-visual images can add colour in teaching and aid the teacher in innumerable ways. Certain subjects like History, Geography, Science and even Mathematics could be made far more effective through pictorial linkages to aid memorising and understanding. It is said that one picture tells more than a thousand words and one moving audio visual is several times more effective than a picture. Television and video will also add to quality and authenticity of information transfer and will become less dependent on the knowledge of the teacher. The role of the teacher, therefore, will become more important as a communicator or as a facilitator than as a subject expert helping to provide the essential element of interactivity which makes any education more effective. It must, however, be clearly understood that traditionally pre-university education. We have to merely think of our own school days and recount how many questions were posed by the students to our teachers, many of whom have generally terrorised us creating in our minds more fear than respect for them. In a country like India, to get large number of experienced teachers that we would need to tackle illiteracy even amongst the young children is very difficult. Once the need for the subject expertise is reduced by using video or TV as an aid, the availability of teachers would greatly improve the teaching skills of the teacher year after year. The strength of the media lies in its ability like never before to unravel the mystery of the universe to our young men and women and we must use this strength up to the hilt.

In the area of College and University education, television, video and computers offer exciting and unmatched facilities. These media will enable to take the country's best teachers to every university and every college. Concept like supplementary video faculty could even extend beyond the frontiers of the country. Large numbers of Indian experts working the world-over would be too keen and glad to share their knowledge with the student community in India through demonstration lectures. Training in professional subjects like Engineering, Architecture, Medicine and Surgery will be greatly improved through interactive audio visual training. Continuing education of professionals can now get into the privacy of their own homes and thereby provide the society with the state of the art services from these professionals who can update their knowledge by using the electronic media.

One of the greatest handicaps of our country today is adult illiteracy. 80% of Indian population does not possess functional literacy. Over 90% of the adult women lack information on almost every aspect of human development. Whatever these literally handicapped people have managed to learn, is through experience and observation. Many of the illiterates are intelligent and are as capable as literates. In fact, the handicap of their inability to read and write a language has given them a sharply tuned ability to learn through experience, probably better than the literates. These people need information and knowledge. The TV or Video media enables us to free the knowledge and information from the shackles of the written words and present it to them in their own mother tongue. Illiteracy today, specially in our villages, is a major

contributing factor to the exploitation of our illiterate countrymen by vested interests often backed by corrupt officials. Knowledge and information provided through video and television would improve and quality of life of these people and also simultaneously help them to an extent to fight the exploitation or at least understand that they are being exploited.

What television and video can do in rural India is to impart to the illiterate masses, information that will improve their understanding of the world around them; answer many a question that keep on haunting them, help them to appreciate the modern technology and its relevance to their lives as well as lives of their children. The women folk could understand facts of life that they should have learnt in school and therefore, it would be possible for a good communicator to share with a larger number of intelligent people. This would add great comfort to their lives and reduce tension in society. Young mothers would learn how to bring up their babies to be bright, healthy and well-developed young children while becoming aware of the importance of the family education and need to send their young ones to school. We can use video effectively by creating community video centres which could operate from a village school to provide to our streetwise but ill-informed and ill-trained artisans and tradesmen, occupational and vocational tips which will improve their skills, reduce their risks and occupational hazards and help them to add to their income through better efficiency and better knowledge of trade.

Finally, there remains a very major segment of education that has escaped attention of the educational bodies not only in our country but almost everywhere in the world. In our formal education, we impart knowledge on wide variety of subjects like Physics, Chemistry, Mathematics, Accountancy, History, Geography and Social Sciences. What we do not do is educating ourselves about life. Except for some rare, vague and broad nebulous guidelines, none of us is often taught how to live. We are not told the value of life nor what it means to be fully alive. We need to learn how the human spirit has the power to rise above all odds and how to derive courage in facing our own obstacles through this knowledge. I would like to quote from Leo Buscaglia's lovely book on "How to become a fully functioning person". I cannot find better words than give them to you as he wrote them.

"We have no idea of the wonders we can take from life or of responsibility we have, to give it something in return. We are born into this world, educated to adjust to it according to the dominant and accepted mores and then pretty much left to sink or swim." He further states, "there is no school for living and there is a dearth of teachers of life. If we look to formal education for answers we are most often giving knowledge without judgement and facts without meaning. If we expect answers from religion, we are often persuaded to make the leap into faith, for which many of us are sourly unprepared. When we are incapable and complying we are often made to feel incompetent and dependent. If we try to learn from life itself through experience, we find that often it seems full of unforeseen dirty tricks for which we are not ready and from which we seem to glean little. If we attempt to learn from examples, we find it too few models".

We must face the reality that if we wish to live fully and in harmony with life, we will have to be self-motivated. This will involve training. We really cannot teach or pose to teach. The best way to help anyone is to share with one what all of us know and leave the choice to that person. In a sense everyone of us has to be one's own mentor. Since all of us are different, there can be no one way. We are all unique and we need not try to become someone else. All such ideas can be shared using television and video. In life we all have to learn what is the role of death, the role of self-determination, purpose, connectivities and linkages, communication, doubts and uncertainty in life, spirituality, frustration and pain and, most important of all, intimacy and love. This entire gamut of education has long been missing from our lives. The present tension in our country, the present lack of motivation and rampant negative feeling are results of the continued neglect of sharing this vital knowledge within the community. We must realise that the human spirit, dedicated to life, beauty and good is not dead, even if we are told differently.

During my own lifetime I have seen many imaginative and impressive illiterates whose 'education' has taught me a lesson or two. I am, therefore, certain that years of formal schooling may make us informed people but it does not give us survival techniques, a sense of human dignity and worth, an appreciation of life, the ability to give and receive love, the knowledge of how to use our limited time wisely and determination to leave the world a better place of our having been in it. Such an education I believe can be passed on through television and video and could be shared by those who are enlightened.

Doordarshan programmes are bound to have far-reaching effects on our society – both the rural as well as the urban. It is not merely a question of fast changing social values or a generation gap which society has been facing decade after decade. Such changes, people accept in their stride. TV will bring far more profound changes. Some of these, which relate to invading the household and giving equal access to a child, an adolescent and an adult alike to every kind of programmes, are very basic, deep and technology

related. We cannot avoid them. But if the programming is structured bearing this deeply invasive nature of media in our mind, many ill-effects and undesirable influences could be avoided. There are many thoughtful and capable communicators in this country. We have exceptionally competent directors and performers who know the pulse of the community. We have authors who are masters of the written words and we have engineers and technicians who are second to none. We must harness all these talents and show the world how the Television or the Video could be used as an instrument of enriching life of the individuals as well as evolving a homogeneous and progressive society of knowledgeable people.

Chapter 3

ROLE OF THE GOVERNMENT

With changing technologies and a growing need for variety of electronic media services to meet our needs for formal and non-formal education, training and awareness building as well as for entertainment programmes with wider choice, broadcasting structuring multilingual programmes for disseminating developmental information, for aiding education and for entertainment and current affairs programmes with regional bias will also require some urgent changes in our Information and Broadcasting policies. These changes may have to be rather profound.

The principles underlying the Government's approach could be as follows :

- a. Broadcasting services must remain independent of the Government editorially, and to a great extent, as far as possible, in economic and regulatory terms. Government could remain the owner but must turn it over to professionals for management.
- b. Due to tremendous power of the Electronics media in influencing the society, both in broadcast and non-broadcast modes, there must be continuous provisions, through both legal and regulatory controls, to ensure imposition of programme standards, including the portrayal of violence and sex, racial jokes etc. and handling of politics, religion and matters of controversy. Special care on exposure of adult programmes to child audience is essential.
- c. Radio broadcasting and television telecasting have their own distinguishing features. The regulatory and promotional measures for these two media need to be different.
- d. While there is a need to create national standards in every aspect of video programme generation and delivery, Government has to ensure that such a need does not stop the country from exploiting new knowledge leading into offering new types of services.
- e. There should be selective thrust to use electronics media for formal and non-formal educative information dissemination and training. Such use of media must be given priority for resource allocation in planned sector. Both generation of such programmes and their distribution, in broadcast as well as non-broadcast modes, must enjoy tax concessions at least to the extent print media enjoys. For a predominantly illiterate nation, disseminating information through television and providing vocational and other forms of non-formal education must be given a very high priority.
- f. Resource for expansion of broadcast services for entertainment, current affairs, news, interviews, comments, discussions, etc. could preferably be raised from non-governmental sources. There will soon be a possibility to have direct payment television programme services through subscription, either on pay-per-channel or on even pay-per-programme basis. These services must also get covered by prescribed norms and standards.
- g. If or when the electronics media is privatised or made autonomous, there should be vigilance against monopolistic practices and market distortions. Partly for this reason and partly to put limiting barriers to the entry of private operators, there should be a greater separation between various functions which made up broadcasting. Thus programme production, channel packaging and sequencing and programme delivery through telecasting which are all today carried out by Doordarshan alone, could be separated while granting private licenses.
- h. All informative and educational software, where the information content is not protected under intellectual property rights or Copyright act, must be considered as Public domain software and all such programmes should be eligible for tax and duty concessions. It should also be free from copy-right restrictions available for free usage or duplication.
- i. In the absence of any easily imposable rules and bearing in mind the fact that such restrictions have not been found feasible for the Radio and the print media, direct reception of satellite programmes from non-Indian sources may be allowed for restricted reception. It must be also kept in view that most of the high quality services are by subscription and need descrambles to receive them. Thus external programmes may not pose any serious threat. In case of subscribed programme services, selective licensing should be granted to support tourism, needs of visiting foreigners continued education, needs of professionals etc. Subscription to such programmes could also be allowed to private citizens, so long as the Foreign exchange for subscription are sent by NRI relatives etc.

- j. All video programmes, irrespective of whether they are for broadcast or otherwise, must be permitted for distribution only if they meet prescribed guidelines on norms and ethics for programming as well as advertising.
- k. Government has to ensure that various organisations, private or publicly owned, must run efficiently, giving good value for money to the viewers and listeners and must work under broad social objectives and awareness necessary for anyone keeping in view cultural minority, religious freedom, economic backwardness, literacy status and pace of economic development of the country.

Level of Doordarshan's Advertising revenues-and the fact that people today rent recorded video cassettes from video libraries, offers us enough evidence to establish that investment in Entertainment telecasting can be met from private resources. Both the programme content as well as advertising messages could still be controlled through appropriately enacted codes and ethical standards to ensure that social and personal development of children, women and weaker sections of the society are not harmed in any way. This will enable the Government to direct the public funds for educational telecasts.

Chapter 4

TECHNICAL OPTIONS

There have been continuous Technical Developments in audio and video signal processing, its storage, reproduction and advances in telecommunications in relation to broadcast media including VHF and UHF telecasting, direct satellite reception in S, C, and Ku band, fibre optic and co-axial cables for multichannel programme distribution and finally interactive, bidirectional, composite analog and digital communication etc. These developments have made it necessary for us to chart out country's future plans in broadcasting consistent with the technological potential in addition to social, political and fiscal considerations. The available technologies offer us prospect to introduce wider choice of programmes for the viewer, specially in formal and non-formal education and also wholesome entertainment in languages of the region. Television advertising and possibility of subscribed programme delivery via Satellite and Cable offer business opportunities, without causing strain on public money. At the present moment, the Government has very admirably utilised satellite technology to nationally distribute television programmes reaching the remotest part of the country. Concept of using a mixed approach of using satellite to feed local VHF/UHF Broadcast transmitters for programme distribution via low cost normal TV sets instead of expensive Direct Satellite Reception sets has worked admirably efficiently. Doordarshan's success is now well-known. In the meantime, however, technological developments in the world and lowering of costs shall enable the country to think of other alternatives for expansion of services.

DIRECT BROADCASTING BY SATELLITE (DBS)

The latest development of satellite technology has opened up new ways of delivering television and radio services to private homes. Lower cost of direct reception, today, made possible due to small dish antenna sizes and mass produced down-converter costs using higher frequency band, shall enable the country to use a single frequency via satellite to deliver directly a TV programme without incurring extra cost of redistribution via VHF/UHF transmitters. This will enable us to get over the problems of spectral scarcity.

SATELLITE TELEVISION-NON TECHNICAL BRIEF

Satellites used for television are really speaking Television Transmitters in space. Because it is easy in any location to point a receiving dish antenna directly at a satellite without anything being in the way, these satellites can use transmitting frequencies which are of little use from land based transmitters, because these signals travel only in straight lines and depend on line of sight between transmitter and receiver. Thus a single frequency could be used to feed Televisions spread over a large country like India. (The land area over which these signals could be received well is called 'Foot print' of the Satellite).

To keep these satellites in the same spot in the sky so that a fixed dish can stay aligned and tuned to them, these are all placed in orbit above the Equator at a height where they will travel at exactly the same speed as the rotation of earth. Such an orbit is called Geostationary Orbit.

Satellite TV is not new to India. India launched its own Geostationary multi tasking satellites, Insat series, which carry TV transmitters. Because of the fact that the receivers needed for direct reception of Satellite frequencies are expensive and because these have been low power satellites, India has set up hundreds of medium and low power transmitters in VHF and UHF band in almost every town to relay and transmit these Satellite delivered national programmes, so that they could be received by standard VHF/UHF TV receivers. Each satellite can carry several programmes provided that they are so designed.

Till 1989, almost all Television transmitters on Satellite in the world were low power and at lower microwave band of frequencies. They require large dish antennas of at least 16 ft. in diameter and are thus expensive. Larger dish size also provides high quality TV signal.

Now the new technologies permit use of higher power and higher frequency, meaning that satellite television will be easier to receive on small dishes costing very much lesser, bringing Direct Broadcast Satellite (DBS) reception within affordable costs.

SATELLITE TELEVISION – TECHNOLOGY SCOPE

Television services in Europe and the U.S. have been earlier based on terrestrial transmission of TV signals in VHF and UHF band. Limited range coverage of terrestrial TV transmission demands large and expensive TV transmitter network to cover a large country. But to keep the quality of TV reception above a

minimum standard, service area of each transmitter is very limited. This needs very large number of TV transmitters to cover a vast country like India. For this, the frequency spectrum in VHF and UHF bands would therefore pose problems in India both technically and financially.

India, however, has been producing its own Low cost TV transmitters in VHF and UHF bands and this TV transmission of localised interest could still be done through terrestrial transmission in VHF/UHF band.

Development of Satellite technology has opened up new ways of delivering TV and radio services to the home. For a large country like India, Satellite enables to use a single frequency to deliver national programmes to the entire country. Thus satellite technology can offer its own distinctive and attractive way to get around the spectrum scarcity by enabling the spectrum to be used efficiently and economically.

In 1977, the World Administrative Radio Conference had allocated frequencies for Direct Broadcasting by Satellite (DBS). India, along with various other countries, was allocated orbital positions for its own satellites.

It is possible to offer via DBS, programmes to be telecast to select customers who subscribe for such programmes. In such cases programmes are suitably encrypted so that one those who have subscribed to such services could receive them by using special de-encryption units or decoders supplied to them by the service provider. With higher power Satellites and by the use of higher frequency band it is possible to create such subscribed - TV channel which is self financing and where the Direct reception down converters and associated small dishes could be produced at affordable prices (less than Rs. 6,000/-).

Unlike our approach to delivery National telecasts by using terrestrial VHF and UHF TV transmitters, elsewhere in the world it is the cable services which redistribute such programmes to individual subscribers. This approach proves to be better and economical when several channels are to be offered. Cable service can carry a large number of channels, programmes for which are delivered to them via satellites on a single cable. The multichannel TV sets could receive several channels via a single cable. Cable distribution is becoming growingly popular in every part of the world.

Terrestrial distribution of many channels will make it necessary to use one Terrestrial TV transmitter for each channel which will not be possible due to limited Frequency Spectrum available in TV broadcast bands. Cable penetration in Canada is 57% followed by Scandinavian countries, where it is 38% and in USA it is 24%. The percentage relates to total TV households in respective countries.

In the U.S., cable services are available in limited regions and the percentage of TV households who subscribe for cable is over 60% where ever cable services are existing.

Universally however, it is the Satellites which are used as means of distributing a large choice of programmes to cable operators.

There are two kinds of Satellites. Those already in use in India are low powered satellites designed primarily for telecommunications use. Insat 1B and 1C as well as Intelsat and Arabsat in our region are satellites of this kind. We use Insat today to transmit our single National Channel to hundreds of medium and low power VHF and UHF terrestrial TV transmitters via TVRO dishes. These transmitters feed individual home TVs through roof-top antennas.

The second kind of satellites, designed specifically for direct broadcasting to the public who could receive them with a small dish and low cost converter are not yet widely available. Such high powered broadcasting satellites will enable high quality direct reception with a small 1-foot diameter dish. But here again only a single channel could be received by each TV owner.

CABLE TV-NON TECHNICAL BRIEF

What is Cable TV and what can it do?

A modern Cable system is a broadband Communication network. This means that it is capable of carrying a large number of television channels, two way traffic including both video and voice (telephone) and high speed data (computerised data) transmission as well. The first important aspect of cable service is that it integrates a range of services otherwise available only separately. (as it is today in India).

So far as Television is concerned, cable can provide the following :

1. Carry almost unlimited number of programme channels.
2. Provide very high quality of programme reception compared to what individual roof top aerials or even Video tapes could give.
3. It will have capability to deliver High Definition TV whenever it becomes available.
4. It can feed local (even small town) TV channel to the entire locality without TV transmitters.
5. It provides a reliable, very economical and straight forward service with no hassles to the viewers.
6. It will keep cleaner surroundings without ugly roof-top aerials or unwieldy satellite dishes.
7. It can provide interactive Television enabling the viewer to participate in programmes by recording his vote on issues or participate in competitions or home instructional or educational TV.
8. It can deliver selectively, programs to certain group of people such as special informative programmes for continued education etc. of Medical doctors, architects, computer programmers etc.

In principle, cable can also make possible transactional services which are far superior to telephone or other interactive bi-directional services due to the fact that it can carry high quality pictures in addition to voice. In practice, it would mean :

- a. Home shopping from a Video catalogue.
- b. Holiday Booking after visually experiencing what is being offered.
- c. Information in Video form could be reached remotely from a video encyclopedia or remote controlled video library.

Key point, however, is that Cable is a medium that can be cost effective even if fraction of the services it is capable of offering, is made possible.

Does Satellite Television Supersede Cable?

On the contrary, Satellites serve as an efficient nationwide TV programme bulk distributor to various cable networks. Cable network in turn can carry, amongst other things, programmes from several satellites together into private home TV sets without deteriorating the quality of programmes. Thus their respective roles are mutually complementary, not contradictory.

Cables are efficient conduits to deliver into private homes, wide variety of services described above.

CABLE TV – TECHNICAL BACKGROUND

There are two types of cables available today. One is a high bandwidth co-axial cable and other, a fibre optic cable with even wider bandwidth & higher transmission quality. The latter is however today much more expensive than the former.

The key to the performance of Cable TV lies in the concept of 'bandwidth'. Greater the bandwidth, more the information it can transmit at a given moment. Bandwidth is the measure both of the frequency range over which the system can operate and of its information carrying capacity. TV picture contains a lot of information and in India it is effectively renewed 25 times each second and each 625 line TV channel requires about 8 MHz of bandwidth. By contrast voice communication of telephone quality needs only 4KHz of bandwidth.

Cable bandwidth is about 350MHz, this permits realistically about 15 to 25 TV channels including associated sound transmission. Teletext channel which carries steady visual needs much lower bandwidth. So, in addition to TV channels, cable can carry several other services.

Indian population today receives indifferent quality of programme reception. Besides this, single channel offered today is totally inadequate if we wish to exploit this communication media and extend it to local language entertainment and formal and non-formal education. Programmes providing city level

information are also vital to handle local community issues and add to local administrative and societal efficiency and convenience.

Experience the world over, wherever the organised cable services are available, is that the VCR owners soon become cable subscribers. In fact one organised study undertaken in November '86 in U.K. showed that VCR owners were the first to subscribe to cable network whenever it became available and that over 50% of TV households who subscribed to cable had VCRs considerably more than the U.K. national average.

Wide choice offered by cable, coupled with Limited life and extra care that VCR needs as well as non-availability of high quality cassettes in libraries encourages the VCR owners and others to subscribe to cable.

It is also found that people belonging to lower socio-economic groups in a society tend to subscribe to cable as it is efficient, of high quality and economical.

Informal study of cable users in Indian cities and industrial colonies indicates that these people welcome cable as it offers increased choice. They utilise and appreciate it wholeheartedly.

Cable is an ideal medium to disburse non-entertainment services-like continued education or primary and secondary school tuitions or tele-courses offered by open universities etc. Further, cable can offer interactive services including security and alarm services etc.

List of services potentially available via Cable System :

- a. Doordarshan's National and regional channels.
- b. Several All India Radio programmes.
- c. Any other satellite broadcast TV channels of Indian or Foreign origin.
- d. Subscribed (Encrypted) TV channels carrying films, sports or arts.
- e. Special subject TV/Radio channels – for News, religion health.
- f. Specialised audience channels – e.g. women, children elderly deaf etc.
- g. Local Channel - Municipal and Police Information, Consumer guidance, social engagements and entertainment guide, programmes By local budding artists, local festival Reports etc.
- h. Other services - Fire and Burglar alarms, remote meter reading, banking from home, travel services like reservation from home, opinion polling electronic mail, messaging Interactive learning Business communication.

SCOPE FOR VCR/VCP

Video Cassette Recorders (VCRs) and Video Cassette Players (VCPs) have an important role to play in communication and in education. Both the products are now common place in Indian with over 2.5 million VCRs in private homes and video parlours entertaining people with legal and pirated films available from over 80,000 video libraries. People rent the cassettes for as little as Rs. 5/- per day. One often hears complaints about this and the first thing that comes to mind is to control it as an undesirable menace. If people today sees movies, it is because very little educational and informative material is available on video and even fewer educational programmes are produced on video to give to the people what they would want. This point is proven well by the fact that high quality informative cassettes available as pirated copy of those produced by National Geographic Magazine or the BBC are in high demand.

Electronic Trade and Technology Development Corporation Limited, a Government of India undertaking is offering 'Margadarshan' video cassettes for education, information and training. Over 1500 titles are made available each at the price of Rs. 75/- for 17-75 minutes programme. Compare this price with prices of educational cassettes in UK and USA where typical cassette costs from Rs. 400/- to Rs. 500/- per copy.

Broadcast Television and Video have certain distinctive features unique to themselves. For instance, one would need an expensive VCR or a VCP to see a video cassette and for using a Television, one needs to be within the service area of a TV transmitter. What matters in education more than other areas, is that a Video programme can be seen at one's will. Teacher can start it and stop it as desired to interject and make a comment and he could conduct his class to suit his time. Any institute could create video library, in the same way as a book library and allow teachers and students to draw on these resources for self-learning or group-learning.

With facilities like convenience of viewing time, user-ability to start, stop or skip a portion of it or review it makes Video a better technological tool for teaching than use of Television in educational broadcast mode.

MULTICHANNEL MICROWAVE DISTRIBUTION SYSTEM (MMDS)

The latest alternative to programme distribution over a defined area as is possible with cable is Microwave Multichannel Television Broadcasting. Started in USA a few years back to distribute a single movie channel in uncabled area, it was called MDS-Multipoint Distribution Service. Later technological development allowed Multichannel Programme dispersal on Microwave. This service is now known as MMDS. This is, in a sense, a 'wireless cable' system.

As MMDS uses Microwave, it can only provide line of sight service. Even the trees can block the service. Range is limited to about 30 Km. They operate from 2GHz to 30GHz (Giga Hertz) band. The practical system uses curved mesh dishes of about 500 mm dia. Costs and technology will put this option beyond Indian resources for sometime to come.

DISTRIBUTION OF EDUCATION AND OTHER PROGRAMMES TO SPECIFIC INTEREST GROUPS VIA SATELLITE TRANSPONDERS DURING IDLE HOURS.

This is a low cost solution to the creation of a separate National Channel for Education. It will help to avoid expensive network of second channel TV relay transmitters to fulfill educational needs. The Information and Broadcasting Ministry has estimated that the total outlay for a separate education channel will cost over Rs.2000/- crore just for Information and Broadcasting's investment. The proposed scheme will achieve same result with negligible investment in I & B infrastructure. It can serve 300,000 schools, colleges, community centers and other institutions with 15 hours of educational programmes on a daily basis. The cost for all institutions put together will be no more than Rs.200 crore, almost 50% of which will be coming from the community. Investment per school or per installation is just Rs.6,000/-.

In addition to full exploitation of the Doordarshan infrastructure and very low cost method of operating Educational TV, it will also provide convenience to the users to watch the programme at different times and offer repeated viewing facility not available in the present form of Transmitted ETV.

Techno-economics

- a. Today's technology, already being used in Europe, enables digitally encoded signals transmitted as a part of the telecast TV signal at the beginning of each programme to automatically start unmanned VCR and transfer the telecast programme on to a video cassette. A similar signal at the end of the programme automatically turns the VCR off. Thus it is possible to automatically transfer TV programmes into a VCR which is operated remotely by the Coded Digital Signal forming part of telecast-material.
- b. This extra facility on a VCR costs not more than Rs.300/- per VCR. It is possible that the owner of the VCR could select in advance any 5 or more of ninety nine different varieties of programmes by a simple procedure so that his VCR will record only those programmes which he has selected and he can then watch them whenever it is convenient to him. Activation and deactivation of VCR recording is automatic without human intervention.
- c. Future INSAT Satellite could be provided with extra power to enable use of TV transponders during nights also. This will need only slightly extra investment but it will fulfill, to a very large extent the need of Educational TV telecasting which gives best of both the technologies-satellite TV and Video.
- d. The option is to telecast during idle period throughout the day and night, educational programmes which precede and end with predetermined digital codes.
- e. 300,000 schools, colleges, community centers etc. could acquire such VCRs at about Rs.6,000/- or so if they are given excise concession. The telecast programmes will be automatically off-loaded into blank Video Cassettes left inside the VCR which will automatically turn on and record the programme at any time of the day or night, if preselected by the institution.
- f. This will need totally about Rs.180 crore for 300,000 institutions. This investment can come from several sources including central and state Govts. private institutions, industries and public and private trusts.

Students and other interested groups could be shown these programmes whenever it is convenient. There is at present a shared transponder on INSAT that relays regional language programmes in Maharashtra and Andhra Pradesh. Other regional language programmes are also being similarly facilitated on the new Satellites. Thus various educational programmes in regional languages could also be similarly distributed state-wide through a similar technique.

In certain cases, this facility will earn good revenue. For example, to provide continued educational support to professionals like medical doctors, lawyers etc. encrypted programmes offered by experts could be telecast which could be received only by those who rent decoding interface. For example, medical

practitioner can pay Rs.200/- P.M. and get four demonstration lectures by eminent experts which he can then see at any convenient time and in privacy without exposing his ignorance as in the case of a group training workshop. If 10,000 doctors subscribe, there will be a revenue of Rs.2 million which is more than adequate to provide four 1st class programmes a month. Doordarshan can charge Rs.200,000 per hour for such telecasting service.

MULTIUSER TERRESTRIAL COMMUNICATION GRID (TERRAGRID)

Creating exclusive and non-sharing communication network by various Government agencies has been causing a lot of concern to us because this network multiplicity is resulting in wasteful expenditure, under-utilisation facilities and poor return on investments.

If the Satellite Communication links can be shared by governmental agencies & ministries without any administrative or technical problems, it should be equally possible to adopt a similar approach to share the terrestrial communication facilities. Such a shared facility, both in case of wired as well as wireless ground communication links would offer overwhelming advantages.

The multi-user, multi-tasking approach under the 'Terragrid' has immense developmental potentialities which will continuously growing as we keep gaining confidence and experience. To begin with, however, we could concentrate in 2 areas which are not only capital intensive but also are presently causing inordinate delays in establishing communication links by any agency :

- a) Multi-user 'Radio Tower' in each town to mount Aerials and Microwave dishes to broadcast TV, Radio, Voice and Data Communication links, etc. and
- b) National Cable grid for fibre optic and co-axial cables.

STRUCTURAL TOWER - HIGH PLATFORMS - FOR COMMUNICATION BROADCASTING SERVICES AERIALS

Communication and broadcasting services in VHS/UHF/Microwave require a high platform for locating the aerials so as to obtain good service areas. It is especially true in major cities where high rise buildings do form shadow areas. The aerial platforms are required on high tower, height of which can vary between 100 to 300 metres, depending on the city's topography and area coverage requirements.

A number of diverse services require such a high platform for locating the aerials. The services which require these facilities are :

- a) T.V. Transmitting aerials for different channels;
- b) F.M. broadcasting aerials for difference channels;
- c) Department of Telecommunication, Microwave communication dishes;
- d) Railways microwave communication dishes;
- e) Police and Security Departments VHF/UHF system;
- f) Common users services such as radio paging, mobile radio;
- g) Specialised users of VHF/UHF frequencies, such as, firebrigade, electricity supply undertakings, public transport services, taxis, ambulance services, gas distributors etc.
- h) Pollution monitoring and sampling instrumentation.

A high tower is a costly proposition. Individual users erect their own towers within their financial limits. It severely restricts making available to them an aerial which can cover the required services areas. To give an example, during ASIAD, the organisers had to locate the VHF aerials on top of DDA building, Indraprastha, which was the tallest building (height 250 ft.). The installations were most unsatisfactory as there was no adequate supporting structure on the terrace for aerials, and inadequate accommodation availability to locate the required equipment. This was because the building was never meant for such an application.

The solution to this is to have a common radio tower, as is the practice in almost all advanced countries. Depending on the topography and availability of funds, there can be one or two such towers covering a major city. The towers would be of a required height. With proper planning and space, structure facilities could be provided for different aerials for services mentioned above so as to cause minimum mutual interference. Just below or near the space for aerials, adequate accommodation is provided to house the transmitting/receiving equipment and associated equipment. All the users can be fed from a common stand-by/UPS power supply system. From such a central location hardened cable, (microwave), multi-pair cable or glass fibre can be provided to different users to meet their baseband transmission

requirements. In certain cases provision could be made to link the radio tower to the Headquarters of the services through a high UHF or high microwave (10 to 40 GHz links).

So far, we have failed to build such towers in any city because of lack of co-ordination between the various user agencies. No single Department can afford to build such a tower which can house several aerials alongwith required infrastructure. There has been no co-ordination between the various departments to come together and build such a tower. It may be possible to compel either one of the major users like Doordarshan or Department of Telecommunications to build such a tower and rent out to or share the accommodation with other users. They may be given financial assistance directly by the concerned likely user or through a central grant. Another way could be to set up a separate organisation like 'Terragrid' to undertake such task.

Considering the money each user is spending on different small towers, building a major high tower will prove very economical by pooling of users. Besides, improvement in coverage and services would be very considerable.

There is no point in tying up such a venture with small commercial proposition like having a restaurant nearer to the top. They may not earn adequate revenue and could also form a security risk to the important services located on the tower. At best, a viewing gallery may be provided.

There could be an argument that it will not be wise to concentrate all vital aerial systems in one structure, damage to which can paralyse a number of services in that city. Such towers are usually massive structures and damaging them is not easy. Because of the nature of the structure, providing physical security is not very difficult. Some vital services like Railways or P&T could have a very small alternative stand-by arrangement, in case of the failure of tower services.

NATIONAL GRID FOR FIBRE OPTIC AND CO-AXIAL CABLES

Fibre optic communication is superior terrestrial communication alternative to satellites. It scores over the latter for voice and data communication due to shorter propagation delay and systematic reliability.

Traffic density and speed for fibre optic cables is also comparable to what satellites can offer in addition to features like longer life and ease of maintenance and repairs.

More important of all, however, is that Fibre Optic communication offers strategic 'terra firma' alternative to vulnerable space satellites. Today, we depend on satellites to an extent that the country can become communication blind overnight, if for any reason the satellite is dislocated.

Today, several user ministries are in various stages of planned induction of fibre optic alternative.

Highest cost in creating fibre-optic cable network is the cost of laying of underground conduits or protective pipes.

Multi-user conduits with built-in fibre-optic cables should achieve cost and time savings for every user agency. Station to station multi-user fibre-optic communication grid needs, therefore, to be planned.

Fibre optic cables, and also co-axial cable, could be laid along the Railways line grid throughout the country without having the problems of land acquisition etc. involving associated litigations and delays. Repeaters and such other intermediate gear can also be located on the Railway property as is found necessary.

In many other countries today, as fibre-optic cables are cored into the ground conductor which is always provided with the overhead high tension lines. We have extensive HT overhead transmission network created for nation-wide electrification and this option also could be considered as the costs could be given lower as no underground work is involved.

Chapter 5

MEDIA CHOICES AND THEIR RELATIVE IMPORTANCE

Potentially, there are two broad forms of communication media available : non-interactive or interactive.

A. NON-INTERACTIVE

(No dialogue, just simplex transfer)

<i>Media</i>	<i>Salient Features</i>
Broadcast Radio	Multiple usage-entertainment.
Broadcast Television	Cheaper-lowers cost per viewer.
Recorded Audio	Already existing.
Recorded Audio Visual (VCR & TV)	Completely suitable for illiterates Wider community usage per system.

B. INTERACTIVE

(Simulated duplex or through data-base query)

<i>Media</i>	<i>Salient Features</i>
Personal Computers and 'Work Stations'	Ideal for self-learning or tutorless education.
Computer controlled Video discs, (CDROM)	Generally suitable for continued education. of professionals.
High investment cost limits its utility to essential area.	
Generally can cater to one user at a time.	

Non-Interactive :

a) Broadcast Radio	1. The lower cost per listener 2. The widest coverage of the country	Audio only-communicating limitation. Limited by language knowledge. Unsuitable for vocational training. Lack of user's control like repeat facility.
b) Broadcast Television	1. Lower cost per viewer 2. Uniformity of information dissemination 3. Most powerful audio-visual media	Generally unsuitable for vocational training due to : i) Viewing time. ii) Lack of repeat facility. iii) Subjects have limited interested audience. Available time is limited and thus can cater to broad interest areas only. Doesn't cover the entire country as yet. Because of being Controlled by relatively small number institutions and disseminating to large masses of people lend ing itself to creation of uniformity of thought and belief.
c) Recorded Audio	1. Listening convenience 2. Listening possibility	Audio only. Communicative limitation. Limited by language knowledge. Unsuitable for vocational training. Lack of user's control like repeat facility.

c) Recorded Audio Visual (VCR+TV)	<ol style="list-style-type: none"> 1. His characteristics of Broadcast TV 2. Viewing convenience. 3. 'Repeat' facility for enhanced learning. 4. Suitable for vocational & curricular training. 5. Erasibility and re-recording of software lending itself to low cost of revised editions. 6. Possibility of multiple Usage of hardware system. 	Need for special equipment – VCR/VCP.
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Interactive :

a) Personal Computers (Computer Aided Learning)	<ol style="list-style-type: none"> 1. Tutorless learning in privacy makes it an ideal choice for continued education of professionals, notably medical doctors and modern technologists. 2. Multiple use of hardware For education as well as For business management and data logging. 	<ol style="list-style-type: none"> 1. Open to literates only. 2. Spl. training 3. Extra investment in equipment.
b) Computer linked Video (CDROM)	<ol style="list-style-type: none"> 1. More attractive than mere Computer-Aided-Learning (CAL). 2. Non-erasable and rugged and longlife software storage 	<p>Captive and expensive technology.</p> <p>Very long time for video software developmental due to inter-active nature.</p>

Non-erasable storage leads to higher cost and investment.

Chapter 6

ELECTRONICS MEDIA FOR EDUCATION, INFORMATION AND TRAINING

FORMAL EDUCATION

Pluto, in his 'Republic', has emphatically underscored the concept of Education being considered as a process of "inserting into the mind, knowledge that was not there before-as if putting sight into blindman's eyes". He preferred to define it as the process of "helping each citizen to develop innate powers of vision by turning in right direction towards the light". Even after several centuries since Pluto, and inspite of similar views expressed by eminent thinkers, philosophers and sages, our primary education has remained regimental. We still keep talking of education to be concerned with exploration, understanding and delight but, in the meantime, quality of education progressively deteriorates because of unmanageable and growing demand for education, lack of good teachers and lack of facilities.

It is here that Electronics Media offers to a country like India, a unique cost-effective solution. Both Video and TV could be outstanding instruments to train and assist teachers enabling them to take to students. What a good teacher would always desire is an ability to bring the world into his classroom giving his students direct audio-visual exposure to what he wants them to learn. Teacher and his human interface shall always remain an essential content of education and of learning. Written word is formal and needs one to learn the meaning of symbols that constitutes written text. The spoken word and the expression, passion and conviction of a good teacher who delivers it, packs more learning into the words that is ever possible with a mere written sentence. Written text is convenient in terms of storing and transport of information but it is essentially an inferior form of communication. Lecturing will thus always remain a chosen method of education in schools, colleges and universities. What Electronics Media does is to strengthen the hands of the teachers. It enriches them with extraordinary means and aids to communicate effectively and quickly and relieve them from the agony of searching for illusive words by enabling them to use moving pictures on TV screen from selectively stored sights and sounds and to embellish their lecture, making it absorbing, engaging and satisfying. Electronics Media has, therefore, become the most essential component of Education technology. Luckily for us Electronics and Communications technologies have brought electronics gadgets like video and TV within affordable price limit made them sufficiently reliable, rugged and simple to use in a classroom.

NON-FORMAL EDUCATION

Electronics Media like TV has now entered several million homes in India. Entertainment, news and views have attracted millions to invest in a TV. Because TV and video prices in India have a large tax and duty content, it is possible for the Government to make them considerably cheaper so that they become easily affordable to communities and even for homes of poorer sections of the society. But inspite of high price, it is estimated that there are 35 million TV and 2.5 million VCR owners in the country, with a prime-time viewership over 200 million. These figures are ever increasing. There are almost 150,000 community TV sets with a prime-time audience of hundreds of people glued to pictures on a 20" screen. A Sitarist, the other day, was explaining, in a very engaging fashion, the history of sitar and elementary insight into its musical range. Over 100 million Indians learnt first hand, from an eminent teacher and exponent, about Sitar. Which other communication media and at what cost could achieve this miracle in informal education of delivering such information into private homes in which everyone from 85 years old great grandfather, 60 years old retired grandfather, 35 years old father, their wives and young children from the age of 4 were able to learn? That is what TV and video can do to a Society – i.e. deliver simultaneously and efficiently essential information into every private home.

Informal education ranges from learning about behaviour, managing personal and societal relationships in everyday life, about management of accidents and disasters, about nursing, medicare, hygiene, about managing chronic diseases like diabetes, arthritis and other disabilities, about handicrafts, learning arts and crafts, about appreciation of culture etc. The limit on how much and in what ways a matured society could use the TV set, is our imagination and creative ability. What should be dramatised or not will be an important but a secondary question. But use of Electronics Media in imparting non-formal education could be unmatched. Government can use it to take authentic information to people on its policies adopted for the benefit of the people and explain to them how to get that benefit, what are their rights and responsibilities. Industry can educate them on correct usage of their products for correct, efficient and safe utilisation by the users. Consumers could be protected through consumer education.

LITERACY SKILLS TO ADULTS

The problem of illiteracy amongst Adults and its continued spread, as uneducated children turn into young adults, is mind boggling. So-called Literacy Mission has fallen short of the expectations rather severely. Functional literacy has remained a dream. Adults refuse to come to literacy classes. Efforts to educate people through unmotivated and unexciting Government paid teachers have generally added to the failure of the programme. The way literates behave and manage their own lives also does not enthrall the street-smart and otherwise matured adult to respect literacy as a tool for self-development. His ignorance of written words does not allow him to understand the value of the reservoir of information stored in print. There are over 300 million functionally illiterate adults in our country, most of them in rural India, spread out in 700,000 villages. Even if we target to teach 10% of them and if we plan to have one teacher for 30 adults, we need one million teachers. These teachers must be trained to teach adults, which also demands different skills than teaching young children to read and write. More importantly these teachers need to be motivators and therefore expert communicators. The illiterate adult will need 600 hours of training to provide him functional literacy to read without help a public notice or to enter information into a form. This task can never be performed without the help of Electronics Media, and that too video media, for the teachers. Anything else is waste of money which could be better utilised by transferring these funds to child education and on not creating new edifices and add to the tribes of illiterate adults.

A detailed analysis of the issues involved and the role that Electronics Media could play in tackling some of the major ones is discussed separately elsewhere in this book.

VOCATIONAL EDUCATION AND SKILLS TRAINING

Adult illiterates predominate amongst artisans, tradesmen, farmers and housewives and those involved in basic blue collared services and jobs. They have no formal training in their vocations and they learn through apprenticeship with other uneducated but experienced street-smart gurus and later by trial and error. All these are at the cost of the society which he serves through his services. End-result is his inability to deliver quality work, to adopt correctly to new technological advances, to work safely and work-aids to gain confidence and improve his earnings.

We find that in spite of recognised inadequacies in the quality and range of services available to the community and in spite of a broad awareness about the need for training, no organised plans have been implemented in any recognisable scale either by the Government or by the industry to remove such shortcomings. For instance, most of the artisans and tradesmen lack information and training in utilising industrial products which they are expected to install, operate or maintain as a part of their work. Hence it is the industry that should get involved in such training of illiterate or semiliterate artisans and service personnel. Paint companies must assume responsibility to educate painters audio-visually or construction companies and producers of construction material should tell about how and why of brick laying, tile fixing, wall plastering, installation of shuttering and pouring of concrete slabs. It is the producers of electrical wires and switches and appliances etc. who should teach through video, the do's and don'ts about work practice consistent with shock and fire safety. But protected industry operating in seller's market does not seem to find it necessary.

In all such areas, when one has to share information and knowledge with experienced but uninformed workmen who cannot learn through written text, the golden opportunity offered by Electronics Media to perform this function, even more effectively through Audio-visual means has to be fully exploited. Since last three years, ET&T, a public sector undertaking under the Department of Electronics has set up 'Margadarshan' programme to make available Video software for such training. In spite of not having concessions, ET&T offers 40 minutes training cassette just at Rs. 75/-. Further to enable poorer communities to see these tapes, a Community Video System called 'Sanghamitra' was launched which consists of 20 inch Colour TV set and a Video Cassette Player, together at Rs. 16,000/-. Here again Government has given no tax concessions and yet it was possible to offer affordable price for a functionally sound and reliable Community Video to the People of India. Such projects are viable and socio-economically vital. May be Government would take suitable steps to supplement and augment such projects.

DISTANCE LEARNING

Government has created Open Universities as institutions for distant or open learning in few locations throughout the country. The most prominent amongst them being Indira Gandhi National Open University – IGNOU in Delhi. Broadly, they offer courses for private learning or for continued education leading to graduation or a diploma. Vehicle for their programmes is Doordarshan and also the video cassettes. Similarly Government has created through the National Council for Education Research and Training – NCERT,

Central Institute of Educational Technology – CIET to support school level education. They also created on similar lines, several State Institutes for Educational Technology – SIETs.

In addition to IGNOU, Government also has funded University Grants Commission (UGC) to establish several production centres for Video programmes to support University level education and training. Five IITs and TTTIs are also involved in video production.

Some of these institutions are well equipped, in fact better equipped than some production units of Doordarshan, but have not been able to attract, capable programme producers in adequate numbers. The study shows that these institutions are generally bureaucratized, inefficient and ineffective. Creative people working in these institutions have little support. It is clearly seen that malaise in these projects lies in fragmentation and duplication and thereby making it ineffective in its impact on any scale. In spite of many of these institutions being under the same Ministry, there is no strength-sharing, either in software generation or in production facilities. All important inter-personal channels are either unavailable for face to face contact or made ineffective due to procedural wrangles.

Another major lacuna is the delivery system for the programmes generated by them. Doordarshan offers a few hours of telecast time but it is done with a certain apathy and neglect. Education lacks glamour of prime-time entertainment and money involved is relatively unattractive. Programme production comes from predominantly Government institutions which are known to be giving step-motherly treatment to educational programmes.

Really speaking, fixed time telecast of educational programmes is not the best way of their delivery. The teacher must have option to use these programmes to suit his time table and he must be able to start and stop the information delivery to intersperse supportive guidance and to ensure understanding. Video cassettes provide a better delivery system. May be one could use the telecast to enable schools and colleges to create library of such programmes in video cassettes by off-telecast recording on a VCR.

The levels in educational matrix at which video based support material is needed are too many to enable single TV channel to cater curricular support and hence the present programming is discontinuous and not interlinked with syllabus. This makes programme utility rather limited and today they seem to cater to home bound retired adults, adding to their awareness than that of students or teachers.

We need to change it to 'Tele-course' approach that supports segments of curricular syllabus and publish them on video cassettes with written text as support materials on the lines that IGNOU does.

There are other avenues for inter-institutional cooperation. They are, creation of shared stock-shot data base, exchange of programmes, creation of video libraries to be used by producers by importing foreign educational programmes etc. They could be highly educative and would speed up programme production time as well as upgrade programme quality. It's vital learning tool.

PROGRAMME EFFECTIVENESS RESEARCH

Educational Video Programmes are meant to enhance quality of training and education by helping instructors to augment their teaching and communication skill. There is, therefore, a vital need to evaluate 'communication effectiveness' of such programmes. Just glossy production, expensive sets or directorial or editorial skills are of no consequence. One major lacuna that needs to be corrected forthwith is by initiating independent research on programme effectiveness.

The Department of Electronics, jointly with the Ministry of Human Resources Development has set up 'Vivekdarpan' project under which a set of 25 villages each in Rajasthan, Bihar and UP are provided with CTVs and VCPs to check and evaluate effectiveness of video based informative, educational and training programmes developed by various agencies for rural education, adult education, literacy training etc. A number of researchers in the field of communication skills are associated to perform these tasks. Similar groups are essential for formal educational programmes. It is the effect on Target audience and their acceptance that must decide the quality of programme and not perceptions of the script writers, directors, participating teachers or editors.

TELEVISION AND VIDEO PLAYERS FOR SCHOOLS AND COLLEGES

There is scope and an urgent need for our institutions of learning like secondary schools, colleges and at least private primary schools to have Colour Television Sets and VCPs, as vital components of Educational Technology in their class rooms and create the most essential infrastructure to use video cassettes and Educational TV in enriching the curricular and non curricular education. In this manner expert teachers of proven ability and merit can be brought within the reach of all students to supplement the existing educational infrastructure.

There is a way to achieve this by the institutions themselves on their own, without waiting for the Government to step in. Following are the parameters :

- i) Normally secondary schools have about 60 students in a class. If the monthly fees for the students covered under this scheme is raised by a nominal amount of Rs. 5.50/- per student per month, it will provide the school, extra funds of approximately Rs. 4000/- per annum per classroom.
- ii) Considering a school with ten classrooms, fees collected per annum will be Rs. 40,000/-. In a period of three years, the amount accrued will be Rs. 1,20,000/-.
- iii) It is possible to provide the schools with CTV sets at Rs. 8,800/- and one portable VCP and one VCR at Rs. 8000/- and Rs. 13,000/- respectively. If the school procures ten 51 cm CTV sets, one VCR and one VCP, the cost of the package will be Rs. 1,09,000/-.
- iv) At the end of three years, let the class teacher, or any one who assumes the responsibility to look after the set, be allowed to purchase the CTV at Rs. 3,500/- per set. This will yield the school further Rs. 35,000/- for CTVs. Similarly VCP and VCR also could be sold at discounted price of Rs. 3,200/- and Rs. 5,800/- respectively. Proceeds from such disposal of used product will total upto Rs. 44,000/-. Thus total income would be Rs. 1,64,000/- (Rs. 1,20,000/- + Rs. 44,000/-).
- v) Nationalised banks can make available this amount as a loan to the schools joining the scheme. The loan could be returned in installments of Rs. 3,050/- p.m. over a period of 36 months. At around 16.5% per annum on reducing balance the interest installment for this per month would be around Rs. 750 on the average. Thus in a period of 36 months the total out-go will work out to Rs. 1,36,800/- (3800 x 36).
- vi) This will leave the school with a surplus of Rs. 27,200/-. Out of this Rs. 15,000/- will be good enough to meet annual maintenance and repair charges for a 3 year period.
- vii) Video tapes for the scheme can be supplied through ET&T's Margadarshan series. The price of each video programme of 20 minutes duration will be Rs. 35/-. Two such programmes will be available on one cassette. This will enable schools to have their minimum library of 350 programmes or 175 cassettes at the cost of Rs. 12,200/-.

Advantages

- a) Each class room will have its own 20" CTV.
- b) As the class teacher or anyone responsible for maintenance is ultimately going to be its owner at the end of 36 months, he or she will ensure proper maintenance and usage. Incentive of having a chance to buy CTV at Rs. 3500/- a VCP at 3200/- and a VCR at Rs. 5,800/- is an attractive motivation.
- c) The school will have the benefit of acquiring new sets of CTV-VCP at the end of every three years.
- d) Educational programmes telecast by Doordarshan can be recorded directly on the VCRs and these recorded cassettes could be used along with other tapes.
- e) In addition to receiving educational TV telecasts from Doordarshan during transmission, the teachers will have the freedom to utilise the material whenever they find it convenient and can even use them for repetitive viewing.
- f) The school can thus build its own large video teaching cassette library over a period of time.
- g) The same recorded programmes can be made use of with advantage for additional tutorial classes just before examinations.
- h) At each district level, it is possible to implement a competitive scheme through which best teachers in each subject can be selected and their lectures can be video taped for use as an aid to the local teachers in the entire district through the educational Tele-Video programme. Once the experiment succeeds it could be gradually extended to state level and later to the national level.
- i) Corresponding financial relief accruing to the Government can be diverted to other priority areas.
- j) Finally the students will derive a sense of pride for having stood on their feet instead of waiting for doles from the Government or from any charitable bodies.

EDUCATION BEYOND CLASSROOM INTO HOUSES AND WORKPLACE

In the U.S. the learning channel, an educational satellite network was reaching more than three million houses in 1984 and offered a number of college courses daily. Formal learning extends beyond the classroom into the home and workplace. Frank B. Withrow of the U.S. department of Education in one of his thought-provoking articles on Institutional TV stated :

Electronics can offer a wide range of services beyond the walls of the traditional college or university. High quality materials designed for broadcast to specific audiences can provide for a life long learning experience. Telecommunications systems offer access to data bases and allow opportunities for dialogue between the learner and instructor. It is obvious that technology can and should make up for a gap in highly qualified teachers and subject experts, making a significant contribution to the quality of education in the United States.

Chapter 7

NETSS

NATIONAL EDUCATIONAL TELEVISION SATELLITE SYSTEM

This study reveals that there exists a possibility of creating a financially self-supportive, affordable and technologically feasible Educational Programme generation and delivery system based on Satellite technology and aided by various cost effective ways of ground delivery.

It is possible to establish an exclusive satellite system to support Educational Television Services throughout India through fifteen dedicated regional Educational TV channels. The proposal offers an optimum solution for dissemination of Educational TV programmes to fifteen language groups. It offers a range of possibilities for distance education, both formal and non-formal. It also offers opportunity for inter-region sharing of education programmes.

The approach contemplates to establish a shared Satellite system tentatively termed NETSS-National Educational Television Satellite system.. It will have 24 Television channels out of which 15 channels will be exclusively used for dissemination of educational programmes to 15 different regions of the country covering all language groups. Three channels will remain as spare channels on the satellite and six channels will be used as subscribed entertainment channels, the programmes from which will be encrypted and will be receivable only by those who subscribe a monthly fee against which subscribers will be given descramblers or decoders, enabling only subscribers to watch what is telecast. These six channels – which will be predominantly movie channels – will be beamed to six national regions.

As educational needs for adult literacy, primary education, non-formal education and vocational education will be in local languages, 15 channels will cater to almost every region's needs.

SYSTEM CHOICE

After giving due consideration to the recommendations of the International Administrative Radio Conference convened by International Telecommunication Union – ITU in 1977 and various technological options as per the present state-of-the-art, optimum satellite system for such an application, which also constitutes a cost effective solution, will be to have a satellite system operating in quasi DBS mode operating in a Ku Band. Such a satellite can accommodate 24 transponder employing frequency reuse technique. Such a choice will enable us to provide low cost direct reception sets with a small dish of about one metre diameter and inexpensive electronics, at an overall cost of Rs. 6,000/- or less plus a normal CTV set.

OPTIMUM SYSTEM

NETSS operating in Ku band with its 24 transponders will offer 24 independent non-interfering channels with 24 different beams, each of which will be beamed to a different area. This will enable delivering upto 24 different areas. This will enable delivering upto 24 different TV programmes. As the initial capacity requirement is of 21 channels, additional 3 channels will remain as on-orbit spares.

DISTRIBUTION MODES

NETSS distribution modes will primarily involve use of direct reception sets which could be made available at low cost. If produced in bulk and assuming minimal taxes, complete DRS set including 1M dish, down converter and 20" CTV set could be made available at less than Rs. 10,000/-. Please note that all prices indicated therein are as of early 1989 in India.

The other option is to pick up satellite signals with professional TVROs and rebroadcast them over terrestrial transmitters.

The third option is to use a standard DRS, boost the signals and feed through a cable network within a township or a community.

The NETSS could also be used as a delivery system to download educational programmes during non-working hours into digitally controlled VCRs, which are today, costing same as normal VCRs.

REGULATORY ISSUES

An ITU (International Telecommunications Union) allotment plan already exists for operation of the satellite in the FSS segment of the Ku Band. This plan provides and identified orbit slot for India for its domestic FSS services. Thus, such a proposal involving creation of a Satellite System fulfills the existing regulatory guidelines.

HARDWARE COST IMPLICATIONS

Cost of each Satellite	Rs. 130 Crore
Cost of each uplink	Rs. 3.5 Crore

Assuming twenty-one uplink earth stations, one satellite-in orbit, one satellite as ground spare and one satellite control center, the project cost for the telecasting system will be around Rs. 350 Crore as per today's feasible cost.

Bulk manufacture of Direct Reception Sets with 1M PDA in Ku Band will enable to make available such sets at less than Rs.10,000/- including one 20" Colour TV set.

BROAD SPECIFICATIONS OF NETSS

Band of Operation	Ku Band (FSS)
No. of Transponders	24
Channel Width	36 MHz
Spacecraft Power Requirement	1800 watts
Spacecraft EIRP	52 dBW
C/N of Downlink	12.2 dB
G/T of DRS	12 dB/K
Rainfade Margin	5 dB
Dish Antenna Size of DRS	1 M

Operational Norms

Idea is to generate revenue for education as well as create employment opportunities for creative people in the field of art, drama and cinema. The six hundred subscribed entertainment channels will achieve these objectives.

Revenue

- A) Six Movie and Drama subscription channels will telecast entertainment for 8 hours a day each interspread with a total 40 minutes of advertisements on each channel. That will give daily advertising time of 240 minutes (6 x 40) or 1440 units of 10 sec. Advertisements. Based on graded advertisement charges ranging from Rs.2000/- to Rs.5000/- for each 10 sec. unit and assuming average revenue of Rs.3000/- per 10 sec. unit.

Daily revenue will be	Rs.43,20,000/-
or say	Rs.4.30 million
Annual Revenue for the six	Say Rs.1550 million
A Entertainment channels will yield	(Rs.4.3 x 365 or Rs.1569.5 million)

- B) There are 35 million TV and 2.5 million VCR owners. By international norms and on the basis of paying capacity as well as average monthly expenditure we assume eventually there would be 5 million subscribers and they would be willing to pay Rs.30/- p.m. as subscription. This will give a revenue of Rs.1800 million-B.

Total Revenue will be Rs.3350 million

Expenditure (Rs. in million)

A) NETSS Cost	3500
Assume 5 years life.	
Based on 20% depreciation	
and project interest cost at 6%	
(assuming interest rate of 12% p.a.)	
Annual Cost	910
Annual Maintenance of Ground System	90
(10% of ground cost)	
Total Amount infrastructural Exp.	1000

B) Entertainment software cost at Rs.1.5 lakh/hour for six channels and 8 hours/day	
48 x 350 = 16800 programme hours	
Programme cost per year	Rs.2520 million
Total broad expenditure	Rs.3520 million

Thus infrastructural costs for educational channels including depreciation, interest, maintenance etc. will be broadly met by such cross financing.

Educational software need will be huge to feed 15 channels for 8 hours a day, even after assuming two repeats of each program. Production of educational software needs not only help of the skilled teacher but also of the communication professionals, videographers and other experts in visual media management. Further one needs to introduce a commitment and reward system to ensure that programmes or telecourses meet the objective of enriching education and effectiveness of teaching. There is need, therefore, to support efforts from every available agency interested in educational video. Huge funds exist with the Government in the shape of unspent budgetary plan resources as well as private trusts. Attractive funding and use of free-lancing professionals would fulfill the need with reasonable success. Merely depending on Government funded public institutions may create problems. This will also create tremendous opportunities for personnel in Educational Technology and will boost employment generation.

While such possibilities may seem distant, as far as India is concerned, it may be worthwhile to carefully observe the development of the media elsewhere in the world.

Chapter 8

FASTER WAY TO TACKLE ADULT ILLITERACY

This is one of the most misunderstood areas. The related points and solutions can be best clarified in a question-answer format.

What is the Need for Literacy?

Traditionally, everywhere in the world, the most convenient and durable way of preserving knowledge and information is to store the written words in print. Consequently, the best way to acquire knowledge and information, besides through direct experience, is to learn to read and write. Every child, must be sent to school to learn, to read and write his/her mother tongue or also the language in which maximum knowledge is stored. Compulsory school education for every male or female child is therefore a must. It is investment for the future.

Adult illiteracy is the problem created due to our inability in the past to provide education to every child. Unfortunately sending grown up illiterates to school is not as easy as compulsory school for every child.

What are the Difficulties in the Way of Removing Adult Illiteracy?

Magnitude of problem of adult illiteracy is too large to be tackled through development of reading and writing skills amongst them. Following are the difficulties :

A. Difficulty in Motivation

Learning a language for an illiterate adult is not easy. We all, as literate adults, know how difficult it would be for us to learn a new language. Handicaps of illiterates in India are :

- a) Lack of awareness and/or motivation;
- b) Inability to concentrate due to other nagging problems of day-to-day life;
- c) Lack of easily accessible facilities;
- d) Lack of time. One is normally busy conducting one's own daily needs of life.

B. Time Consuming

Present studies show that the minimum time required will be 1,000 man-hours of learning. At the rate of two hours a day and six days a week work-schedule, one would need approximately two years continuous training to acquire the desired minimum literacy standard, which enables him/her to read and understand a public notice or a newspaper.

C. Difficulty in Getting Teachers

As per the demographic estimates, today there are 300 million illiterate adults in India above the age of 25, when we apply the above norms to measure literacy rather than census criteria.

Assuming that each teacher/volunteer can help 30 adults a day, we shall need one million of them to teach 30 million adults over a period of two years. And this takes care of only 10% adult illiterates.

D. High Cost

At the cost of Rs. 1,000 per batch per month we shall need Rs. 1,200 crore per year. An equal amount would be needed to meet infrastructural and other costs, taking the total to Rs. 2400 crore per annum.

Thus for providing appropriate literacy to mere 10% adults will need Rs. 4800 crore in cost, two years in time and would need 1 million well-motivated and trained Teachers/Volunteers.

Is there a Way-Out?

Yes, A practical and less onerous way-out can be had by use of Electronics audio-visual Media, Radio, Television, audio and video tapes.

How ?

Basic objective in adult literacy is to enable them to learn things, to have access to information and thereby to gain knowledge.

Literacy is not an end in itself. It is a means to an end. The end is acquisition of knowledge.

Electronics Media allows to by-pass the written words and helps to free the information from its clutches. In fact, Electronics audio-visual Media, though ideally a poor second to learn written language, are better than the written words in certain respects and in a sense can be more effective. As they say, one photograph is better than thousand words and a movie is better than a thousand photographs. It is so because the human mind is architected that way. The human mind, as we all know, is a very vast library of information with profound capacity to receive, scan, reject, accept, assimilate, store prioritise and utilise innumerable pieces of information continuously, day in and day out. All this is retained in the mind, not in any language but in pictorial form. The spoken word, the written word and the visible perception are all converted to pictures for storage in the library. Therefore, any pictorial or visual input to the mind is most easily acceptable. This is why even an illiterate adult can acquire enough knowledge through visuals to conduct himself reasonably successfully.

There is another very important fact which we all know and do not make use of. The average individual can speak 150 words in a minute but can accept and assimilate 600 words in a minute. This inherent difference in input-output speed creates problems like absent-mindedness etc. that's why TV teaches better than radio, giving the human mind faster information input pictorially.

What Kind of Information and Knowledge does an Adult Illiterate Need?

A large portion of information and knowledge needed by the illiterate rural population relates to physical activities, such as, in personal health, hygiene, improvement in agricultural production, protecting oneself against hazards, learning to interact with the development in the world, such as telecommunications and benefit from these modern technologies, knowledge on how the banks works and so on. All these can be done more effectively and much faster through audio-visual rather than through written communications.

In our country, it is too expensive for an individual to have audio visual aids like TV and a Video player. It is also less convenient today than the books and periodicals, in terms of care of usage.

How would then TV-VCP help Rural and Urban Poor?

Use of video-TV are expensive but luckily they can be more easily shared than a book. It is, therefore, possible to turn it into a multi-user facility and, therefore, can ideally form a shared property of a community. It has been shown elsewhere in this study that the cost of disseminating information, even without subsidy of any kind, will be merely 10 paise/hour.

Is not Radio or TV, as Communication Media, Non-Interactive?

Yes, it is. All the same, we may ask- "are the books interactive?" and, talking about class room teaching, how many of us can claim to have learnt any thing which was interactive?

Undoubtedly, interactivity is desirable and ideal but it is not 'a must' in basic education. It is more relevant in higher studies where the students can think independently and enhance the quality of learning through discussions and arguments.

TV-VCP, in fact could simulate interactive situations.

How is it Suited in our Villages?

In more than one way, the Electronics Media is an ideal choice to reach and enrich our illiterate adults in villages.

Let us think of the target audience and its characteristics. Our literate adult compatriot in a village is very rich in experience in general. The adult illiterate can be as intelligent as any one of us. His illiteracy is a handicap. But like any other handicapped person, his other faculties of acquiring information and knowledge such as observation and listening are more sharply developed than even a literated. SITE experiment has proven that his interest in Audio-visual training is better.

Why is Video better than Radio, Audio or Even TV?

Audio-visual devices like Video and TV are essentially better than simple audio-devices like Radio and audio-tape.

Audio-visual through a video player and a colour television combination provides all the attraction and motivation that a target audience would need. It is also amenable to be shared more easily and attentively than a mere audio-tape because both the human senses are kept engaged and therefore concentration is better. The programmes meant for illiterates are essentially to be given in their own mother-tongue and also at a time which is convenient to them. Further, the type of information that is ideally suited for them may not suit to be telecast specially when we have only one or two television channels. Therefore, 'Community Video' is the most ideal form for adult education.

How much does the whole thing cost?

A Community Video set consisting of a video player and a colour television set can be available at Rs. 12,000 without any subsidy from any quarters. In this price of Rs. 12,000, Government's taxes and duties account for Rs. 6,000. Thus, if the Government can offer concessions under the governmental schemes for adult literacy the price for each set can be just Rs. 6,000 or at the most Rs. 7,000 and that includes both a 20" CTV set and a video cassette player.

Even at a price of Rs. 12,000 per set, assuming the life of the set as just three years or 5,000 hours of usage, the cost of information dissemination per house will be just Rs. 2. If 20 people are using the facility, the cost per person per hour is just 10 paise and with Government's concession on duties. It will be as low as 5 paise per hour.

What about its misuse? How can we stop them from becoming Video Parlours?

Electronics provides all the essential solutions. We merely need imagination. The video players at the Community Centres will be so designed that they will neither accept nor play a normal video cassette mechanically and electronically. The players have been designed to be non-compatible. The colour television set, however, will receive all normal Doordarshan programmes.

While this solution is available, one might ask-isn't such risk of misuse present in books and periodicals too? Undesirable information or pornography is the problem even in print media, where only solution is legal machinery which is not always effective. Electronics offers solution here which is more basic and does not need legal machinery.

What about maintenance?

Here again we have a solution that will work. The best maintenance of any product comes through proper knowledge, training and motivation of the persons whose job it is to keep the product in order. The community video being media for audio-visual education, knowledge and training could be given through video itself even as an illiterate can learn proper usage and maintenance of the product without any difficulty.

More important is the motivation. The used television set can be sold just for Rs. 1,000/- to one who accepts the responsibility of maintenance for three years or 5,000 hours of usage. Everyone knows that a colour television set can function properly for 10 years or more if handled and operated properly. Getting a set for which he is responsible for maintenance just at Rs. 1,000 will provide an excellent motivation to ensure proper upkeep of the Community video system. As far as Community video is concerned, at the end of 5,000 hours, it will go back to the centralised reconditioning facility which will professionally recondition such sets, and make them as good as new at a negligible cost compared to a new Video player.

What is the Capital Outlay needed for this Programme?

There are 650,000 villages in the country in addition to small towns and cities in which our target audience is spread out. About 0.7 million sets will be initially sufficient to cover 100% of the target audience. But for comparison purposes, to reach 10% of the target group of 300 million illiterates, we shall need 70,000 sets which in terms of capital investment would cost nearly Rs. 85 crore. Compare this figure to 4800 crores worked out for the present approach.

What about the Teacher/Volunteer Problem?

We have seen that in the absence of audio-visual option, we will need one million teachers/volunteers to train 300 million over a period of three years. These people will be required to have sufficient expertise to train adult illiterates which will demand far more skill than training young children in schools. Course content will also have to be carefully designed.

The audio-visual option will enable us to take experts in communication skills in every regional language to impart information even in the remote part of every State. Hence, the quality of education will be excellent and can be well-designed. The local tutor therefore, would be someone who cares about development of his pupil but would need no skills in training or in communication or imparting education. Thus, the availability of volunteers would become easy.

Who will produce the Video Programmes?

There are about 200 video recording and editing facilities available in the country which are created by the Government as well as private individuals to generate programmes for TV.

Fifty percent of them would be keenly interested to help in creating these programmes specially since they do not have adequate work due to the limited time-segment available on single channel TVs.

Further the scope to enlist motivated subject experts, who are willing to give their support and share their knowledge and experience for the benefit of their illiterate brethren, is found to be available for the asking.

A lot of information that our illiterate friends need is about the functioning of various Government Departments, and authorities and responsibilities of its various officials as well as of the citizen. They also have to know the procedures to approach the Government departments to get their rightful privileges as well as comply with the legal obligations. Therefore, Government itself can easily generate this portion of the software.

Next, the adult population in villages have to learn a lot about getting the best out of various appliances and materials that they have to use in their day-to-day life. All these are products of Indian industry. Discussions with the Indian industry leaders show that they are quite willing to make audio-visual programmes to educate people for getting the best out of the products they make. Today the label on the paint container, which is used by an illiterate artisan, in most of the cases, is in English. He is unaware of the risk of the solvents and chemicals which are used in the paint and his education would not only benefit the recipient but also on the Industry which has produced those products. Many of the children's toys are painted in the lead-based paints, generally out of the manufacturer's ignorance. But a proper audio-visual information would stop such usage and would result in better care of our children. Besides these, there are large number of socially conscious private citizens who have Trusts primarily created for the benefit of the Society and most of them will come forward to finance adult education related to Health, Family planning, Immunization etc.

What could be a Typical Management Mechanism for Community Video Centers?

Educating illiterate adults in the Community is not the monopoly or the responsibility of the Government alone. Every literate Indian somehow has to share a minor burden to contribute to the success of this programme. There is tremendous interest and enthusiasm. But everybody seems to be waiting for a suitable management mechanism. Government may share and contribute in creating the basic infrastructure and the balance may be left to non-government organisations which are interested in nation-building. A typical set-up could be somewhat as follows:

In a cluster of 25 villages, there will be in each village, two or three community video systems to cater to two or three interested groups such as, Adult women. Adult men and the aged. All these 50 to 75 systems could be looked after by one or two motivated unemployed educated youth who could be paid a good salary of Rs. 2,000 per month and a motorbike as well as necessary training to look after these systems with speed and convenience. The same person would also be responsible to handle the software cassettes for circulating them amongst the villages. A library of 1,000 video cassettes in local language will cost only Rs. 75,000 without any Government concession. ET&T is already selling 45-minute recorded Video Cassettes at Rs. 75. A proper Excise and Import duty concession will enable us to offer these cassettes at half the price. Cost of running such a programme for 25 villages over a period of two years will not exceed Rs. 10 lakh. Out of this, 80% of the investment is the capital cost; therefore, the real cost including depreciation will be merely Rs. 5 lakh in two years or Rs. 2.5 lakh per year or Rs.10,000/village/year. In this price each village will get 3 complete Community Video Systems, each consisting of 20" CTV and a Video player. This is a reality, not a dream!

What are the further advantages of creating Community Video Centers?

Community Video Centers will be normally utilised in the evenings when village adult population is available for learning. If the community centers are located in the village schools, an excellent curricular support could automatically be given, almost free of cost, not only to village school children but also it could

be beneficially used to train teachers in village to improve their training skills as well as to give them extraordinary motivation by taking experts with finest human communication skills to be given in every nook and corner of the country.

Why 20" CTV ? Why not a projection TV ?

Projection TV is not suitable for the Community Video Center for four important reasons :

1. The cost of projection TV today is over a lakh of rupees and above. In the same price each village can have as many as ten 20" Colour Television set or as many as 5 VCP-CTV combinations at its Communication Video Center. Amongst other things, it will ensure service reliability through redundancy.
2. Whereas one Projection TV will allow only one programme to be seen at a time at a time by a group of viewers, five VCP-TV combinations will enable five different programmes being seen by different viewers-groups at the same time. In a typical community video center, located in a village school, this will enable 5 entrusted groups, such as, women folk, young men, aged and young children to see different kinds of programmes with the same amount of investment without any need for building a special project theatre or auditorium.
3. Normally, a projection TV needs a darkened room which will require specially constructed viewing auditorium, whereas a 20" CTV can be placed anywhere.
4. 20" CTV is a national standard and is produced in millions. Therefore, the price of spares as well as their availability is extremely easy even in a small town. The maintenance of 20" CTV is a routine affair and can be adequately undertaken in remote areas whereas the projection TV needs all imported parts, the availability of which is very poor and the prices will be extremely high.

Many of the Villages don't have electric supply, what is the Solution ?

A very low cost DC battery-to-mains converter will enable every village to run the VCP-CTV combination, without electricity. A community video set can be operated with a 12 V car battery has been developed already. There are two methods of charging this battery. One system involves the use of idle manpower or farm animals to drive a D.C. motor generator like the one used in automobiles which in turn charges a car battery. Suitable geared drive mechanism such as a stationery bike for men or a modified bullock driven sugarcane crusher could be used which drives the dynamo charging the battery. The cost is not more than Rs.2,000. The other solution which exists is charging through solar panels. Through this system, the battery can be charged throughout the year. Of course, the option to charge the batteries in a nearby place where Electric supply is available and carting them on a regular basis to remote places exists in any case.

Chapter 9

REGULATION OF BROADCAST SERVICES

In broad terms, cable and other broadcast services used to be regulated in two areas. One relates to regulations controlling cable operation i.e. the medium, the other concerns itself about the message. As a medium, cable system is one kind of Telecommunication system and its use has to be licensed by the Government of India and has to be a subject matter within the jurisdiction of the Central Government.

Regarding control over the medium, the issue largely relates to Government's attitude towards private franchise for cable operation. In many countries in the world, where till recently such services were not privatized, experience has shown that after enacting suitable laws relating to operation of cable services including cable laying and maintenance and after introducing procedures to cancel operating licenses in case of prescribed defaults, these Governments have adequate hold over the cable operator and experience in privatisation has been rewarding, both to the Government and cable subscribers. Further the investment in this sector has also not burdened the exchequers. It has served the basic hypothesis for privatisation of assuring better customer service through competition.

The major obstacle in uncontrolled media freedom is irresponsible and motivated spread of rumours, disinformation and falsified reportage of news and current affairs. There is also a mix up of News and Views. One way to ensure editorial freedom and yet put in some acceptable methodology will be to permit only authorised news agencies like UNI, PTI, Reuter etc. and many more to be made sources of information to audiovisual media.

The objective of promoting competition in telecommunication is already on anvil in India and cable will be good avenue for a nationwide trial. With adequate freedom to say, to undertake street works, to lay cables under prescribed procedure but without undergoing hassles to deal with several authorities like State Government, municipality and local ward office etc. will ultimately decide the success of such privatization in terms of efficiency and better customer service.

Cable operators could provide later may other services and add other conveniences to the lives of cable subscribers, such as central alarm services etc. Once we have a high bandwidth communication link between a household and a central point, extensive advantage could be taken of this wire link-limited almost by the cable operators' imagination.

Telephone, Teletext, data communication, ISDN etc. could also be routed through these cables in association with Mahanagar Telephone Nigam Limited (MTNL) or the Department of Telecommunication (DoT), Government of India.

To ensure competitive environment, such private cable operator licenses in every area will have to be more than one. This will stimulate better service due to competition and if, for a default, someone's licence is cancelled, subscribers need not get stranded. Other view could be that looking to the cost of laying cables, it may not be feasible to attract more than two cable operators to seek licence to operate cable network in the same area. This would again lead to a monopoly and that too in the hands of a private enterprise which may not have public accountability and may therefore not discharge his responsibility towards the cable users. On the other hand encouraging multi-operator cables in the area would be too costly to the society. The solution could be to adopt the British pattern of granting a franchise. In UK franchise is granted by a specially Constituted Cable Authority which overviews all cable operators in U.K. There the law required that the Cable Authority for each franchise, shall invite application in respect of each specific area. The Cable Authority does the market research before inviting the application for franchise. A process of evaluation and consultations with representatives of local community follows. The Government also has to be consulted before granting the franchise. The British laws does not permit companies with foreign share holding or such companies which could be controlled from outside of Britain. Also debarred are such applicants who wholly or partially own newspapers or are linked in any way with political or religious bodies or local authorities.

Once the franchise is granted, some obligations are assumed on the part of the licensee in return for the privilege. He must undertake to follow all laws, regulations and procedures prescribed by the Government in relation to operation, privileges of cable users, facilities offered to them and cost of service. The equipment has to meet prescribed technical and environmental standards. Licence is granted for a period of 5 years and financial penalties are prescribed for default. In extreme cases cancellation of franchise is also authorised.

The most desirable feature of the framework is that the onus is on the cable operator (licensee) to keep to the rules and the cable Authority does not breath down his neck all the time. The Authority does, however, monitor, dips in and takes samples. If cable operator abuses his freedom, there are wide enough powers to exercise over him.

The next control issue relates to programmes carried by the cable operator, the rules and regulations relating to such control over the programmes provided the cable operators would be other than those for Doordarshan of films. Cable operator essentially is a conduit manager to carry the audio-visual programmes available to him. For instance, he would carry programmes live from Doordarshan or any other subsequent licensor for broadcast Television or he may carry pre-recorded entertainment from producers belonging to private or the Government agencies. He may also carry pre-recorded programmes for formal or non-formal education, continued education, medicare, skill development, religious discourses, philosophical thoughts etc. In all such cases, the existing codes of ethics and programming norms would have been already enforced by the Government through its censorship procedures. In such an eventuality, cable operators' responsibility will merely relate to only carrying properly censored material and to ensure that the time at which he carries does not make transmission of such programmes undesirable. For example, programmes considered unsuitable for children should not be carried during day time. Also certain recorded programmes may not suit the social environment or mood as in the case of politically disturbed or religiously sensitive times.

Recorded video cassette is a stored Audio visual programme one can see on a Television Set. It's duplication and distribution, therefore, must involve safeguarding copyright protection and imposition of standard programming code of ethics. Ease of duplication has created severe problems to producers and would need a carefully worked strategy to deal with. Organised video duplicating agencies need to be made to guarantee the conformation to prescribed operational norms.

Telecast or cable programmes are always under the control of a few licensed agencies and therefore, fully controllable by typing them down to a set of rules and regulations. Video cassettes distribution in not easy to control. Video, therefore, becomes an attractive communication medium that is often misused. Proliferation of 'blue' video cassettes have created serious problems all over the world. So also its use for political propaganda has shown tremendous increase.

Chapter 10

ELECTRONICS MEDIA

OWNERSHIP AND CONTROL AN ALTERNATIVE OPTION

Control of Electronics Media is a subject of great debate all over the world. The issue is 'who says what, how, to whom, with what effect and what purpose'. Television is a major factor in terms of social influence. Its controllers are, therefore, exercising a specific social function. In such a process, concepts like stimulating understanding, value judgement and involvement and objectives of programme developer have to be carefully understood. In Western Europe, until recently the Governments kept the electronic media under the direct state regulation. They considered it as constituting "Public Service" for safeguarding 'Public interest' and therefore a state prerogative. On the other hand, in USA they have what is popularly called 'Free TV'. On close examination one realises that it is not all that free and is, in fact, controlled by Private commercial advertisers and profit-motivated groups with no public accountability. Sometimes, however, it becomes clear that 'Public Interest' is confused with 'Government Interest' which it is not. In recent times, in India too, ownership of the Media by a 'political' government has stimulated sharp and critical comments. There is, therefore, a need for an alternative form of control which may become broadly acceptable.

One often compares Electronics Media with the print media and wonders why total freedom of expression available to the print media cannot be extended to Electronics Media. First reason is that Electronics Media is far more powerful communicator. Extensive research, the world over, has shown that TV and Video are enormously powerful and hypnotic gadgets capable of exerting a deep influence on minds of the people. It is manipulative in terms of influencing viewers and opinionating them. TV is proven to be capable of 'cultivating' the social environment almost like farming that cultivates natural environment. These potential culture-changing influences of Electronics Media require careful management. The question is; who should do it? Secondly, the Electronics Media unlike print media needs no skill except understanding language of broadcast. Thus it is accessible to everyone irrespective literacy skill, level of maturity and intelligence, age, sex and mental development. In fact there could be good justification to have a relook into control aspects of print media as well as to ensure not only its freedom but also its responsibility.

Our national character and, therefore, the national strengths could be derived out of homogenisation of cultural responses. It would be a solid foundation for tomorrow's Indian society by making it information-rich, thereby adding openness and resultant check on opportunities to exploiters-social, economic or political. Towards this end again media ownership - and right towards management-demands mature and democratic societal mechanisms.

The government has not so far created a department or laid down policy guidelines to overview and plan utilisation of Information Technology toward the goals and objectives detailed above. It is a vital component for building a homogenous Indian character. Information Technology helped U.S.A. in this regard turning it, over a period of four or five decades, from a multiracial, multilingual and multireligious society into a far more society into a far more homogenous and integrated community of people. India also could work towards such a goal and benefit even more, bearing in mind, India's broad cultural uniformity and metaphysical maturity built-up through age old traditions and rituals. The Planning Commission must, therefore, take urgent steps to investigate, deliberate and decide on how to harness Electronic Media to derive maximum socio-economic and techno-economic benefits.

MEDIA ADMINSTRATOR OF INDIA (MAI) – CONCEPT, ROLE AND FUNCTIONS

The issue as to whether Electronic Media should be privatised like the print media has become a bone of contention with differing political ideologies even running into serious conflicts at times. It appears possible to strike a golden mean between regulatory mechanism and ownership by the Government on one side and total unbridled freedom on the other. A possible management structure could be on the following lines :

There shall be created an autonomous and statutory Institutional Authority exclusively devoted to overview appropriate development of norms for utilisation of Electronic Media. Such an Authority shall be made totally independent of the executive government, somewhat on par with the Chief Justice of India or the Comptroller and Auditor General of India. The head of the new Authority could possibly be named as Media Administrator of India (MAI) reporting directly to the president of India and giving an annual report of its own to the Parliament.

The objective of MAI shall be to provide detailed parameters on all aspects of Electronics Media and even other media-Radio broadcast, Television telecast, Direct satellite reception, cable and wireless distribution of stored video programmes, interactive network-based information dissemination etc.

MAI shall operate in a structure that enables it to work with multilingual, regional and national information-related issues in various areas like formal education, vocational training, literacy mission, entertainment, news, current affairs, non-formal education, continued education, distance education etc. it could, therefore, create wings with specialisation and avoid organisational bureaucratization by decentralisation of decision-making within prescribed broad guidelines on contents. Censorship could be avoided by putting onus to remain within prescribed norms and thereby remove structural bottlenecks in the paths of the creative programme producers.

Various wings, with suitable checks and balances, shall be headed by Media Commissions which will have representatives from institution. Institutional Experts from fields of education, social psychology, mass communication culture, Science and Technology, Engineering, Medical Sciences, Theology etc. could be invited to serve on these commissions depending on what the respective commission overviews.

There shall be corresponding media tribunals to consider and dispose of any complaints and grievances whose appellate authority could be MAI himself. These tribunals shall be vested with full judicial powers, both civil and criminal.

Bearing in mind the fact that it is the society that finally is the recipient of the output of Information Software and keeping in view the availability of a large number of socially conscious and intellectually capable members of the society to be able to guard the societal interests, MAI could evolve feedback and control mechanism based on such feedback. In a sense, it is synonymous to consumer protection against misinformation and infringement of moral and ethical codes. MAI structure should revolve around such thematic concepts.

Today there is a tendency to blur the difference between news and views. Many times this is confusing to the recipient which occasionally results in disinformation. Some unethical reporting seems to slip through the media causing undesirable effects & tensions. MAI, therefore, could prescribe, that only accredited News Agencies who could be made fully accountable are able to feed news reports. Competition will provide essential choice to the recipients because even the news could differ based on individual perceptions of facts.

Chapter 11

CODE OF CONDUCT AND ETHICAL STANDARDS

PREAMBLE

Establishing codes of conduct and ethical standards for audio-visual arts like drama or cinema has been the most discussed subject matter. It also has been widely written about but the writings have been rarely ever conclusive. Freedom of expression is a spicy subject for debates which may end up with blows but never with an acceptable compromise. I have, however found it a relatively easy task. The reason for this belief rests on a uniquely distinguishing feature of TV compared to other audio-visual mass media such as cinema or theatre. It is its location. Television is primarily viewed in homes, in living rooms and bedrooms. People watch television in privacy of their homes. They watch it along with their young children, with their aging parents, with relations, or family friends or the neighbours. Every home follows a code of behaviour. It has its own traditional unwritten norms. These standards might undergo change but they are slow and they take relatively long periods to get into motion. Family culture prevails over everything. Even the radicals within a family often find no courage in defying such cultural barriers, in breaking the codes of behaviour or violating the traditions and ethical standards adopted by their families. While it is true that such codes of behaviour and ethical standards vary widely from family to family, there is a common denominator which is almost universal in nature. Almost everyone in the household is bound by it, although outside their homes, some may plead for entirely revolutionary ideas on behavioural conduct and ethics. If we simply list and logically present ethical standards and codes of conduct which no civilized guest can violate while visiting a private home, we would have the desired standards. The television cohabits with the family in their living rooms and bedrooms. It delivers messages and information that needs no skill to understand and appreciate. It is viewed and listened to by everyone from a baby to great grand dads and moms. It brings into their homes not only the human drama but the real and direct images from life and nature. It brings to them actions, events and happenings as they occur. But there is a significant difference between TV images and reality. The images brought into private houses by television or video are structured and edited by experts in the art of visual communication. They are capable of crafting simple plain images into highly dramatised and devastating visuals aided by haunting music and narration. Thus television could become an instrument of manipulation on a mass scale. It is indeed known to have growing influence on the children as shown in every organized study, making it almost the Third Parent. One may notice that out of all the TV programmes on Doordarshan, it is the advertisements which seem to prevail in terms of retentiveness. Children easily remember and recite musical ad jingles than the other contents of programmes. There is a strong reason for it. Messages in advertisements are carefully cultured after extensive research by experts in visual art. Money invested in creating a TV advertisement is often several times the money spent on a dramatic episode. One 30 Sec. advertisement for automobile tyres on Doordarshan is known to have costed over Rs.40 lakh, whereas a 30 minute serial episode rarely costs over Rs.3 lakhs.

Thus one must remember that Doordarshan, with its access to millions of private living rooms, would slowly but surely cultivate the Indian mind, like a farmer cultivating his land for a certain crop. Dr. George Gerbner has established this in principle. He says that aggregate flow of reiterated formulae, formats and ritualisation "cultivates" the social environment almost as farming cultivates the natural environment. Thus there is a scope to create a shared cultural environment within which minds are fertilised and nurtured. That's why I prefer to consider television like a knife. Depending on who holds it, it could become a killer's weapon or a surgeon's healing knife.

Television is a guest in a home and like a decent, well behaved and honourable guest, it must follow the codes of conduct and ethical standards of an average Indian family consisting of a mixed audience of children and adults in varying age groups. Like a guest, it has the responsibility to entertain them, inform them, enthuse them, stimulate them, warm them, amuse them, educate them and enlighten them by remaining within the unwritten behavioural standards of dos and don'ts. Television or the videos should not bring into the private homes anything that would not be expected from a well-meaning guest. Television programme content must be consistent with the present societal norms, the traditions and the cultural ethos. Codes of conduct and ethical standards described here are drawn up on this simple premise. Many of those standards also presently form a part of regulatory standards for audio-visual programmes and advertisements adopted in some West European countries. It is hoped that the outline given below could form a nucleus for the ultimate national standards to be set after wider discussions by a variety of experts. It is also appreciated that such standards would need a periodical review to accommodate changing human and societal perceptions with regard to acceptable conduct and behaviour.

Codes of conduct and ethical standards are described in two parts viz Part A-Programming and Part B-Advertising.

PART A - PROGRAMMING

Accuracy

It should be ensured that all news given (in whatever form) in programmes is presented with due accuracy and impartiality.

Any mistakes that occur, whether in news bulletins or in other programmes presenting news information, should be corrected as quickly as possible.

Recorded Topical Programmes

Programmes not used immediately should be checked before transmission in order to ensure that none of the facts being reported has been overtaken by intervening events.

Reconstructions

The use of 'reconstructions' in documentary and 'dramatised documentary' programmes for the purposes of greater authenticity or dramatic effect as opposed to mere effect, is legitimate, so long as they do not distort reality. Whenever a reconstruction is used in a documentary, it should be labeled so that the viewer is not misled. This requirement applies to all programmes, whether acquired or home-produced.

Simulated Matter

No simulation of a television new bulletin or new flash should be included in any programme, or in any portion, without the appropriate Authority having given its express previous approval in each case.

Programmes on Medical Subjects

For programmes on medical subjects it is necessary to obtain competent professional advice and on matters of potential controversy to give a hearing to more than one opinion. There are some subjects, such as cancer or certain aspects of mental health, that are particularly sensitive. A soundly-based unsensational but informative programme can do a genuine service. But in order to avoid unnecessary distress it is essential to handle with care any information about controversial or novel forms of treatment of criticisms, explicit or implicit, of current medical practice. Equal care must be exercised in fictional programmes in which medical matters are features.

OFFENCE TO GOOD TASTE AND DECENCY

Language

Many people are offended by the use of bad language and profane talk in television programmes specially since TV is watched by the family together. On the other hand, writers and producers seek with reason to protect their freedom of expression. It is therefore important for them, if this freedom is not to be jeopardized, to avoid the gratuitous use of language and impious behaviour should not be used in programmes, specially designed for children. Moreover anything likely to be transmitted at a time when large numbers of children are likely to be watching should be suitable for viewing by a whole family.

There can be no absolute ban on the use of bad language. But when used it must be defensible in terms of context and authenticity. It is one thing, for example, when such language occurs in a documentary programme, and quite another when it is introduced for its own sake in a studio production. Many people who would not be unduly shocked by swearing are offended when it is used to excess and without justification, specially in their homes.

Sex and Nudity

Present laws of land regarding sex, obscenity, nudity etc. should be carefully observed. Unlike cinema, TV is seen in private homes in presence of children. That should remain a major guiding factor.

Bad Taste in Humour

- (i) **Jokes about Physical Disability**
The roots of laughter are often found in deviations from the normal and familiar tract but there is a danger of offence in the use of humour based on physical disability. Even where no malice is present, such jokes can, all too easily and plausibly, appear to be exploitation or humiliation for the purposes of entertainment. This not only hurts those most directly concerned, but also it can and does repel many viewers. The use of such jokes in programmes needs to be considered with great care on every occasion.
- (ii) **Religious, Linguistic and Caste based Jokes**
There is a danger of offence also in jokes based on such characteristics. Producers need to be sensitive to changes in public attitudes to what is and is not acceptable. Even though it is hard to conceive that matters intended as a joke might constitute an offence, it may nonetheless offend against good taste or decency or be offensive to public feeling.
- (iii) **Recorded Entertainment**
Programmes not used immediately or which are rerun should be checked before transmission to ensure that jokes or situations are not rendered tasteless and improper by intervening events, such as death, injury or other misfortune.

Suitable Screening Times

So far as possible material unsuitable for children should not be shown at times when children are likely to be viewing.

Material screened between the hours of 5.00 a.m. and 10.00 p.m. should be suitable for a family audience. After 10.00 p.m. programmes may be shown that are intended for adults only. It is assumed that parents may reasonably be expected to share responsibility for what their children are permitted to see after 10.00 p.m. Reasons why a programme may be unsuitable for family viewing, include violence, bad language, innuendo, explicit sexual behaviour, and scenes of extreme distress.

Trailers must also comply with these time restrictions. Excerpts selected for trailering a programme containing violent material should be chosen with care, and should not give emphasis to violent incidents – uncharacteristic of the programme as a whole.

Behaviour Easily Imitated by Children

The portrayal of dangerous behaviour easily imitated by children, including the use of offensive weapons or articles readily accessible to them, should be avoided, and should be specially excluded at times when it is likely that large numbers of children will be viewing.

Scenes Depicting Hanging and Inhuman Cruelty Towards Weak

No film or programme which includes hanging or preparations for hanging and acts of unprovoked cruelty and violence should be shown specially when large number of children may be viewing.

Scenes of Extreme Suffering and Distress

The choice of material reporting the effects of natural disaster, accident, or human violence, even during the News presentation may need to be determined in part by the time of day at which it is shown. It may be appropriate, for example, for different scenes to be included in late evening news from those included in daytime and earlier evening bulletins.

CRIME, ANTI-SOCIAL BEHAVIOUR, etc.

Interviews with Criminals

Nothing should be included in the programmes which offends against good taste or decency or is likely to encourage or incite to crime or to lead to disorder or to be offensive to public feeling. While interviewing, there needs always to be careful consideration whether or not such an interview is justified in the public interest. Any programme item which, on any reasonable judgement, would be said to encourage or incite crime or to lead to disorder is unacceptable.

Demonstration of Criminal Techniques

In programmes dealing with criminal activities, whether in fictional or documentary form, there may be conflict between the demands of accurate realism and the risk of unintentionally assisting the criminally inclined. Careful thought should be given and, where appropriate, advice taken from the police, before items are included which give detailed information about criminal methods and techniques: a public-spirited warning to the general public against novel or ingenious criminal methods, for example, may defeat its own aims by giving those methods wider currency than they might otherwise have. Similar caution is needed in the representation of police techniques of crime prevention and detection.

Relations with the Police

There is a variety of messages to the public which police may from time to time request broadcasters to transmit. These include, for example, warnings to stay away from a crash or an accident; information about road hazards for motorists; warnings of missing drugs; requests for help in tracing missing persons; and so on.

Police and other public service agencies should be reminded :

- a) that frequent use of television for public messages makes those messages less effective.
- b) That, in the interests of justice, care has to be exercised in transmitting photographs of persons wanted by the police and of objects associated with suspected crime.

Presence of Television Cameras at Demonstration and Scenes of Public Disturbance

News editors and producers will be conscious of the need to be on guard against attempts to exploit television. The aim of any public meeting or demonstration is to attract public attention, but there is always the possibility that the presence of television cameras will provoke incidents that would not otherwise have occurred. Disruption of meetings or public enquiries and incidents of the disorder or violence may be encouraged, however unwittingly, by the arrival of television news teams. If coverage is recorded, it is possible to exclude 'manufactured' incidents or to reveal them for what they are. Where coverage is live, the difficulties are obviously greater, but every effort must be made to place what is being seen and heard in context, so that viewers can properly evaluate the significance of activities that could have probably arisen from the scope of television coverage.

Smoking and Drinking

Tobacco and alcohol are social drugs whose consumption carries no particular stigma even though they can constitute a major health risk and may be as addictive as drugs which are less socially approved, or actually illegal. It is therefore desirable that programmes should not include smoking and drinking unless the context or dramatic veracity requires it.

Particular care is needed since programmes are watched inside homes and are, therefore, likely to be seen by children and young people. Programmes made specially for children should not normally contain any smoking or drinking of alcohol unless an educational point is being made, or unless, very exceptionally, the dramatic context makes it absolutely essential.

Drug Taking and Solvent Abuse

Drugs, drug addiction and their effect are valid subjects for television programmes. But care needs to be taken to avoid any impression that drugs are a normal feature of society, particularly in programmes of special appeal to children and young people. The same caution should be applied to solvent abuse (glue sniffing etc.) Any demonstrations of such practices that could easily be imitated are best avoided. Well intended programmes on Doordarshan, may have, in fact, serves as guidance to youngsters on methods of distribution and access to drugs.

Privacy, Gathering of Information, etc.

The programmer's freedom of access to information and their freedom to publish are subject to certain limitations. These limitations arise not merely from consideration of national security, from the laws for example of libel, contempt and trespass, but also from the individual's citizen's right to privacy. There will be occasions when the individual's right to privacy must be balanced against public interest. This right should be protected from unwarranted intrusion, particularly on occasion, for example of bereavement or other situations of personal distress.

Filming and Recording of Members of the Public

When coverage is brought given to events in public places, editors and producers must satisfy themselves that words spoken or action taken by individuals are sufficiently in the public domain to justify their being communicated to the television audience without express permission being sought.

Filming and Recording in Institutions, etc.

When permission is received to film or record material in an institution, such as a hospital, a factory, or a departmental store, for example, which has regular dealings with the public, but which would not normally be accessible to cameras without such permission, it is very likely that the material will include shots of individuals who are themselves incidental, not central, figures in the programme. The question arises how far and in what conditions such people retain a right to refuse to allow material in which they appear to be broadcast. As a general rule, no obligation to seek agreement arises when the appearance of the persons shown is incidental and they are clearly random and anonymous members of the general public. On the other hand, when their appearance is not incidental, and they are not random and anonymous members of the general public, a producer should seek specific consent. Refusal to allow the film or recording to be shown must normally be respected. It cannot always be taken for granted that apparently willing co-operation in a filmed interview automatically implies agreement to unspecified use in a broadcast. When by reason of handicap or infirmity a person is not in a position either to give nor to withhold agreement, permission to use the material should be sought from the next of kin or from the person responsible for their care.

Recorded Telephone Interviews

Interviews or conversations conducted by telephone should normally not be recorded for inclusion in a programme or in the course of preparation for a programme, unless the interviewer has identified himself or herself as speaking on behalf of a programme provider seeking information to be used in a programme, and the interviewee has given consent to the use of the conversation in the programme.

Hidden Microphones and Cameras

The use of hidden microphones and cameras to record individuals who are unaware that they are being recorded is acceptable only when it is clear that the material so acquired is essential to establish the credibility and authority of the story, and where the story itself is equally clearly of important public interest.

Scenes of extreme Suffering and Distress

Scenes of human suffering and distress are often an integral part of any report of the effects of natural disaster, accident or human violence, and may be proper subject for direct portrayal rather than indirect reporting. But before presenting such scenes a producer needs to balance the wish to serve the needs of truth and the desire for compassion against the risk of sensationalism and the possibility of an unwarranted invasion of privacy.

Interviewing of Children

Any interviewing of children requires care. Children should not be interrogated to elicit views on private family matters, nor asked for expression of opinion on matters likely to be beyond their judgement.

POLITICS, RELIGION AND MATTERS OF CONTROVERSY

Statutory Requirements

Treatment of politics, religion and matters of public controversy are today covered by a set of guidelines. Two primary guidelines are as under :

- a) News must be presented always with due accuracy and impartiality.
- b) In all other programmes, taken as a whole, no undue prominence may be given to the views and opinions of particular persons or bodies on religious matters or matters of political or public policy. Programmes other than news may however include views related to the News but should provide equitable opportunity to divergent views to observe the essential impartiality.

Politicians in Programmes

Appearance by politicians in news programmes when they take part as spokesmen for their party, or for their own political point of view, should be governed by the general requirement of fairness and impartiality.

Feature Films

Guidelines concerning the showing of Feature Films should be so designed as to assist programme provider (programmers) in arriving at a decision as to whether a film is acceptable for showing and, if so at what time of day or night. All films, should be judged for their suitability against three key considerations:

- a) that nothing is included which offends good taste or decency, or is likely to encourage or incite crime, or lead to disorder, or be offensive to public feeling;
- b) that account is taken of circumstances such that TV is watched by total family including large numbers of children and young persons; and
- c) that the prevailing laws and codes are fully observed.

Part B – Advertsing

GENERAL PRINCIPLES

Fundamentals

The standards prescribed for programming are applicable fully for advertising material also. These should be supplemented by the following additional guidelines for advertising productions.

An advertisement must be clearly distinguishable as such and recognizably separate from the programmes broadcast, telecast or videocast.

‘Subliminal’ Advertising

No television advertisement may include any technical device, which, by using images of very brief duration or by any other means, exploits the possibility of conveying a message to, or otherwise influencing the minds of, members of an audience without their being aware, or fully aware, of what has been done.

Politics, Industrial and Public Controversy

No advertisement may be inserted by or on behalf of anybody, the objects whereof are wholly or mainly of a political nature, and no advertisement may be directed towards any political end. No advertisement may have any relation to any industrial dispute.

No advertisement may show partiality in respect to matters of political or industrial controversy or relating to current public policy.

Appeals and Charities

Advertisements appealing for money by publicising the work of charitable or voluntary organisations shall be subject to careful scrutiny by the authorities

Good Taste : Protection of Privacy and Exploitation of the Individual

Individual living persons should not be portrayed or referred to in advertisements without their permission. However, reference to living persons may normally be made in advertisements for books, films, radio or television programmes, newspapers, magazines etc. which feature the persons referred to in the advertisement provided it is not offensive or defamatory.

Stridency

Audible matter in advertisements must not be excessively noise or strident. The general sound level of the audio in the advertisement should be within + 3db of the average programme audio level telecast prior to the advertisement. Viewers of Doordarshan might have noticed that it is almost a common practice that audio levels are much higher in advertisements than preceding or succeeding programmes.

Fear and Superstition

Advertisements must not without justifiable reason play on fear.

No advertisement should exploit the superstition.

Other Unacceptable Forms

Advertisements for products or services coming within the recognised character of, or specially concerned with, the following are not acceptable :

- a) matrimonial agencies and correspondence clubs;
- b) fortune-tellers and the like;
- c) services associated with death or burial;
- d) organisations/companies/persons seeking to advertise for the purpose of betting including lotteries;
- e) cigarettes, cigarette tobacco, bidis and chewing tobacco;
- f) private investigation agencies;
- g) privately owned advisory services related to personal or consumer problems;
- h) habit-forming or addictive eatables such as Pan Masala.
- i) appeal for free use of drugs or medicinal preparations directed specially to children such as Hajmola.

Indirect Advertising

An advertisement for an acceptable product or service may be unacceptable should it seem that its main purpose would be to publicise indirectly the unacceptable product. For example, advertisements for soda by liquor manufacturers.

Simulated Matter

No simulation of a television news bulletin or news flash should be included in any programme, or in any promotion, without the appropriate Authority having given its express previous approval in each case.

GUIDELINES ON THE INSERTION OF ADVERTISEMENTS

Advertising Breaks :

Spot advertisements may appear in the natural breaks occurring during the telecast.

The physical boundary between programming and advertisements should be highlighted by a suitable device in vision and/or sound.

Note: A natural break is a point in programming where some interruption in continuity would occur whether or not advertising were telecast.

The most obvious example, of course, is the interval between individual programmes. Other examples, would be between the scenes of a play or film, half-time in a football match or the end of a round of questions in a quiz show.

What is a 'suitable device' will entirely depend upon the programme and discretion of the programmer. In a film or play it might be an 'end of part one' caption and in other cases a presenter may say "we will be back after the break". Even a momentary fade to black may suffice in some cases.

'Ad flashes' deserve special mention, being textual messages superimposed on the screen. Where they overlay programming they should be isolated in a separate band of colour on the screen to preserve a physical separation.

General Presentation

Advertisements should be inserted in programme services so as not to cause:

- distaste or offence in their juxtaposition to programming.
- Confusion with programming.

Confusion will normally result where :

- ad advertisement's theme, setting or title resembles that of a programme.
- An actor or presenter in an advertisement adopts a similar character or role to that in a programme.

In either circumstance, the advertisement should be differentiated from the programme.

Note : This sets out the two major principles to be borne in mind when scheduling commercials. Aside from these, and any directions as to the amount of advertising which may be carried, there are no presentation rules dealing with the length of advertising spots, or breaks, or which establish any kind of advertising pattern; such matters are left entirely to the Programmer's discretion.

As to good taste etc., care is required in the selection of advertisements appearing adjacent to e.g. religious discussion programmes or documentaries containing harrowing scenes. Similarly advertisements which may be alarming to some should be scheduled thoughtfully. Programmes showing plight of women should not be interrupted or followed by an advertisement showing scantily clad woman in a soap advertisement etc.

Confusion of advertising and programming would occur, for example, where a programme presenter was also the presenter in an adjacent advertisement, or alternatively the same studio set was used both for programme and adjacent commercial. Neither alternative is ruled out (in the interests of producing cost effective advertisements) but in such cases there should be a time separation of one complete advertising break or at least 15 minutes (whichever first occurs between programme and advertisement).

News Readers and Programme Presenters :

News Readers or Programmer Presenters should not be permitted to appear in Advertisements or even in TV dramas.

RESTRICTED / PROHIBITED SPONSORS AND PROGRAMMERS

Unacceptable products

Goods or services which are excluded from advertising by the Advertising Code (e.g. Cigarettes), are not acceptable for sponsorship.

No sponsor's credit is acceptable which, in the Service Provider's opinion, would publicise directly or indirectly, any goods or services so excluded.

A sponsor is not acceptable for a particular programme if his advertisements could not appear in or around that programme.

Political Sponsorship

Any organisation whose aims and objectives are wholly or mainly of a political nature is prohibited from programme sponsorship.

Sponsorship by non-political organisations is not acceptable where the sponsoring of a programme is directed towards any political end or has any relation to any industrial dispute.

News and Current Affairs

News and current affairs programmes shall not be allowed to be sponsored.

Others

Sponsorship of any programme is not permissible, in case of prohibited sponsors and, in particular, sponsorship of an event by a cigarette brand or brands of Alcoholic drinks, or tobacco house will not be acceptable.

The use of a company's house name of tobacco or Alcoholic drink manufacturer as an underwriting or commissioning credit would be unacceptable as indirectly publicising cigarettes/alcoholic drink.

In regard to undue visual emphasis on Commercial Products in a Programme, some considerations might be :

- (i) Are these products/services consonant with the argument or germane to the plot of the programme, or are they obtrusive and contrived? Would a viewer be left wondering why they had been included?
- (ii) Is the camera dwelling on the products/services? Are they in close-up for no good reason?
- (iii) Without the opening or closing credits, would it be possible to deduce the identity of the sponsor?

Advertising and Children

Particular care should be taken over advertising that is likely to be seen or heard by large numbers of children and advertisements in which children are to be employed.

Foreign Brand Products

The Government or appropriate authority may at its discretion require confirmation that such advertisements are acceptable under the laws and regulations of the country constituting the primary target for the advertising.

Child Audience

No product or service may be advertised and no method of advertising may be used, in association with a programme intended for children or which large numbers of children are likely to see or hear, which might result in harm to them physically, mentally or morally and no method of advertising may be employed which takes advantage of the natural credulity and sense of loyalty of children. Children's ability to distinguish between fact and fantasy will vary according to their age and individual personality. With this in mind, no unreasonable expectation of performance of toys and games must be simulated by the excessive use of imaginary backgrounds or special effects.

In particular

- a) No advertisements which encourages children to enter strange places or to converse with strangers in an effort to collect coupons, wrappers, labels, etc. should be allowed. The details of any collecting scheme must be submitted for investigation to ensure that the schemes contains no element of danger to children.
- b) Advertisement must not directly urge children to purchase or to ask their parents or others to make enquiries or purchases.
- c) No advertisement for a commercial product or service should be allowed if it contains any appeal to children which suggests in any way that unless the children themselves buy or encourage other people to buy the product or service they will be failing in some duty or lacking in loyalty towards some person or organisation whether that person or organisation is the one making the appeal or not.
- d) No advertisement should be allowed which leads children to believe that if they do not own the product advertised they will be inferior in some way to other children or that they are liable to be held in contempt or ridicule for not owning it.
- e) If there is to be a reference to a competition for children in an advertisement, the published rules must be submitted for approval before the advertisement can be accepted. The value of the prizes and the chances of winning one must not be exaggerated.
- f) Advertisement for toys, games and other products of interest to children must not mislead, taking into account the child's immaturity of judgement and experience.
 - (i) the true size and scale of the product must be made easy to judge, preferably by showing it in relation to some common object by which its size and scale can clear whether the toy is made to move mechanically or through manual operation.
 - (ii) treatment which reflects the toy or game seen in action through the child's eyes or in which real-life counterparts of a toy are seen working must be used with due restraint. There must be no confusion as to the noise produced by the toy - e.g. a toy racing car and its real-life counterpart.
- g) Cartoon characters and puppets featured in children's programmes and regular presenters of such programmes must not expressly recommend products or services of special interest to children or be shown using the product. This prohibition does not extend to public service advertisements not to cartoon characters or puppets especially created for advertisements.

Prices

Advertisements for toys games and similar products must include an indication of their price. If parts, accessories or batteries which a child might reasonably suppose to be part of a normal purchase are available only at extra cost, this must be made clear. The cost must not be minimised by the use of words such as 'only' or 'just'.

Health and hygiene

Advertisements shall not encourage persistent eating throughout the day or the eating of sweet, sticky foods at bed-time. Advertisements for confectionery or snack foods shall not suggest that such products may be substituted for proper meals.

Behaviour Easily Imitated by Children

The portrayal of dangerous behaviour easily imitated by children, including the use of offensive weapons or articles readily accessible to them, should be avoided, and should be excluded at times when it is likely that large numbers of children will be viewing.

THE CHILD IN ADVERTISEMENTS

Contributions to Safety

Any situations in which children are to be seen or heard in advertisements should be carefully considered from the point of view of safety if children are participating.

In particular :

- (i) Children should not appear to be unattended in street scenes unless they are obviously old enough to be responsible for their own safety; should not be shown playing on the road, unless it is clearly shown to be a play-street or the other safe area; should not be shown stepping carelessly off the pavement or crossing the road without due care; in busy street scenes they should be seen to use pedestrian crossings to cross the road; and should be otherwise seen in general, as pedestrians or cyclists, to behave in accordance with the relevant traffic rules.
- (ii) Children should not be seen leaning dangerously out of windows or overbridges, or climbing dangerous cliffs.
- (iii) Small children should not be shown climbing up to high shelves or reaching up to a height to take things from a table above their heads.
- (iv) Medicines, disinfectants, antiseptics and caustic substances must not be shown within reach of children without close parental supervision, nor should children be shown using these products in any way.
- (v) Children must not be shown using matches or any gas, paraffin, petrol, mechanical or any such appliance which could lead to their suffering burns, electrical shock or other injury.

Good Managers and Behaviour

Children in advertisements should be reasonably well-mannered and well-behaved.

Children as Presenters

Children must not be used formally to present products or services which they could not be expected to buy themselves, nor must they make in relation to any product or service, significant comments on characteristics on which they cannot be expected to have direct knowledge.

Testimonials

Children must not be used to give formalised personal testimony. This will not, however, normally preclude children giving spontaneous comments on matters in which they would have an obvious national interest.

INDUSTRY AND TRADE PUBLICITY**Trade Descriptions and Claims**

No advertisement may contain any descriptions, claims or illustrations which directly or by implication mislead about the product or service advertised or about its suitability for the purpose recommended.

In Particular

- a) Special Claims - No advertisement shall contain any reference which is likely to lead the public to assume that the product advertised, or an ingredient, has some special property or quality which is incapable of being established.
- b) Scientific Terms and Statistics – Scientific Terms, statistics, quotation from technical literature and the like must be used with a proper sense of responsibility to the ordinary viewer or listener. Irrelevant data and scientific jargon must not be used to make claims which appear to have a scientific basis they do not possess. Statistics of limited validity should not be presented in such a way as to make it appear that they are universally valid.

Advertisers and their agencies must be prepared to produce evidence to substantiate any descriptions, claims or illustrations.

Price Claims

Visual and verbal presentations of actual and comparative prices and cost must be accurate and incapable of misleading by undue emphasis or distortion.

Comparisons

Advertisements containing comparisons with other advertisers or other products, are permissible in the interest of vigorous competition and public information, provided they comply with the following observations.

All comparative advertisements should respect the principles of fair competition and should be so designed that there is no likelihood of the consumer being misled as a result of the comparison, either about the product advertised or that with which it is compared.

The subject matter of a comparison should not be chosen in such a way as to confer an artificial advantage upon the advertiser.

Points of comparison should be based on facts which can be substantiated and should not be unfairly selected.

In particular

- a) The basis of comparison should be the same for all the products being compared and should be clearly stated in advertisement so that it can be seen that like is being compared with like.
- b) Where terms are listed and compared with those of competitors' products, the list should be complete or else the advertisement should make clear that the items are only a selection.
- c) Advertisement should not unfairly attack or discredit other products, advertisers or advertisements directly or by implication.

Reproduction Techniques

It is accepted that on television the technical limitations of photograph can lead to difficulties in securing a faithful portrayal of a subject, and that the use of special techniques or substitute materials may be necessary to overcome these difficulties. These techniques must not be abused; no advertisement in which they have been used will be acceptable, unless the resultant picture presents a fair and reasonable impression of the product or its effects and is not such as to mislead. Unacceptable devices include, for example, the use of glass or plastic sheeting to simulate the effects of floor or furniture polishes.

Testimonials

Testimonials must be genuine and must not be used in a manner likely to mislead. Advertisers and their agencies must produce evidence in support of any testimonial and any claims therein.

Guarantees

No advertisement may contain the words 'guarantee' or 'guaranteed', 'warranty', or 'warranted', or words having the same meaning, unless the full terms of the guarantee are available for inspection and are clearly set out in the advertisement or are made available to the purchaser in writing at the point of sale or with the goods. In all cases, the terms must include details of the remedial action open to the purchasers. No advertisement may contain a direct or implied reference to a guarantee which purports to take away or diminish the rights of a purchaser.

Intertial Selling

No advertisement will be accepted from advertisers who send the goods advertised, or additional goods, without authority from the recipient.

Imitation

Any imitation likely to mislead viewers, even though it is not of such a kind as to give rise to a legal action for infringement of copyright or for 'passing off', must be avoided.

Use of the Word 'Free'

Advertisement must not describe goods or samples as 'free' unless the goods or samples are supplied at no cost or no extra cost (other than actual postage or carriage) to the recipient. A trial may be described as 'free' although the customer is expected to pay the cost of returning the goods, provided that the advertisement makes clear the customer's obligation to do so.

Competitions

Advertisements inviting the public to take part in competitions which normally require the presence of an element of skill shall be accepted only if arrangements have been made for prospective entrants to obtain printed details of the conditions governing the competition, the announcement of results and the distribution of prizes. Any special conditions governing entry to the competition must be given in the advertisement.

Homework Schemes

Full particulars of any schemes must be supplied and where it is proposed to make a charge for the raw materials or components and where the advertiser offers to buy back the goods made by the homemaker, the advertisement is not acceptable.

Instructional Courses

Advertisement offering courses of instruction in trades or subjects leading up to professional or technical examinations must not imply the promise of employment or exaggerate the opportunity of employment or remuneration alleged to be open to those taking such courses; neither should they offer unrecognised 'degrees' or qualifications. Advertisements by correspondence schools and colleges will normally be accepted only from those granted accreditation by the Central/State Government authorities.

Mail Order Advertising

Advertisements for goods offered by mail order will not be accepted unless :

- a) Arrangements have been made for enquirers to be informed of the name and full address of the advertiser if this is not given in the advertisement.
- b) Adequate arrangements exist at that address for enquiries to be handled by a responsible person available on the premises during normal business hours.
- c) Samples of the goods advertised are made available there for public inspection.
- d) An undertaking has been received from the advertiser that money will be refunded in full to buyers who can show justifiable case for dissatisfaction with their purchases or with delay in delivery.

Advertisers who offer goods by Mail Order must be prepared to meet any reasonable demand created by their advertising and should be prepared to demonstrate, or where practicable to supply samples of the goods advertised, to the monitoring agency.

Direct Sale Advertising

Direct sale advertising is that placed by the advertiser with the intention that the articles or services advertised, or some other merchandise or services, shall be sold or provided at the home of the person responding to the advertisement. Where it is the intention of the advertiser to send a representative to call on persons responding to the advertisement, such fact must be apparent from the advertisement or from the particulars subsequently supplied and the respondent must be given adequate opportunity of refusing any call.

Direct sale advertisements are not acceptable without adequate assurances from the advertiser and his advertising agency :

- a) that the merchandise advertised will be supplied at the price stated in the advertisement within a reasonable time from stocks sufficient to meet potential demand, and
- b) that sales representatives calling upon persons responding to the advertisement will demonstrate and make available for the sale the articles advertised.

It will be taken as prima facie evidence of misleading and unacceptable 'bait' advertising for the purpose of 'switch selling' if an advertiser's sales representatives seriously disparage or belittle the cheaper product advertised or report unreasonable delays in obtaining delivery or otherwise put difficulties in the way of its purchase.

Alcoholic Drinks

Advertisement of all alcoholic drinks should be totally prohibited.

Other Habit-forming Products

No advertisement for such products may feature any personality whose example people under 18 are likely to follow or who have a particular appeal to people under 18.

Advertisements may not imply that such products are essential to social success or acceptance or that refusal is a sign of weakness. Nor should it be implied that the successful outcome of a social occasion is dependent upon the consumption of such products.

While advertisements may refer to refreshment after physical performance, they must not give any impression that performance can be improved by such products unless it has been clinically established by independent study. e.g. Advertisement for Glucose.

No advertisement for such products may publicise a competition or other sales promotion which entails or encourages intake beyond clinically permissible limit e.g. Hajmola.

Advertisement must neither claim nor suggest that such products can contribute towards sexual success.

No advertisement should suggest that such products are an essential attribute of masculinity. Treatments featuring daring, toughness or bravado in association with drinking must not be used.

Medicinal Products

Unacceptable Products or Services

Advertisements for products or services coming within the recognised character of, or specifically concerned with the following are not acceptable unless so authorised by the Government or the appropriate authority.

- a) smoking cures - this does not preclude smoking deterrents which have been specifically approved by the relevant Government authorities;
- b) products for treatment of alcoholism
- c) clinics for the treatment of hair and scalp;
- d) pregnancy testing services
- e) hypnosis, hypotherapy, psychology, psycho-analysis or psychiatry.

Impression of Professional Advice and Support

The following are not allowable :

- a) presentations of doctors, dentists, veterinary surgeons, pharmaceutical chemists, nurses, midwives, etc. which given the impression of professional advice or recommendations;
- b) statements giving the impression of professional advice or recommendation by persons who appear in the advertisements and who are presented, either directly or by implication, as being qualified to give such advice or recommendation. To avoid misunderstanding about the status of the presenter of a medicine or treatment, it may be necessary to establish positively in the course of an advertisement that the presenter is not a professionally qualified adviser; an
- c) references to approval of, or preference for, the products or its ingredients or their use by the medical or veterinary professions.

Establishments Offering Slimming Treatments

Advertisements of establishments which offer or provide treatment aimed at the achievement of weight loss or figure control will be accepted only if :

- a) such treatments are based upon dietary control, the availability of which is referred to in the advertisement'
- b) medical opinion confirms that such treatments are likely to be effective and will not lead to harm, and any claims made are justified.
- c) Any financial and other contractual conditions are made available in writing to respondents prior to commitment.

Celebrity Testimonials and Presentations

No advertisement for a medicine or treatment may include a testimonial or be presented by a person well-known in public life, sport, entertainment, etc;

No advertisement shall employ any words, phrases or illustrations which claim or imply the cure of any ailment, illness or disease, as distinct from the relief of its symptoms.

Diagnosis, Prescription or Treatment by Correspondence

No advertisement shall contain any offer to diagnose, advise or prescribe or treat by correspondence.

Encouragement of Excess

No advertisement shall encourage, directly or indirectly, indiscriminate, unnecessary or excessive use of products.

Exaggeration

No advertisement shall make exaggerated claims, in particular through the selection of testimonials or other evidence unrepresentative of a product's effectiveness, or by claiming that it possesses some special property, the authenticity of which is incapable of being established.

Analgesics

It is accepted that the relief of pain, such as headache, may consequently ease tension. But no simple or compound analgesic shall be advertised for the direct relief of tension. In such advertisements there must be no reference to depression.

USER SAFETY

Safety and the Protection of Children

No advertisement shall encourage the adoption of any unsafe practices especially by children.

Safety Oriented Products

Products which involve user-safety like electrical appliances and for which Indian Standard has been prescribed by the Bureau of Indian Standards (BIS) should be allowed to be advertised only if they are approved by a recognised standards inspection organisation by BIS and have an ISI mark.

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