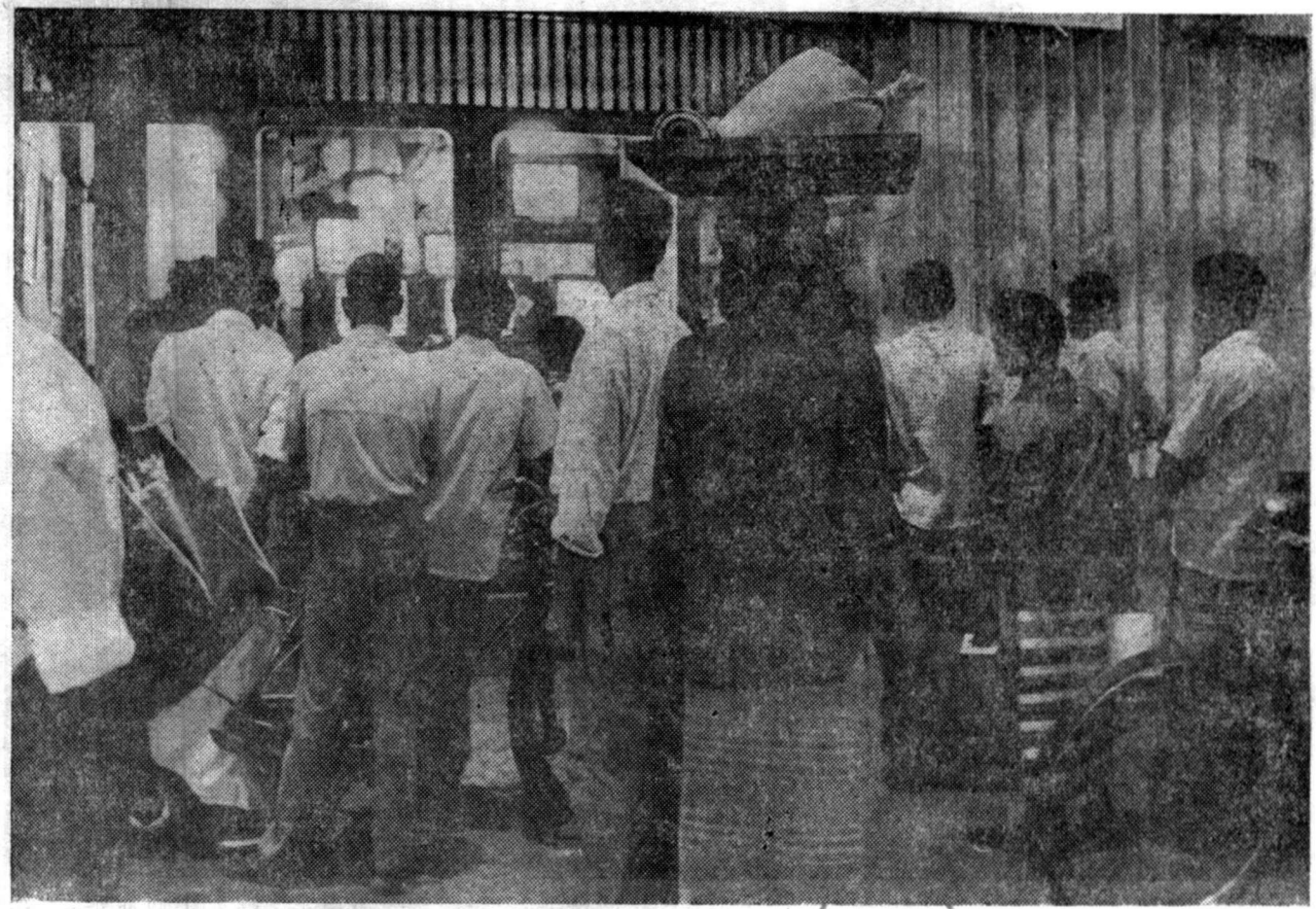


Television Comes to SRI LANKA

Television first came to Sri Lanka in April 1979 in the form a of private commercial TV station which has now been taken over by the state. Work on the big national network scheduled to come into operation in 1981 is now going on apace. This special report in the "Economic Review" deals with the varied aspects of the introduction of TV to Sri Lanka. It deals with the technological history of Television, its affinity with other older forms of presenting an image, (*see box on page* 10 *and* 11) its cultural impact both positive and negative, its economies and its future as a medium. Television is an exciting and a controversial medium and there is a large literature on it in the developed countries. We hope that this issue will provide the essential background for informed opinion and debate in the Sri Lankan context.

The Story of TV—The Early Years

In the industrialised nations of the world, particularly the North American and European continents and Japan, the most modern of communication media—television—has been in existence and thriving for a little less than 30 years. However, preliminary work on T.V. or as it was then called, the "magic box", has been attributed to a 19th century Berlin student—Paul Nipkow—who had conceived the idea in order to transmit a picture by electric current; it would have to be diffused into tiny points, brighter and dimmer ones similar to reproducing a newspaper picture. His primitive equipment were a disc-shaped cardboard containing a chain of minute holes arranged in the form of a spiral near the edge of the disc and a rectangular receiving screen. The picture to be transmitted had to be "scanned" continuously by the holes in the fast-rotating disc.

Young Nipkow was granted a patent for his invention in 1884, but he did not have the necessary resources to pursue this project and he went in for a job as a railway signalling engineer after he had let the world know of his invention. In the next decade, a British scientist, Sir William Crookes, invented the Cathode Ray Tube (CRT) which basically is a device to change electrical energy into light and through which a stream of electrons flow. The tube was subsequently converted into a mass means of controlling electrical fluctuations at

great speed. In the same decade, Professor Ferdinand Braun of Strasbourgh University got the idea of coating the inside of the wide end of the CRT with some fluroescent emulsion so that the beam or stream of electrons hitting it would be more visible. The "Braun" tube was meant for other scientific research. Ten years later an English inventor, A. A. Campbell Swinton improved on the "Braun Tube" which was later to become the "heart" of his experimental TV system. Today the front end of this same flourescent tube has become our TV receiver screen. The new communications system still had a host of imperfections. John Logie Baird, the son of a Scottish clergyman, who had given up his career as an engineer because of poor health, stepped in with the meagre resources at his disposal. With a heap of odds and ends purchased from a Hastings junk shop, Baird succeeded after two years of experimentation, to transmit the flickering shadow of a cross over a distance of nearly 5 yards. In the process he accidentally touched a naked wire almost killing himself and fell in a heap. The local newspaper published the sensational story of the TV inventor and the World Press played it up across the continents. Band moved to Soho and in his attic, worked frantically on his still imperfect device. He succeeded in transmitting the impression of the head of a doll with every one of the doll's features clearly visible in the received picture. Baird's instant reactions was that he ran next door, brought in an office tea-boy, William Taynton, and substituted his face for the doll.

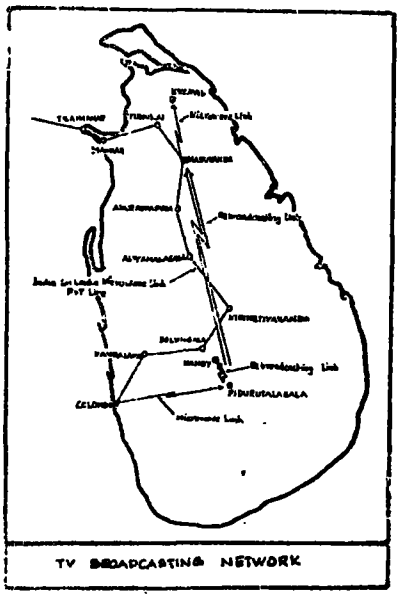
And thus, Tea-boy Taynton earned the unique distinction in history of owning the first human face to be televised. Baird's original apparatus and the doll are still exhibited at the South Kensingtor Science Museum in England. In January, 1926, Baird, well on the way to further success, demonstrated his invention to distinguished members of the Royal Institute. He had managed to prove for the first time that it was possible to photograph and reproduce moving scenes instantly. His financial trouble ended and next came the "Baird Company". By 1925 Baird had built a respectable looking model at his new laboratory in

TV IN SRI LANKA

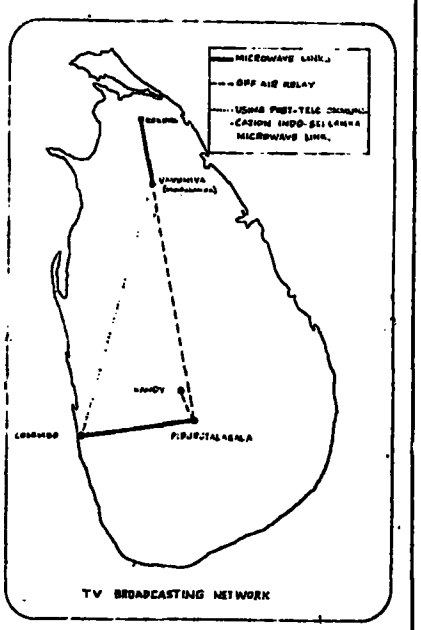
The outlines of the TV systems being introduced into Sri Lanka are now known. There will be in essence two networks: the national network and the other a private one. The government network will have two main transmitters located at Pidurutalagala and at Kokuvil in the North. In addition there will be a low power station in Kandy. These stations will cover 87 percent of the area of the island containing 84 percent of the population. Initially it is expected that the national network would limit itself to a two-hour transmission in the morning beaming educational material and to two to three hours of entertainment material in the evening.

The studio centre for the national network will be located in Colombo and would have a capacity to produce programmes for a duration of five to six hours. This centre will be connected to the Pidurutalagala transmitting station by a microwave line. This studio will control and supervise the transmitting station at Pidurutalagala.

Sri Lanka is going straight to the colour TV system on the assumption that black and white TV first introduced and later converted into colour would be very costly. Sri Lanka uses the PAL 625 system developed initially by Telefunken of Germany and now standard in most parts of the World apart from France and Eastern Europe which uses the French SECAN system.



The national TV network is being provided by an outright gift worth Rs. 270 million by the Japanese government



(See box on page 6) and will be operational by mid 1981. The private TV system (which has since then been acquired by government) began transmitting in April 1979 from a small transmitter at Pannipitiya. This was intended to be a forerunner to the national network for introducing TV as a medium to the public and for initiating infrastructure development for the new medium. The latter was to include dealers and service personnel as well as advertising material. Defned in these terms, this exercise has proved a considerable success with several TV dealers already in business and many newcomers coming into the field every month.

The biggest problem for TV in a Third World country like Sri Lanka would be programme material (software) and not so much the technicalities of setting up a TV network. It is cheaper to buy software from abroad with the obvious implications that the packages so bought would not necessarily fit requirements of local audiences. The effects and implications of such influences are well known and have been often documented elsewhere as we have indicated in other material in this issue.

The Ministry of State is attempting to give serious attention to the problem of software by means of the National Television Planning Centre. The Centre is expected to come up with ideas as to what must go into TV in fields such as agriculture, education etc. The organisational mechanism for this is to be by drawing specialists from various government organisations, as well as by international agencies who will provide a "think tank" for the industry.

Long Acre, London, from where he was transmitting pictures to New York and even to a liner in mid-Atlantic.

Later Developments

BBC Radio which was then monopolising radio transmission clashed headlong with Baird. Radio was their monopoly communication system and Baird's TV was an 'intruder'. The British Parliament appointed a Commission to study the matter and thus by a decree of 1929, the BBC was forced by Parliament to start experimental transmissions with Baird's equipment: though regular BBC Television service transmission began only in 1936.

The Radio Corporation of America (RCA), Marconi Company and the Electrical and Musical Industries (EMI), not to be outdone, were now becoming formidable rivals to the BBC and in 1939 the National Broadcasting Corporation (NBC) began a regular television broadcasting service in the United States. Baird's System was based on the mechanical scanning and re-assembling of pictures which limited their "definition" the number of light points transmitted which in turn formed lines—as each revolution of the scanning disc was one picture line. The most the Baird's disc could subsequently produce was 240 lines. The US Radio Companies were working on a completely different system of producing picture lines through the genius of a Russian-born American inventor, Dr. V. K. Zworgkin, who invented an electronic TV camera known as the "Iconoscope". This "Electronic Gun", as technicians called it, is an electronic replica of the human eye. The lens cast the image of what it sees on a plate inside a vacuum tube. The main part of the receiving set is a large cathode-ray tube, whose wide end, with its flourescent coating, provides the screen on which the televised picture appears. As against the 240, lines that Baird was able to produce the new iconoscope worked with 405 lines and therefore gave a much clearer defined image. But it was with this that the world's first regular television service in Northern London began on November 2, 1936. For a while the BBC alternated both systems—that of Baird and the Iconoscope, but months later, the Baird dropped out of the race. TV as a public service in Britain had just passed its experimental stage when the second world war broke out in 1939 and the BBC television service was closed down for security reasons. It was resumed only in 1946 and in 1948 the first live "outside" broadcast was televised in Britain. By an Act of Parliament, the BBCs monopoly was broken when a rival television network—Independent Television Authority was established in the mid-fifties and financed solely by advertising. Their news service, however, was to be the responsibility of a separate, non-profit making company, namely, Independent Television News (ITN). Around this time British, American, Japanese, French and German laboratories were frantically working on ways and means of introducing colour television, the basic principle being that instead of one electronic gun as used in black and white television, there had to be three electronic guns in the camera, one for each of the primary colours—red, green and blue. The first regular transmission of colour television pictures began in USA in 1955.

When in the early 1950's, the Americans offered to the world their NTSC system, other countries not to be outdone had to join the race. These countries were divided in their preferences; in 1966 Great Britain and the Federal Republic of Germany began colour broadcasting in the PAL system, while in the same year France and the Soviet Union also introduced colour adopting the SECAM system. Earlier in the USA public broadcasting had begun in 1954 using the NTSC system. This same system was adopted by Japan, where it came into service in 1960. The Japanese however, hastened the manufacture of receivers for all these systems. Britain's BBC and ITV began their regular colour TV service only in 1966, though the British colour TV system was demonstrated as early as 1957. By the 1970s one or the other of the three TV systems was being adopted by all countries that had introduced television.

In the early years, TV programmes were relayed either live, or recorded on film and then fed into the transmitter by a special projector. But in 1953, the Radio Corporation of America (RCA) brought about a major revolution in the field of recording by the introduction of the video-tape or magnetic tape on which programmes could be recorded in both black/white and colour. One of the pioneers of video-tape was A. M. Poniatoff, an American engineer of Russian parentage whose original magnetic tape called AMPEX is now a worldwide household word. AMPEX stands for his initials. By 1960, when BEC TV moved into its TV Centre in White City, West London, fourteen Ampex recorders had already been installed.

The search continued for a wider and new variety of uses of TV. One more landmark in TV history was notched up when Telestar the communication satellite that was positioned in orbit made possible the first transatlantic transmission. It is today receiving and transmitting programmes from North America to Europe and vice versa. But in 1965 the satellite, Early Bird started the age of the 'synchronous' satellite—apparently standing still above the earth so that it is continually within range of its ground stations, yet in fact keeping pace with the rotation of our planet at a height of 35,700 km. above it. With the gradual spread of TV to nearly a hundred countries, there are today dozens of communication satellites whose TV signals are picked up by disc-shaped earth aerials installed in all continents. France and Britain are experimenting with a joint satellite and

Overspending on Antennas

Professor K. K. Y. W. Perera, Professor of Electrical Engineering at the Moratuwa University has calculated that an antenna correctly tuned to the channel 12 of the present T.V. station could be manufactured for about Rs. 60/-. In fact a leading local manufacturer is retailing these for about Rs. 100/-. Yet, there are costly imports and attempts to oversell antennas: some imported costing as high as Rs. 2,000/- together with a booster (the cost of a cheap black and white set). These expensive imported antennas could marginally increase reception because of the extra reflectors used. However, they could also absorb a high degree of random noise, tending to blur the picture. Simple advice: Buy or manufacture your own low cost antenna with a few feet of aluminium tubing and a short PVC pipe.

by next year there could well be over 200 such pieces of hardware orbiting or hovering high in the sky.

Television's greatest moment to-date, however is undoubtedly linked to the historic landing of the first man on the moon. Neil Armstrong was 384,000 km. distant from earth at the time that live pictures from an automatic camera, set near the landing-module, were seen by more than an estimated 600 million people At Parkes, Australia, a 70m-wide radio telescope picked up the signals, converted them into television micro-waves and sent them via satellite to Houston, Texas, from where they were instantly relayed to the whole world. TV's potential to change man's life-style is perhaps limitless, and the communications satellite, further improved, is bound to be its closest ally, for as US President Johnson once said: "The communications satellite knows no geographic boundary, is dependent on no cable, owes allegiance to no single language or political philosophy".

By the early 70s the total number of receivers in use throughout the world was about 275 million, more than two third of these being used in the affluent industrialised countries. More than 1/3 of these 275 million were in the United States, 18 million in the United Kingdom, 8 million in Canada, 25 million in Japan, 28 million in France, 70 million in West Germany and 10 million in Italy. At this stage the technically more reputed colour television was also beginning to replace the standard black and white receiver. In the early 70s more than 40 million colour sets were in the world. Of this more than 31 million were in the United States where the purchasers of colour television sets were exceeding sales of domestically manufactured black and white, 5 million were in Japan and the others in West Germany, Canada and Italy.

TOWARDS FUTURE TV

By using the colour TV system Sri Lanka's TV has leaped over the black and white stage (although a critical analysis of the economics of colour television versus black and white for a poor third world country might indicate a different choice). In technical laboratories all over the world—as well as in a small production unit of electronic companies—there is underway the development of new television possibilities that could become standard fare in the industrialised countries within the next decade or so. We document some of these.

Worldwide TV reception based on satellite transmission. Present television transmissions are limited to line-of-sight transmission which means that a country has to be dotted with micro-wave repeating stations. Satellite transmissions that exists today are those capable of being received by only a large antenna as the one at Padukka. In the future small home antennas pointed towards a geo-stationary satellite could receive broadcasts directly from all parts of the world. Possibilities of tuning to the world services now restricted only to short wave radio would thus extend to TV.

Cable television is today used in the US for transmitting several video programmes to homes thus making possible an array of programmes. Optical fibres which are about a size of a human hair can be used to transmit a large number of information channels. This would allow several television shows as well as linking the TV to a computing centre with a large Data bank. Such a link when combined with a home computer (home computers have now come down drastically in price; some now cost not more than a colour television set). should allow a total electronic information and control system within the house.

The availability of multi-channel TV would lessen the propaganda control of TV to some extent. Cable television could always have some degree of talk-back so that a participatory system would result.

3D AND WALL TV: Experiments in holography micro-miniaturisation and the use of liquid crystals have brought closely the television set hung on a wall (like a picture) with a three dimensional image. These developments could mature within the next decade with mass production occurring in the 1990s.

The existing video cassettes are expensive and cumbersome and several manufactures have experimented with cheaper video cassettes and with laser operated discs. This would allow films or other programmes being reproduced at the home television cheaply like present sound discs and sound cassettes.

TV GAMES: There are already in Sri Lanka television games costing about Rs. 300/- that can be plugged on to a Television set for playing games of skill. In the industrialised world the number of more sophisticated TV games allowing much more excitement and challenge when connected to a micro-check information processor are on the market. These allow games like chess or games of strategy like war games. These at the moment are expensive, but with the rapid drop in prices now occurring they may be afforded by large segments of the Sri Lankan population in the not too distant future.

JAPANESE TV AID

The Government of Japan has granted aid to the value of Rs. 269.23 million to the Government of Sri Lanka towards reinforcing and expanding the island's TV network. The folowing sums of money have been set apart for this project:

Buildings and Towers	Rs. 116.700 m.
Equipment	Rs. 123.042 m.
Installation	Rs. 19.816 m.
Consultancy ..	Rs. 9.672 m.

The Government has already called for quotations from recognised TV establishmentsin Japan in order to carry out the installation work. It is expected that Japanese TV experts will act as consultants to this project.

TV AND VIOLENCE

Does the content of violence in TV programmes have a detrimental effect or influence upon children?

Where once the debate in Sri Lanka was confined to determining whether this country should embark on the TV project, it has now apparently shifted to ascertaining the kind of programmes that should be screened in view of the possible dangers on children and youth. At present, TV programmes are presented in Sri Lanka from around 6 p.m. to 10 p.m.—what in TV parlance is called 'prime time' in countries where Television is a night and day affair. As the Secretary, Ministry of State, recently remarked: "We are presently televising some of the popular American programmes of the early seventies, but negotiations are currently on with a view to obtaining some of the more popular programmes from Asian countries such as Malaysia, Japan, Thailand, Hongkong and Singapore."

Communications researchers in the United States, Canada, Britain, Japan etc. have, during the past two decades or more, conducted exhaustive research on programmes whose contents have been categorised as "least violent" and "most violent". One example of a programme which is currently being

serialised in Sri Lanka is 'Mannix.' Adult viewers here who have had occasion to view this particular programme need not necessarily be communication researchers in order to confirm that 'Mannix' has many moments of intense violence, but what ill-effects such violence could have on a child's mind has become the subject of research already.

In 1979, approximately a decade ago, three professional communicators from the University of Minnesota—Randal Murray, Richard Cole and Fred Fedler conducted experimental studies on the effect of TV violence on children. The following methodology was adopted. A Minneapolis high school with 812 students from Grade 9 to Grade 12 was selected in part because it aimed at a racial and socio-economic mix by bringing in students from various backgrounds. The study was conducted in three phases, the first to define (a) 'violence' and (b) rate the violent content of TV programmes, the second (a) to ascertain a violence exposure score for each student in the sample and (b) to gather data on variables to be analysed with viewing of violent and non-violent content; and the final phase to determine what type of content, students with high and low violent scores recalled from programmes viewed the previous night. Since polls already confirmed that 'teenagers are more apt to watch TV during the evening hours than at any time during the day, the research team selected prime time—6.30 p.m. to 10 p.m. for their study. In order to simplify data-collecting procedures, they selected at random, teenage judges from among the sample. These 41 judges defined three types of violence, namely physical, mental and verbal.

Paysical violence constituted violence to a person, noted damage to property and harm to animals, riots, breaking windows etc. Mental violence, meaning psychological or emotional aspects of violence, was defined variously as anxiety or fear, hatred or prejudice, jealousy or greed. Verbal violence was defined as harsh swearing, verbal attacks, name-calling etc. "Least Violent" and "Most Violent" content scores were rated on a 1–5 continuum.

The over-riding generality in the definitions was that violence is 'senseless and irrational' and usually occurs without good reason. Respondents listed 20 regular programmes as "least violent", which included Family Affair, The Carol Burnett Show, This is Tom Jones, Here's Lucy and the Music Scene. The violence rating for these programmes ranged from 1 to 1.455.

Out of the 20 'Most Violent' programmes listed, the FBI programme headed with a violence rating of 3.4, Hawaii Five-0 (3.3) and Mannix (3.2). One significant finding was that the male respondents recalled more violence than females did.

Similar studies carried out on TV violence have brought out findings indicating that violence may "contribute to the rising rate of juvenile delinquency by showing methods used by criminals and by presenting crime as a common and sometimes acceptable activity, reduce the amount of time that children spend in more desirable activities, induce passivity, increase tension, serve as an escape from reality and disrupt normal family relationship. Such studies have also revealed that (1) children devote a significant portion of their free time to TV viewing and (2) programmes shown on TV frequently portray violent acts and (3) programme sponsors obtain maximum commercial benefits through advertising of products when the content of violence is at its maximum. However, like the exception to the rule, the ongoing American TV programme, "ALL IN THE FAMILY" which has been rated as least violent, is believed to be the most popular family entertainment programme throughout North America.

If the foregoing findings are any indication of the possible effect of violent programme content on teenagers, researchers might expect to find that teenagers, including Sri Lankans, who spend a great deal of time watching TV, at the expense of study-time, particularly violent programmes, possess characteristics notably different from those teenagers who prefer less violent programmes. Other studies have been conducted on the characteristics of both adults and teenagers and the re-

fore their preference for either less violent or most violent programmes. It has been hypothesized that (1) respondents from predominantly male households tend to view more violent programmes (2) the reverse applies to predominantly female households (3) persons who practise their religious faith regularly watch fewer violent programmes and (4) colour-set viewers recall more violent incidents than black/white set viewers.

TV—SNIPPETS FROM AROUND THE WORLD

USA

It is generally accepted that Television is largely instrumental in reshaping American politics, American society and American manners. According to a survey made on the "viewing" habits of the American people, it is concluded that very few are very far from a TV set in the United States. By mid 1970s some 95 percent of all American house holds had at least one television set; these sets, on the average, were turned on about six hours per day. The television set, on the average, flickered more for women than for men, more for people over 50 than under 50. It appears accordingly that for most Americans Television watching in the mid-1970s has become the most frequent activity after work and sleep.

JAPAN

Television was introduced to Japan in 1953—nearly 28 years after the initiation of Japan's first public radio broadcasts. Today, T.V. Stations are even more densely established than radio; and a national administrative programme ensures that at minimum, three Television stations one for NHK—Nippon Hoso Kyoki—Japan Broadcasting system, one commercial station and one NHK—educational operated in each of Japan's 47 prefectures. In such major cities as Tokyo, Osaka, Kyoto, there is often a wide selection of TV broadcasting—Tokyo itself is provided with seven channels.

INDIA

TV was first introduced in India in 1959, on an experimental basis, sponsored by the UNESCO. At present there are 84 Akashavam (Radio stations and 13 Doordarshan Kendras (Centres). Akashavam covers 76.2% of the area and 87-75 of the population, in contrast to Doordarshan which covers 8% of the area and 14.9 of the population. The daily radio broadcast output extends over 252,743 hours in 25 Indian and foreign languages and 136 dialects. Doordarshan transmissions extend over 38 hours in 12 languages.

TV : THE TUBE OF ILLUSIONS

Tran Van Dinh

Professor Tran Van Dinh of the Department of Pan-African Studies, Temple University, Philadelphia, USA, wrote this for the Review *at the end of* 1977, *before it was decided to have TV in Sri Lanka.*

In August 1976, as a scholar specialized in the study of the non-aligned movement, I visited Sri Lanka to observe the 5th Non-Aligned Summit meeting. Upon my return to the United States, I discovered, without much surprise though, that a conference assembling 86 heads of state or government of the Third World, was practically ignored by the American mass media. The only article of some length datelined Colombo, which appeared in *The Washington Post* of August 20, 1977 was by its Southeast correspondent, Jay Mathews who visited Sri Lanka supposedly to cover the Summit meeting. Instead, he wrote a piece titled: LAND WITHOUT TELEVISION with a subtitle: "Deprived Sri Lankans Survive by Talking, Reading and Smashing a Festive Coconut". The article revealed a fact which also impressed me most during my stay in Sri Lanka, that "Sri Lankans are proud of their high literacy rate and tuition-free school systems. Even in ramshackle villages, teenagers can be seen leaning against coconut trees looking at newspapers." Jay Matthews who observed that "in the rest of Asia, television has become either a government propaganda tool or a bonanza for businessmen with lots of commercials and second-run American television series" asked people in Sri Lanka "why they haven't yet succumbed to the worldwide addiction to television?" The answer was "their debt-ridden economy simply can't afford it", but they offered other reasons for putting it low on their list of priorities". Some said that "television in whatever form would be too powerful a weapon in the hands of an unscrupulous government. Some government officials think it would distract people from their work".

Matthews of *The Washington Post* in his article also referred to a "lecture by a Buddhist scholar published in the "*Ceylon Daily News*". The unnamed scholar was quoted as having said that "television is just a medium of projecting consumer society ideals to the masses and it should be kept out of Sri Lanka because it only satisfies and encourages one's craving and the well-being of others tends to be neglected."

LAND WITHOUT TELEVISION attracted a great deal of interest and admiration for the sagacity of the government and the people of Sri Lanka, and when I was finally identified as the Buddhist scholar cited in the article, I became a sort of celebrity among my students and my colleagues in the communications' field. I was invited to talk about the LAND WITHOUT TELEVISION. My study on BUDDHIST-TAOIST VIEW OF TELEVISION published in the April and May 1976 issues of *World Buddhism* was reprinted by the thousands and circulated.

I mentioned the above article and its effect just to show the prevailing feeling in the United States, the TV land of the world, that TV has become a necessary evil, the producer of illusions par excellence. Thoughtful Americans, serious communications' researchers, are deeply concerned about TV's harmful effects on peoples, especially on peoples of the Third World whose major task is how to deal with the realities of underdevelopment and poverty resulting from centuries of Western colonial exploitation and cultural domination, rather than to be obsessed by the idea of "catching up with the West in every domain". They would be frightened at the spectacle of these countries thoughtlessly embracing TV the way they have consumed Coca and Pepsi Colas.

In the United States, the forces leading the fight against TV are the Christian churches. In a study published in the respected ecumenical weekly, *The Christian Century*, titled: MASS MEDIA'S MYTHIC WORLD: AT ODDS WITH CHRISTIAN VALUES, Mr. William F. Force, Assistant Secretary General for Communication at the (US) National Council of Churches, defines TV as "*indeed a window on the world. But a window by its very nature selects only a small piece of reality. And though its glass is transparent, it shuts out heat and cold, noise and smells: like the tinted glass in today's buses and airports, it may totally change the colour of everything, "out there". TV acts as a filter, selecting images, extracting unpleasant (and pleasant) elements, colouring others, and making a whole world seem real to us when it is in fact nothing more than bright phosphors dancing on a piece of glass.*" He then cited two well-known scientists who have studied the effects of TV: "Rudolf Arnheim, author of Visual Thinking, says that a child who enters school today faces" a 12 to 20 year apprenticeship in alienation". He points out that as soon as a child learns to name something, he or she begins to separate the self from it, and before long, learns to handle words and concepts, but at the risk of becoming estranged from the object talked about: The child learns to manipulate a world of words and numbers, but he or she does not learn to experience the real world. The child has been conditioned to live in our culture. Exposure to television for hours everyday simply further separates youngsters from the world of reality, or rather creates a new reality. Abraham Moles, Director of the Social Psychology Institute at Strasbourg, points out "*while television has been a cultural life buoy for farmers, lonely people and the impoverished, it has at the same time been a pressure towards the banal and also constricting for those already experiencing a communication-rich life. But in both cases, as the individual is exposed more and more to TV, he or she is a bit less able to differentiate between the fictional universe and the real world*". Although research continues to determine with more precision the effects of TV, the consensus in the US, the Mecca of TV, is that TV has and is causing serious damages to people, especially to children. Dr. George Gerbner, Dean of the School of Communication of the University of Pennsylvania, one of the major centres of communications' research, differentiated TV with other media. He wrote, "*Television is different from all other media. From the cradle to the grave, it penetrates nearly every home in the land. Unlike the newspapers and the magazines, television does not require literacy. Unlike the movies, it runs continuously, and once purchased, costs almost nothing. Unlike radio, it can show as well as tell. Unlike the theatre or movie, it does not require leaving your home. With virtually unlimited access, television both precedes literacy and increasingly preempts it.*". A result of his most recent research shows that "television dramatically demonstrates the power of authority in our society, and the risks involved in breaking society's rules. Violence-filled programs show who gets away with what, and against whom. It teaches the role of victim, and the acceptance of violence as a social reality we must learn to live with—or flee from. We have found that people who watch a lot of TV see the real world as more dangerous and frightening than those who watch very little. Heavy viewers are less trustful of their fellow citizens and more fearful of the real world". Marie Winn, well-known for her books for children and parents sees, in her recent work: The Plug-In Drug, the similarity between drug taking and TV watching and concludes that, "TV keeps half of the world in diapers". The adverse social effects of TV are best demonstrated indirectly by the citizens of a small town named Essex in California. They cannot receive TV signals because it is located in the mountainous Mojav Desert. The result is that in that town "everyone knows everyone". Kids are forced to talk with parents. Without TV people go out and make friends", reported the *New York Times* of December 13, 1976.

Despite all the known negative effects of TV, the TV industry in the United States continues to prosper and it is the most profitable commercial venture. (CBS Total Sales in 1976, 2.23 billion dollars). It is intoxicated with a sense of 'imperial power' as US TV programs like Coca and Pesi colas, have penetrated almost all corners of the earth. A TV producer: Gene Roddenberry (his famous creation was Star Trek) recounted in an interview in the Penthouse Magazine of March 1976: *I sat in a meeting many years ago where one of the heads of syndication was talking to some other syndicators. They were discussing the sales of programmes in Africa. At that time Africa had newly emerging states in*

turmoil. He said: "Don't give me the armies of Africa. I don't need the control of the governments. You give me television in Africa for ten years and in ten years I will own the Continent."

Today, many countries in Africa are having TV, and although CBS or NBC or ABC has not yet owned the African continent, TV's entry into Africa has produced most disturbing initial effects. In 'Zanzibar' which is the first and only place so far which has colour TV, the people remain very poor and "the same villages that have TV sets also have shops that stock little more than cooking oil and cigarettes and sometimes, the cooking oil runs short. Every night at 7.30 p.m. as children fall silent and old men gaze quizzically, 2½ hours of TV programming begins", according to the *Washington Post* of October 15, 1977. "In Dar-es-Salaam, self-proclaimed revolutionaries mix freely with blue-jean clad youths whose main preoccupation seems to be catching the latest Bruce Lee Kung-fu movie, stated the same source. In Japan, the TV land of the non-western world (almost all households have a TV set, 95% colour) "the poor watch TV over twice as much as the middle class", and according to Mrs. Kimiko Takizawa, leader of the Society for Responsible TV, TV is "a drug for the Japanese. It is also becoming a social and political problem" she writes in the *Atlas World Press Review* July 1977.

The damaging effects of the cultural penetration of Latin America by US telecorporations, TV programs and foreign branches of Madison Avenue advertising agencies are well documented and examined by Professor Alan Wells, a British-born, American educated sociologist in his book *Picture Tube Imperialism? The Impact of US Television on Latin America.*

On a personal level and as a Buddhist who oddly enough realizes the profound truth and reality of the human condition in the teachings of the Buddha while living in the TV land of USA, I believe that TV, by promoting selfish cravings, creating thought-fragmentation and preventing concentration-meditation, is essentially anti-Buddhist and is an obstacle of any human being's enlightenment. While Buddhism searches for the Ultimate Truth and Reality, TV intrinsically creates Myth, Magic, Monotony, leading to ignorance, surrender and blind acceptance of oppression.

I am not unrealistic or unscientific-minded enough to say that Third World countries should never use TV as a communication medium. I would simply submit that before a country decides to enter the TV land, under any form, government-owned or private owned, with or without advertising, commercial or educational, it must find the concrete answer to one single question: "How could it resist the Americanization of TV in the long run?" Needless to add that: "Television is expensive. The sets are expensive; production is expensive: It requires a great deal of electricity and employs vast amounts of talent in writing, in acting, in repair and maintenance. Whenever the government has kept television non-commercial, financing has been difficult, for the cost of keeping an adequate supply of interesting material in production to fill the air waves for many hours a day is horrendous". These words are from a leading, conservative American communication scholar, Dr. Ithiel de Sola Pool of the Massachusetts Institute of Technology in "Modernization: The Dynamics of Growth".

While going over the parts of this article dealing with the effects of TV, I can see how the people of Sri Lanka, armed with their common sense and their Buddhist heritage, have reached most of the same conclusions, as they expressed to Washington Post correspondent by Jay Matthews, and researchers in the US have spent years and millions of dollars to discover. I sincerely hope that Sri Lanka will remain a LAND WITHOUT TELEVISION, and with a vigorously literate and politically alert population it has today.

Despite these balanced studies, the issue remains controversial and often clouded by emotion. Researchers have either hypothesized or drawn conclusions on the effect of violent programme content on both adult and teenager by the use of a standard set of variables embracing a person's social, economical religious and cultural background. In Sri Lanka social studies researchers commonly use the variables of nationality, sex, language, age, religion, rural, urban or urban residence, degree of education, nuclear family or extended family, nature of employment, income levels etc.

Since Sri Lanka TV currently reaches only a very limited number of homes and the programmes are televised exclusively in English, the 'language' and class variables has to be eliminated, and therefore programme preferences among average Sinhala, Tamil and Muslim audiences cannot be gauged survey-wise, until TV programmes cover all three languages. It might be argued

EDUCATIONAL TELEVISION

Types of Programmes

In the meantime, the Ministry of Education hopes to develop a certain number of schools, especially in rural areas with equipment and viewing facilities for ETV. The educational television sector of the National Television system will design and produce programmes to suit the school curriculum, and conduct seminars and workshops to initiate teachers and students to the use of their new medium for teaching and learning.

Educational television (ETV) may be used in both formal and non-formal education. In these two main categories, there will be different types of programmes.

In formal education, ETV may be used for direct classroom instruction. Such programmes used as substitutes for classroom lessons by teachers belong to the category of Instructional Television (ITV). In Sri Lanka, such programmes may be useful in subjects such as English, Science and Mathematics for which there is a shortage of teachers, and lack of adequate facilities. Another type of programme will be in the form of supplementary enrichment lessons. Such programmes will not replace the regular classroom lesson but will be designed to *enrich* the regular lesson. The TV medium will be used to bring into the classroom, knowledge and experience which are removed in time and distance, e.g. geography of distant lands and episodes from history.

In the non-formal sector, programmes will meet the needs of life-long education, basic functional education for out-of-school learners, rural transformation, etc. Non-formal education programmes will also be aimed at improving the health and nutrition standards, and the quality of aesthetic life of the masses.

Implementation

Introduction of television as a tool in education will be phased out until the wherewithal and the technical know-how are readily available. It would be necessary to have at least two phases in the implementation programme.

During the first phase, good quality programmes, produced in other countries may be adapted for use in Sri Lanka. Consequently, a programme will be launched to train our own personnel for production of our own programmes and for establishing the physical facilities needed for such productions. When satisfactory progress has been made in this direction, the second phase would commence with programmes produced locally and geared to local needs.

that a well-presented visual programme, such as TV or cinema, would not involve the barrier of language, much as Charlie Chaplin's pioneer 'silent films' were understood by any nationality in the world. But unlike the cinema where a person has the option of viewing or otherwise at his own free will, TV viewers in Sri Lanka are now a captive audience, tuned in to programmes televised by the station. In fact, in the more developed countries where TV has been in existence for several decades, the degree of captivity is much reduced because of a viewer's ability to tune into a channel of his or her preference. Systematic research on the effect of TV violence on the average Sri Lankan teenager can be conducted only when TV reaches wider segments of the country in all three languages and TV time is extended to day time. Until that day dawns, we have no choice but to believe in existing research that a programme like "Mannix" which appears to be popular among Sri Lankan teenagers falls into the "most violent" category and, therefore has certain ill-effects on our teenagers as already determined by research elsewhere.

TELEVISION AND THE CHILD

Education

Television's usage as a direct instrument of education is unanimously accepted. The little screen exerts such a fascination on the young mind, that children's participation as members of the audience becomes an effortless process. However, the effect of TV on the mind of the child is another question with no simple answer. Based on a survey involving 6,000 children and some 2000 teachers and parents, Scramm, Lyle and Parker published a book on the theme "Television in the lives of our children", where they said "....for some children, under some conditions, some television is harmful, for other children under the same conditions or for the same children under other conditions it may be beneficial. For most children under most conditions, most television is probably neither particularly harmful nor particularly beneficial. This may seem unduly cautious or full of weasel words, but it is not a simple question to answer."

THE IMAGE

in early forms of communication

Dr. N. D. Wijesekera

One of man's unique achievements is his ability to speak and communicate with his fellow men by words in a language of their own. His greatest ingenuity has been its employment for communication with each other. The natural corollary to this has been his ability to retain experience and knowledge in memory and the transmission of that knowledge and experience to succeeding generations. Thereby man was able to build up a body of traditional culture.

There are certain factors common to all forms of communication. In this process the person who initiates the message comes first. That is the sender of the message. Next comes the message itself. Thereafter, the medium of expression and conveyance follows. Finally, there is the receipient of the message. Throughout human history the variable factor in this sequence of events has been the medium. The media have been the signal, sign, word, writing and image. A combination of one or more of the media, viz:— the sound, the written word and the image—was possible. And man has succeeded in doing so from time to time. With the scientific and technical knowledge man has devised a mechanism of combining vision and sound into one transmission. Fifty years ago the radio communicated by sound and word. Twenty five years ago man began to communicate through vision.

It is believed by archaeologists that the beginning of conveying messages by means of pictures, symbols and signs, goes back to pre-historic paintings of Europe. The engraved marks on objects of ivory and bone from La Crozo de Gentillo in Spain are interpreted as messages to fellow hunters and other members of the community. There may have been mnemonic signs, a sign language, or possibly a pictographic form of writing in those early times. Even such traces are lacking for the later periods anterior to the ancient Mesapotamian era. A tablet found at Kish in Mesapotamia is the earliest object containing signs of a foot, a hand, and drawings of objects. That was about 5,000 years ago. Each picture meant the thing it represented. Later, only the sound was retained and the ideogram became the syllable. That was how picture writing in Mesapotamia developed into a script which in due course produced a new means of communication. However, in Babylonia the ideogram continued. In some cases the picture signs lost their realism and continued to be accepted as mere symbols. In Erech the process of evolution produced the cuneiform script. In China, too, a similar development gave birth to pictographic writing in that region of China, Japan and Korea. In the Indus Valley culture are found a large number of seals containing a variety of scenes, figures and objects. These may be symbols of a forgotten past. And the pictographs or ideograms may be some kind of an undeciphered script.

A new form of recording information for visual observation by others is to be seen in sculpture. Two plaques from the royal tomb at Ur 5500 years ago portray a series of scenes of servants bringing sheep and oxen for a feast. A series of war scenes shows chariots driving over fallen enemies. In these two series one observes a new trend. It is the beginning of the art of story telling sculpture. This is now known as the narrative style in and is intended for communicating with the people by means of images in a continued series of events. This was a very effetive means of communicating with the people in conveying aesthetic and religious sensiblities. Also the beauty of the human body in the nude presented itself for admiration and appreciation. In Greece and Rome the people were able to see much plastic forms. The purpose behind such displays was to keep the general public informed of the beauty of form. This proved a successful means of communicating art through vision.

The people living in different regions of the world, where distance and difficult terrain made quick movement and communication a time consuming exercise resort to primitive methods of transmitting messages. The Australian aborigines sent messages by drawing or carving signs and symbols on sticks. The carved stick is sent through a person. These are known as 'message' sticks Human beings were employed as carriers or messengers both in war and peace. Pigeons were also trained to carry messages across distances. In such cases a third person was employed as the medium. A more popular method employed in Africa, India and other lands is the use of drums. The intermediary is substituted by sound. The sender and receiver are sufficient for this type of communication. The secrecy is maintained by the use of a particular code. Even today Xylophones are used by the Nagas of Assam, India for sending messages to summon people during an emergency. In Africa, too, drums are used for similar purposes. These have come to be called war drums. Still the absence of a language is a drawback. But the transmission and reception are immediate. Drums were and are still being used in Sri Lanka to make public announcements. There are the 'magul bera' and 'mala bera' used for announcing events by means of musical notes.

Since palaeolithic times art, painting, carving, and sculpture has been commissioned for the service of man. Painting, and that too, polychrome painting, has rendered this service admirably. How wonderful are the animal paintings of palaeolithic Europe. When painting was used to relate a story by portraying the scenes in the order of sequence the effect was immediate and arresting. The image appealed direct to the eye and mind.

The narrative style was adopted by several countries for recording scenes.

The imperial court of Emperor Asoka erected stone pillars surmounted with symbols to proclaim his royal edicts. It was a novel medium of communicating with the people at large. The symbol on the summit functioned as the image for arresting attention and the writing on the body of the pillar contained the message. When the sculptured reliefs of Sanchi and Bharhut are examined one finds the message of fertility conveyed by images of natural beauty. Sculpture was also used elsewhere to illustrate myths and legends mostly jataka stories. Indian artists found the narrative style a fine medium of story-telling. What the artist wanted to communicate was his idea of plenty to the eye and didactic moral to the mind. Buddhism exploited the image of beauty as an aesthetic medium to relate jataka stories.

The use of the three-dimensional form to communicate with the masses was a psychological and visual success. In the two-dimentional form were the wall paintings in colour employed to convey information and propagate religion. At Ajanta, Bagh, Ellora and Sittanavasal in India the artists have been successful in the use of this medium to communicate with the masses. In ancient Sri Lanka, both sculpture and painting have been employed for visual communication. The semi-nude beauties (apsaras) of Sigiriya have a message to the people who come to see them. The spontaneous reactions of the onlookers prove this. What the artist wished to convey through these images remains a mystery to this day. At Hindagala the artist portrays in polychrome the story of the seven weeks (satsatiya) preceding the enlightenment of the Buddha in seven scenes.

The narrative style of painting adopted for portraying the jataka stories in polychrome continues into the 12th century in Sri Lanka. At Polonnaruwa temples and the caves at Dimbulagala there are several jataka stories in colour. The message is the same and that is to teach a moral. The medium used is the image again. The popular appeal for this medium has been amazing. The interest displayed by the recipients of the message through visual observation has been lasting. The same medium is adopted at Dambulla caves, Ridi Vihara, Degaldoruva and Telwatte. In all these wall paintings within temples one sees the narrative style employed to convey information and communicate with the masses through the medium of images. The onlookers found the images easy to understand and entertaining to view. Finally the narrative style of painting helped the written word to be illustrated with painted scenes in colour. The ola book cover was adorned and illustrated with paintings of jataka scenes in colour. This was also a means of providing attraction and information. This same method of communicating a message through painting was extended to painted cloths in temples and handicrafts.

In this long series of images adopted as media for communicating information one finds clear and convincing evidence of the value, effectiveness and mass-appeal of the image or series of images. In all the acts mentioned above that is signalling, speaking, painting, sculpturing and reading the image comes first. It originates in the mind of the sender of the message. Only thereafter is it translated into form and shape, sound and vision, to be communicated to the recipient. The time-lag between the sender and the recipient began to be narrowed by and by due to advancement of science and technology. In the end the sender and the recipient was brought closer and closer within each other's presence. The telephone made this partially possible some time ago. Radio transmission followed. The full realization was made possible with the development of television.

It will be apparent to the reader how important the medium of communication has been before and even after writing came to be widely used. Of all the media used by man from ancient times up to now the visual presentation was supremely effective. It is true other means of mass communication such as the press, film, telephone, telegram and radio provided improved media. But still they did not bring the sender of the message and the recipient into each others direct view simultaneously. What combined all these factors into one sole act had yet to be commercialized. That came after World War II with the introduction of television as a new medium of mass communication.

During the last twenty five years television has been admitted to countries of East and West, both developed and less developed, where ancient civilizations flourished, where new civilizations prosper, and where men of different races, different cultures, and different religions live in harmnoy. Still there are a few countries which seem reluctant to admit television through fear of the known and the unknown. In Sri Lanka several attempts have been made during the last twenty years to have television admitted. But all of them failed perhaps due to some fear of a danger to culture, morals and religion. Such fears seem unfounded when it is known from past experience that the beauty of the human form in Greece, Rome and India; the vitality of the animal form in Europe, Indus Valley, India and Sri Lanka have been conveyed to the human mind through visual observation. Neither the human form nor the, amorous poses in painting and sculpture nor the love scenes at Ajanta nor the semi-nude ladies at Sigiriya have debased the morals, desecrated religion nor destroyed cultures of these ancient lands. Is it not time for Sri Lanka too, to adopt television for providing the people with this new medium for better appreciation of art, better education, better entertainment and better communication?

This comment becomes all the more relevant when one observes the circumstances surrounding the growth of any child. Children do not live in isolation—and they belong to families, groups, gangs and schools. They also have abilities, interests, hopes and experiences and, all these vary from child to child. Thus it is obvious that television, though powerful, is only one factor which affects the life of children.

This in fact is important to be remembered by television planners and producers in order to make their programmes effective amidst other mediating factors which form the background in the life of the child.

During the early days of educational television, some teachers felt inclined to resent television for diminishing their responsibility in the classroom. This was a wrong impression based on false premises. In the strictest and simplest sense, television is no more than "a successful technical device for the convenient simultaneous distribution of visual and aural material". It is like a visual aid, supporting the teachers' discourse with illustration, example and demonstration. It helps to establish that the facts the teacher speaks of are indeed facts thus establishing a desirable relationship between the pupils and his lesson.

However, success of such educational programmes to schools depends solely on the relevancy of such programmes to the work the teacher does in the classroom. Advance information on programmes, availability and regular maintenance of viewing-sets in schools, and above all close liaison between programme planners and education authority are some of the essential needs for success of educational programmes.

Although there may appear a superficial similarity between a television audience and that of a theatre or cinema, there are some basic and significant differences between the two. Those attending a theatre or cinema form an "active audience", in the sense that they on their own volition have decided to go to a particular place on a particular day to see an entertainment of