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Research Findings: Do They Bear Out The Assumptions Of Devcom

By

Prodipto Roy
RESEARCH FINDINGS: DO THEY BEAR OUT THE ASSUMPTIONS OF DEVCOM

Prodipto Roy*

I. FRAMEWORK FOR RESEARCH

"DevCom"

Before one looks into research findings the term DevCom or development and communication need to be semantically specified, as researchers from various fields have used these terms in their own ways to suit their own disciplines. (Hartman et al, forthcoming) Communication variables have been used to 'explain' a part of development; or communication was subsumed as part of development. While this instrumental utility of different channels of communication for development was useful or communication used as a component of development, there is a far more pervading concept of communication which was far broader than development. Social psychologists from the time of George Herbert Mead have viewed all socialization as symbolic communication. In this broad sense, communication was the basic social interactive flux of human society and was like what money is to economics. Communication as a separate discipline only began to take institutional form in the sixties. A large number of universities, centres and institutes now offer training, diplomas and degrees in communication. New technologies of communication and new electronic advances in computers threaten to add new dimensions to the concept and practice of communication for development.

Time-Frames

The paper will view DevCom in three time-frames: the past upto the end of the sixties; the present taking the more recent developments from 1970-85; and the future predestined role in historic perspective of the communication revolution in development. One reason for breaking the research reviews in these time-periods is the theoretical grounding of communication upto the sixties came from other disciplines. In the last decade or so a more integrated

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new discipline has evolved and the literature and research has become more multi-disciplinary. The next decade will see new technologies and new dimensions requiring rapid conceptual assimilation and therefore a totally different and more comprehensive research framework.

Plural Societies

Plurality in society normally signifies isolated strata with relatively separate lifestyles with somewhat watertight entities like castes in India. In this paper the contemporaneous technological ages in which different parts of a nation live must also be considered as part of our plural society (Eisenstadt, 1973). In remote Himalayan regions there are isolated traditional mountain communities whose women and men may be mostly illiterate except for a few rulers, scholars and priests. Most parts of the region consist mainly of agrarian multi-class or caste villages with simple crop production techniques, rural crafts and industries. A small growing urban section of these countries have modern industries, jet airports, electricity, TV, telex, satellite communication and participate in the most advanced technological inventions of the modern world. Most third world countries particularly in the South Asian region are comprised of this two-dimensional plurality of stratification and technological ages. Much of the literature being reviewed reflect both these types of plurality and the barriers to communication between them.

Zeroing In and Zooming Out

The pragmatics of communication research is probably best illustrated by the advertising literature on say selling soap. Decisions on the brand of toilet soap are made by the housewife; the target audience is identified, the radio or TV spots are optimally timed to suit the audience and increases or decreases of sales measured against different media inputs. Development inputs in agriculture or family planning have begun to identify their target audiences and prepare specific programmes tailor-made to these audiences. Agricultural innovations being advocated are
very sophisticated and varied with every crop for different of farmers. Similarly family planning contraceptives have audiences by age, sex and stage of family cycle. Communication and research on audience response has therefore been mentalised in the public sector and by different industries in the private sector. At the other extreme are communications related to broader goals of attitudinal change, information for broader general audiences about environment or population pressure. Development communication therefore has in its armament a wide variety of inputs in its armoury for constantly zeroing into specific target audiences and zoom for broader development objectives.

**Biases of Author**

All authors have a developmental and disciplinary bias; these are stated at the outset the readers can make allowances for these biases. The author of this paper did his first degree in agriculture with a major in dairy husbandry. He then went on to higher studies in Pennsylvania in agricultural economics and sociology doing a master's thesis on the sacred cow and the doctrine of non-violence and a doctoral dissertation on ac proneness. After returning to India he worked at the National Institute for Community Development on a number of community and development studies. Later research in the Council for Social Development has been related to micro-regional planning, grated child development, non-formal education, literacy and population. In short, the biases are, diffusion of innovation, rural social change with communication as one aspect of development. More recently working in Nepal and the high Himalayas, a b toward environmental protection and the problem of community problems of environment has become important.

**Research Framework Depicted**

Diagrammatically the above concepts can be depicted simply as Diagram A and B below. Diagram A shows the two concepts of DevCom: communication as an integral part of development and communication as a set of variables instrumental in bringing about development.
Diagram A:

Diagram B:

Development

Agriculture | Health & F.P. | Education | Adult Education | Infrastructure | Industry | Instl. Devl.

Communication
As development research became more departmentalized into what were referred to as the nation-building sectoral departments with one co-ordinating or super-ministry each of these departments or sectoral ministries had a communication component with a separate national or state department of information, broadcasting or communication. This re-aggregated whole is depicted as communication. The legal or de facto parts of the actuality called development communication was actually studied as development administration, agricultural extension, community health services, leadership, road and infrastructure construction, institutional development or participation in organizations (traditional and modern institutions) education and adult education, radio forums, broadcasting and audience research, mass media exposure, advertising and market research, television audience exposure and audience response. These wide-ranging types of studies, monitoring and research, into physical, interpersonal and mass communication were the fragments of the totality which comprised development communication. This list is by no means complete because new technologies of communication are being invented and propagated in the plural societies of Asia.

II. RESEARCH FINDINGS

Diffusion of innovations

The study of the diffusion of innovations or cultural traits has been undertaken by a number of social scientists. Anthropologists were the first to point out how cultures adopt cultural traits from other cultures and that every living culture is basically made up of traits borrowed over long periods of time from other cultures. (Ralph Linton, 1945). More recently in rural development, the adoption of improved practices first started with the studies of hybrid maize in the 1930s. US farmers very rapidly adopted hybrid maize and a large number of studies were conducted in Iowa which were ably summarized by Everett Rogers in his doctoral dissertation. The stages of adoption from Awareness, Interest, Trial to Adoption became the model widely used for adoption studies (Rogers 1962).
The time-span required for rapid adoption was described by the S-curve over a period of months or years. US farmers who feed hybrid corn to pigs, who are not very discriminating, were very fast adopters but Mexican farmers who found hybrid corn did not make good tortillas were very slow adopters. In other sectors like health and family planning, variations of the adoption process as KAP studies, became common (Mukerjee, 1973). In one of the widest global applications of diffusion research this author was involved in the construction of scales to measure the dependent variable 'agricultural innovation' for the whole of India at the individual farmer or the village level. It was gratifying to find out that by either factor analysis or Guttman Scaling that agricultural innovations using a 52-point scale was unidimensional (Fliegel et al 1968, Roy et al 1968). The mathematical assumption often made about 'development' or 'communication' as presented in the diagram above, is that these phenomena, which are enormously complex are unidimensional. Any attempt to inventory, multi-sectoral integrated rural development will run into 1000–2000 variables. And it is very unlikely that such multi-faceted phenomena like development or communication are unidimensional.

**Communication Disciplines**

In its formative years the scholars who migrated into communication came from various disciplines which reflected a certain bias both in their research emphasis and in their choice of publication: that is, a psychologist in communication published in psychological journals, a rural sociologist in sociological journals and a journalist in literary journals. This made the review of communication literature in the sixties very discipline-oriented and cast a disintegrative die into the fate of this new discipline. Although a number of communication journals came into existence scholars still choose to write in a variety of discipline-oriented journals. The sectoral utilisation of communication has added to the dispersal of communication research.
literature. For example agricultural communication and extension became a separate specialization within the school of agriculture. Family planning and health became an area which received a great deal of emphasis for the third world. Mass media seemed to become an institutional area of specialization and to that extent it sometimes became synonymous with communication. So much so that institutes or centres of mass communication had to over-react and do studies of traditional media or village studies in which the mixes of media in traditional societies became more evident.

Notwithstanding certain 'older' areas which rightfully should form a part of the general rubric of communication have become lost and certain very 'new' areas which need to be brought into the framework of communication research have not been brought in. First, in the older budgetary parlance of community development, communication meant costs of roads or physical access. This physical aspect of communication, measured as miles of roads or dirt tracks, or as number of visits to urban centres or movement patterns to markets, religious ceremonies, schools etc. is being left out of 'communication' research. Second, more structured formal bureaucratic, extension, political and institutional inter-personal communication is being by-passed in favour of leadership, informal influence structures and political vote-banking. Third, the new electronic innovations like how telephones substitute physical communication, or the new roles of telex, TV, video and audio-cassettes, computers, micro-processers in the future third world are not being studied (Forester, 1985).

East Asia and some ASEAN countries already reflect the coming shape of the third world in Asia: the passing of the traditional 'gemeinschaft' village imperceptibly into the global village. In a deeper social-psychological sense this is the passing of 'community'—the face to face village which has no walls—for a new 'mass' society. It was this harking back of Reisman's Lonely Crowd for the inner-directed man in
America over twenty years ago (Reisman, 1951). The framework of devcom needs to span physical, interpersonal, mass and electronic communication and the socio-psychological transition of village to mass society.

The Two-step Flow

The Katz and Lazarsfeld study of the two-step flow discovered in medical innovations took on a very different meaning in mass media research in India (Katz, 1959). It was found in a number of studies that newspapers were read by only a few village leaders who selectively passed messages on to other village people (NICD, 1963; Roy, Waisanen and Rogers, 1968). Radio, before transistors, were community battery sets or rural radio forums and also operated like a two-step flow. Film was a mass entertainment escapist medium but was largely limited to urban cinema halls which rural folk visited only occasionally and only the rural elite more regularly. TV only came into selected villages as an experiment of Doordarshan or SITE in India and is not really a mass medium in the rural areas yet, mainly due to its very high costs. The 'two-step' flow in village studies is the flow of mass media directly to the village elites and from them to the village people by interpersonal channels. The elites played a role of social filters for mass media channels passing on what they felt was news for common people.

Experiments and Pilot Projects

Experiments well-designed and executed, often heralded the introduction of media or development. Each new experiment reinvented the experimental framework, and criticising the same pitfalls which often did not exist in previous experiments. The SITE experiment criticised previous experiments which solely relied on surveys without qualitative anthropological validation of the process of communication (Agarwal 1981). In the NICD/UNESCO experiment, Dube had resident anthropologists; the Mahboobnagar experiment had resident workers-cum-observers and
a constant research monitoring (Jesudason et al 1980); even Neurath's massive radio forum experiment had resident social scientist field staff (Neurath & Mathur, 1959). In general communication experiments have used a variety of research methods to ensure validity and reliability. Where social experiments 'fail' is in the replicability like natural or physical science experiments. Too often in-depth studies revealed that the dedication of one worker explained the success of an experiment. (Roy et al 1968; Jesudasan et al 1981, p. 397). Dedication was too fragile a basis for pilot experiment replication is amply borne out by the rapid expansion of the ICDS into 1200 replications.

**Advertising to Election Polls**

The commercial enterprises and political parties probably spend more money in communication research than any other agencies. Much of this research is not published and is not of much theoretical significance. However, in terms of sampling designs, interviewer training, data gathering, rapid data processing and utilization of research results, this body of research for sheer excellence of methodology is difficult to fault. The principles of parsimony have been honed down to a fine art because even if money was not always a constraint time was a critical factor. Turn-around time in national election polls in the US between decision and results was sometimes three to four days!! The course of the last week's campaign for a Presidential election in the US was charted on these polls. Advertising and market research were also direct correlations between communication inputs and market sales. While one may not consider the content of such research of great development significance the quantum of research done and experience in methodology is very important. Second, if good theory is built on empirical foundations communication research has built up very firm foundations for testing theories. This is more true of communication research in the west but starting with adoption and extension research in agriculture, then family planning, mass media, advertising and market research, a reasonable body of research has been built.
Departmentalization

One of the characteristics of the body of communication research as mentioned above, is that each sectoral ministry felt is needed to control the instrumentality of its own communication inputs. In order to justify the communication inputs, audience impact and evaluation studies were undertaken. Hence the instrumental and utility aspects of communication for say agricultural adoption became the focus for research or even information needs for each stage of adoption. In relatively new programmes like family planning, communication needs were greater as each new contraceptive received prominence. Other ministries and departments like industry, petroleum, steel, railways, airlines also had communication inputs and their own research. The Ministry of Information and Broadcasting and specialized institutes or university departments also had their own research which had a wider scope and was more theoretical. This diversity and unity of communication research was healthy in that it increased the quantum of total research and also the different disciplinary biases with different target audiences participated in the research.

Media Specialization

Another way the communication research cake was sliced was by media. For example the All-India Radio (AIR) had its own audience research unit which has conducted a wide range of studies. The introduction of rural radio forums was heralded with a large experimental project conducted through AIR (Neurath 1959). Educational TV in Delhi was similarly heralded by on experimental research project (Neurath 1965, 1966) and later by SITE (Agarwal 1981). Specialised film and TV institutes also developed specialized research. The Press Institutes had their own unit of research. Thus each of the media had its own specialised research which had utility for each sector of development. This matrix of sectoral and media specialization did not really co-ordinate
and complement their efforts. However in terms of research findings one can find strands by sector and strands by medium and integration has to be done by the specialized institutes of university departments.

**Communication as Media Mixes**

In the rural areas of Asia is a media mix of physical, interpersonal and mass media. The new electronic communication revolution in East Asia has had all-pervading influence which has almost wiped out the traditional village. Suye Mura up to 1940 was a classical village of Japan. By 1975 it was a hot-spring resort for which reservations at the Ryokan had to be made by travel agents by telephone and telex. In Gifu Prefecture the traditional street in Takayama has to be preserved and development prevented as a tourist attraction. The ASEAN countries reflect various stages of both modernity and tradition. Most South Asian villages are traditional with sprinklings of modernity in Punjab, Sind, Kerala and Sri Lanka. The metropolitan areas are the modern contrasts to the traditional village. Even modern metropolises evolved over time as castes or class enclaves with imperially planned New Delhi adjacent to the walled old Mogul city and the seven older cities scattered nearby going back beyond the veil of history to the legends of Indraprastha.

The media mix of devcom in the literate/illiterate, men/women, rural/urban and many other such contrasts varies a great deal. Development communication for each sector had different mixes. While studies have been done about the uses of different media at different stages of agricultural adoption the complementarity and sequential substitution of different media mixes has not been well understood nor have media strategies been planned and integrated.

**Conscientization**

Communication, both traditonal and modern has in general been top-down and almost exclusively one-way. There were very severe barriers to feed-back so that corrective action could be taken so that more functionally useful information could be fed into the different media. The concept of communication from below
or reversing the order of communication is practically non-existent. Even the ideas of conscientization have also come from the top and have not quite filtered down (Freire, 1972). However, various forms of decentralization, voluntary action, people's participation have become operational in various places and there is undoubtedly a gradual march toward more decentralized even in mass communication. This dimension of reversing the order of communication in each sector and each medium will be quite revolutionary within the third world. Although the idea is extant and fashionable between the developed and underdeveloped countries, the devcom curtain within third world countries is not so well understood nor is reversing the order of communication being undertaken very seriously.

III. PREDESTINATION IS LOOKING BACK

Development Communication Re-stated

Calvin's philosophy on predestination made many Presbyterians conscious of the course of past events which determined a man's predestination. This philosophy resembles the Hindu-Buddhist concept of Karma and re-incarnation. In the history of nations the flows of thought, ideas and innovations have varied from East to West or Middle-East to East and West. At the height of Greek expansion, the military expeditions of Alexander in the Fourth Century BC brought him into close contact with the civilizations of the Indus, Asoka's Empire and the very advanced Buddhist philosophy extant along his path from Afghanistan, the North-West passages (which were the old silk trading routes) through Pakistan. Later Greek historians and philosophers took back records which enriched Greek, Roman and later Christian civilizations. Conversely, Greek art embellished Buddhist sculpture and architecture of India. In fact until five centuries ago it was not just the spices but the cotton and silk manufactured goods for which these trade routes became the avenues of development communication.
After the industrial revolution and the discovery of the new world the central source of development innovations has shifted to the west, the New World and to some extent the Socialist Eastern block of nations. One should not try to neatly separate out the politics, economics and technology of either development or communication. For the last three to four centuries Europe, then America and the European and American empires with their expansions into South America, Africa and Asia have taken with their political baggage, their way of life, their technologies of government and economic development and 'exploited' the raw materials of these continents by establishing networks of trade and transport. The European nations felt they were bringing "civilization" to these barbarians and heretical cultures. Religion was often the handmaid of political and economic development. There is no truly ill-wind which blows no good. South America, Africa and Asia were "opened up" to the avenues of communication — political, economic and religious — but messages flowed in both directions. Technologically the smaller sailing vessels gave way to the large four-mast sailing ships and then the steamships. Roads and railways were constructed across continents.

In this classical imperial period of Europe, the nation-state as a geo-political unit began to reify and when the empires passed away Europe became divided into a large number of nations. This model was replicated in South America, Africa and Asia. After World War I and World War II and the mini world wars which have followed, the world has been carefully parcelled into X nations which all now belong to the United Nations.

Upto the twentieth century, the concept that physical communication was a necessary condition for development, got firmly rooted. The twentieth century may go down by some future historian as age of creation of narrow domestic physical boundaries of nation states. The re-aggregation of these nations into the First, Second and Third World nations has geographically confounded geo-politics. The advent of 'socialism' as an
economic innovation, and the Socialist march into the developed and developing nations has further politically queered the pitch. Economic development has also been uneven in the continents and nations keep jumping out of the Third World into the Second or First world.

It is in this milieu in the second half of the twentieth century that the Communication revolution has begun to take root. Physical communication as a concept yielded to politico-bureaucratic structures of interpersonal communication for development within nation states. These inter-personal structures are now yielding of mass media networks which span continents, but which have some national-bureaucratic constraints. The new wave of the mass communication revolution is a result of electronic inventions of satellites, micro-processors and optic fibres. The miniaturization in size and cost in the electronic world is just beginning to sweep away many age-old boundaries. The full impact of these waves of the communication revolution will not be fully comprehended before the turn of the century.

Looking at Development and Communication in this far larger sweep of history, the political economy of development and the concepts of communication must be given new shape. First, the exchange of ideas, social institutions and technologies started a very long time ago and they have been enculturated long before the present nation states were established. Religions have been born and have spread over the face of the earth and have had waves of expansion and recession. Empires with differing political ideologies have risen and spread and have been superseded: the Egyptian, the Babylonian, the Persian, the Greek, the Roman, the Mongol and most recently the European empires of the British, the French, the Portuguese and the Dutch. In Asia, the Mauryan, the Mongol, (later the Mogul), the Chinese dynasties and the Japanese have all left their impact in the religious, political and economic development of Asia. These interpersonal communication structures still persist as ideals and social organizations.
"Development" as the diffusion of innovations, whether they were religious ideas, political systems, technologies, trade or the exchange of goods and services, has had a very long period of dissemination and integration into various cultures. Similarly "Communication" must be broadened beyond mass communication to re-incorporate the conquest of space across continents by various modes of physical communication. The inter-personal structures (both formal and informal) which has remained as the grist of human socialization for centuries: Mass Communication which has become manifest only in the last half century. Electronic communication is a new wave affecting physical, inter-personal and mass communication in very different ways.

The Asian Drama

Applying these broader concepts of development and communication to the Asian situation in the last half century one gets a feeling that the three great ancient Asian cultures are re-awakening. The older European political empires have crumbled. A new socialist-communist empire was created but its main Asian ally has broken away and is pragmatically changing its ideology. A large number of new nation-states have been carved out of earstwhile colonies or the division of nations. New Eastern, Western and Non-aligned blocks are being formed. "Super" powers are still using military, economic and technical incentives to gain alliances. Fishing in these very muddled Asian waters has clouded many issues of both development and communication. The varying Asian views of each country of both development and communication over the last half century would be a kaleidoscope of varying forms and colours.

The Indian Empire has been dismembered partly by the earstwhile powers into the new nation states of Pakistan, India, Bangladesh, Burma, Lanka and the Maldives. The Japanese Empire has had its rises and falls in the past fifty years. After World War I the Japanese empire stretched in the Kuriles in the north to include parts of Manchuria, Korea, to the north; during World War II it expanded its military campaigns into China, whole of Indo-China, the Philippines, Indonesia, Malaysia, Burma to state of Assam in India; two of mankind's most destructive weapons the atomic bombs dropped on Hiroshima and Nagasaki were needed to destroy Japanese Empire of 1945. The economic resilience of Japan has created a new super-state which economically has spread not only throughout Asia but threatens the economies of America and Europe. The rise of Communist
China politically, economically and ideologically has been one of the world's most astounding resurgences. The very formation of a single nation-state of over one billion people is a politico-economic structure never rivalled in the world. The bamboo curtain has not been fully drawn and the political and economic dimensions of China are not fully understood by the world and it will not be included in the main analysis in this paper. The defeat of the French in Indo-China and the Dutch in Indonesia after World War II created several new nations which have not all been consolidated. The Philippines was liberated both from Japan and the US. Thailand continued to remain relatively free. Malaysia and Singapore were created when the British decided to leave.

These are only the broad parameters of the Asian "nation-building drama. Economic development has been a very different story. Japan which already had high levels of literacy and military-technical prowess re-built after the occupation and began an economic take-off unparalleled in economic history. Taiwan and South Korea had slightly slower but comparable economic growth histories. These three East Asian countries can be categorised together as having left the third world. The ASEAN countries from Thailand to Philippines have formed a politico-economic alliance which has had some very distinct mutual advantages. This has created a new regional entity somewhat similar to the EEC in Asia. South Asia is probably the most backward region of Asia and the SAARC alliance is still too new both politically and economically to make any observations about. The association has great potential for mutual development by decreasing political fears and increasing economic co-operation which will be a challenge for the leaders of the region.

"Communication" may play the decisive role in SAARC.

**Diffusion of New Communication Technologies**

East, ASEAN and South Asia are not only at different stages of development but at very different stages of 'development communication'. In all aspects of communication: physical, inter-personal and mass communication, these three broad regions of Asia present very different stage of development.

Physical Communication in East Asia is led by the Japanese super-state. The Shinkansen and its coming new models is symbolic of the physical access revolutions. Roads, railways, undergrounds, cars and
motor-cycles along with surface public transport systems makes Japan probably the most advanced nation-state in the world in respect to physical communication. South Korea and Taiwan are small countries and are not far behind.

The ASEAN nations have a great deal of diversity with respect to physical communication. The most spread out island nations like the Philippines and Indonesia have very formidable physical communication problems using mixes of land, sea and air transportation. A small country like Singapore has very good physical communication. Malaysia and Thailand are developing basic physical access systems very fast, road standards are high, construction technologies are improving and in five to ten years these nations will have very good physical communications.

The South Asian region represents very traditional physical communication systems. The metropolitan areas of Pakistan, India, Nepal, Sri Lanka or Bangladesh have fairly modern and well-run physical communication systems. These large metropolitan centres are fairly well linked by air, rail and road transport. After one leaves these major arteries of linkage one finds traditional Asia. Bullock-carts, bicycles, old trains, dusty roads and overcrowded buses are the means of physical communication. In hilly countries like Nepal half the districts have no motorable road. A student coming home from the US after five years, jets in 20 hour to Kathmandu, takes a bus for 12 hours to the nearest road head and then walks for three days to his home.

Inter-personal Communications are both formal and informal. The informal structures are traditional and have not been too much affected by either the new development or communication changes. The formal development structures are affected by both the educational and socio-political structures. In nations where educational and literacy levels are high, development bureaucracies function in a very different way. The three Asian regions are very different in the functioning of inter-personal development communication. Even within regions inter-personal development communications has great diversity and is not discussed in great detail as it deals mainly with developments in each nation's education and development administration (Coombs, 1985).
The mass media coverage in the three Asian regions are very different and the regional categorization have exceptions which prove the rule. For example a small country like Singapore with high literacy and very good mass media coverage should probably be clubbed with East Asia. Allowing for such exceptions the general classification of East, ASEAN and South Asia holds good for the diffusion of mass media. While the spread of mass communication over the past fifty years in all Asia has been phenomenal there are important differences in the three geographic categories.

In East Asia, Japan almost symbolises the mass media explosion (or may be implosion is a better word). (Forester, 1985). Not only is Japan one of the most literate nations of the World but during the post World War II period went through a traumatic decision about latinizing its script but get it decided to unify the language under one Kanji script. This has the advantages and disadvantages of cultural isolation. Newspaper and other print media circulation has steadily increased. Since Japan was the inventor and propagator of a great deal of radio and television technology, the spread of these media was extremely rapid in Japan with pragmatic adjustments for expanding various markets. Radio and television programme both in the public and private sectors have researched target audiences and professionally pushed up the number of channels and the number of hours of broadcasting. The public sector NHK-TV network probably produces and broadcasts more hours of television than any other government. Traditionally cultural preservation language and even chauvinism makes Japanese film and TV very culture-bound which is probably what some forms of mass media have to be. Careful audience research has fine-tuned criteria for acceptance/rejection and what is considered the public good. Korea has closely followed Japan and in some areas may have surpassed the Japanese levels of coverage in media. Taiwan with a different language but similar script is probably not as advanced in mass media as Japan and Korea. All three countries are in the forefront of the world in the production and per capita sales of radio and TV.
The ASEAN group of nations starting at low levels have had very great increases in all three types of mass media — print, radio and television. Literacy has been and still is a constraint on print media in most of the ASEAN countries, but steps are being taken and literacy levels rising. Since radio and television do not fully have the literacy constraint, these media have probably shown more rapid growth rates. Of course some countries have had leaps in specific decades reflecting economic growth.

The South Asian region remains the relatively backward area of Asia. Here again there are exceptions: Sri Lanka’s literacy levels being high could expand the print media and also radio and TV coverage. Whereas a country like Nepal with low literacy and mountainous terrain, very little electrification, has many constraints for the spread of mass media. Television only started broadcasting a year ago and is limited to Kathmandu Valley. India, Pakistan and Bangladesh have the plurality of good coverage in the urban areas and poor coverage in rural areas. Pakistan and Bangladesh have had better TV coverage in the past but recent policy changes have increased the number of broadcasting stations and number of receivers in India in the last few years. Film has been India’s forte and its spread both within South Asia and abroad has been an important success story.

The mass-media II revolution is the field of electronic innovations. The last decade or two has brought a number of innovations like geostationary satellites, the micro-chip, optic fibres etc. which have had and will continue to have very far reaching effects on mass media. Newspapers, magazines and books are written on micro-processors on floppy and hard discs, edited and corrected on TV monitors, directly accessed and photo-composed and printed. Very soon the Madras Hindu will be composed in Madras and simultaneously printed in three cities using a telephone computer transmission between metropolitan cities. This may increase the total circulation of the Hindu by reducing costs but total newspaper readership may not increase much due to the English
language literacy constraint. These electronic inventions have so radically reduced costs (and will continue to further reduce costs) and simplified and expanded usage that all mass media – print, radio, television, audio or video cassettes etc. will be affected a great deal in the next decade or two. How rapidly each invention will be diffused and in what applications is again difficult to predict.

New Models for Dev Com. Research

This paper has tried to review the research findings in both development and communication over the last few decades in Asia. A three by three implicit categorization has been used dividing Asia into three rough geographic-cum-development areas and also three time periods: upto the sixties; 1970-85; and 1985-to 2000. It has generally been found that neither development nor communication have really comprehensively been empirically measured. Conceptually communication is typically viewed as part of development and instrumental for development (Diagram A). The far broader view of communication being far wider than development is seldom used in research. Development has itself been fragmented into the different sections like Agriculture, Health and Family Planning, Industry etc. and the role of communication studied (Diagram B). Advertising and mass media research is far more widespread and has a sophisticated body of research.

This partial view of the main concepts development and communication which can be rendered into cognizable research variables is perhaps the humility which is the beginning of wisdom. Development and Communication as conceptual areas are not congruent; one may have explanatory effects on the other and each may be a part of the other. The "developed" world may have a greater quantum of material goods and services but does that really make it more "developed". Or is Nirvana, the fullness of wisdom and compassion for all sentient beings with non-attachment to all material possessions, and the meditation on emptiness, the ultimate of development.
The eternal accumulation of higher levels and standards of material possessions typically includes higher levels communication — physical, interpersonal and mass. Casting off old models of cars, refrigerators, TV and computers are all signs of development. The interplay between development and communication is endless and empiricism cannot hope to fully measure either of these two phenomena. Each of the phenomena are probably multi-dimensional and parts of each can be empirically described and reliably measured. Other parts can only be qualitatively assessed and ranked. Still other aspects of development and communication can only be vaguely described — the highest levels of development in music, art, religious meditation etc. -- which are ideals of any society are not easily measurable.

Hence "development" in the UN technical assistance syndrome deals much more with basic needs and sectoral objectives which are more easily quantifiable and measurable. The sum total of all these sectoral achievements could be labelled total 'development'. Similarly, the objectives of physical, interpersonal and mass communication can be spelled out and measured and totals summed. Whether the components are additive or mathematically in the same dimension can be tested and different factors measured and the relationships between "development" and "communication" set down a multidimensional matrix. (Fliegel, 1968, Roy 1968).

In order to depict such an interlocking set of variables one may use the Mandala or Sricakra. (Diagram 0). And view the downward pointing triangles as "development" and the upward pointing triangles as "communication". The universe is the three circles with the lotus. If one meditates on the triangles one finds that they move in space. Such a representation provides the dynamic and almost infinite relationships between development and communication without trying to define the parameters too rigidly. Development like communication changes over-time and the mandala is a conceptual device to assist one's thinking. It symbolizes the world of which development in a much wider sense than the UN technical exchanges and communication and dynamic and changing parts of the world or universe.
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