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By

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RESEARCH FINDINGS: DO THEY BEAR OUT THE ASSUMPTIONS OF DEVCOM

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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 life styles 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 differer
of farmers. Similarly family planning contraceptives have
audiences by age, sex and stage of family cycle. 'Communic
inputs and research on audience response has therefore beer
mentalized in the public sector and by different industrie
the private sector. At the other extreme are communication
related to broader goals of attitudinal change, informatic
for broader general audiences about environment or populat
pressure. Development communication therefore has in its s
gies and tactics a wide variety of inputs in its armoury a
constantly zeroing into specific target audiences and zoom
for broader development objectives.

Biases of Author

All authors have a developmental and disciplinary bi
these are stated at the outset the readers can make allowa
these biases. The author of this paper did his first degre
agriculture with a major in dairy husbandry. He then went
higher studies in Pennsylvania in agricultural economics a
sociology doing a master's thesis on the sacred cow and th
doctrine of non-violence and a doctoral dissertation on ac
proneness. After returning to India he worked at the Natio
Institute for Community Development on a number of communi
and diffusion studies. Later research in the Council for S
Development has a been related to micro regional planning, i
rated child development, non-formal education, literacy an
population. In short, the biases are, diffusion of innovatio
rural social change with communication as one aspect of de
More recently working in Nepal and the high Himalayas, a b
toward environmental protection and the problem of communi
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 s
concepts of DevCom: communication as an integral part of d
and communication as a set of variables instrumental in br
about development.

Diagram A.

Communication

Development

Development

∞

Communication

Diagram B.

Development

| Agriculture | Health & F.P | Education | Adult Education | Infra-structure | Industry | Instit. Devt. |

Communication
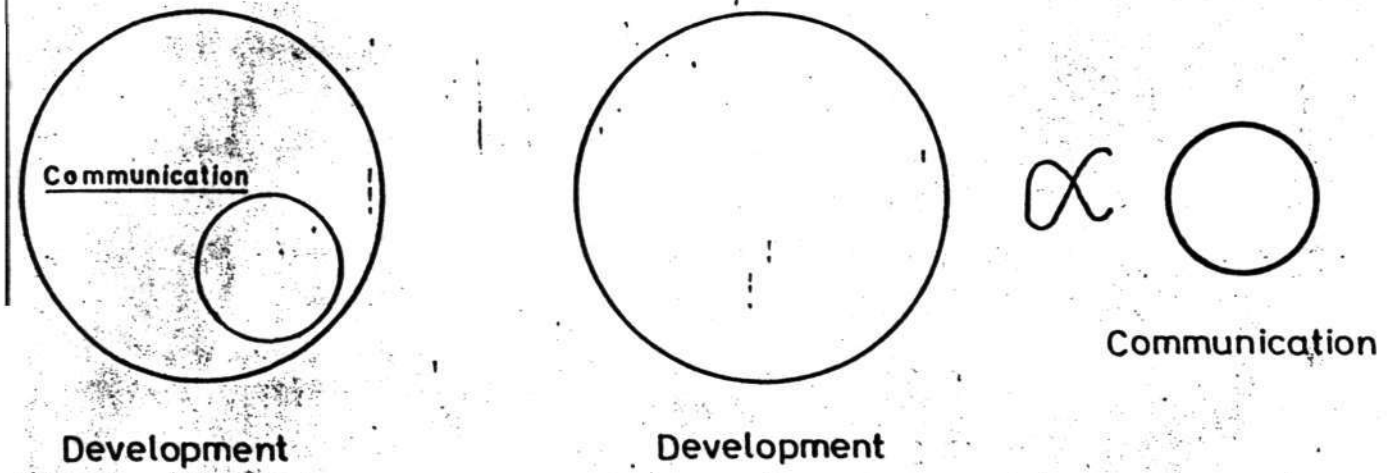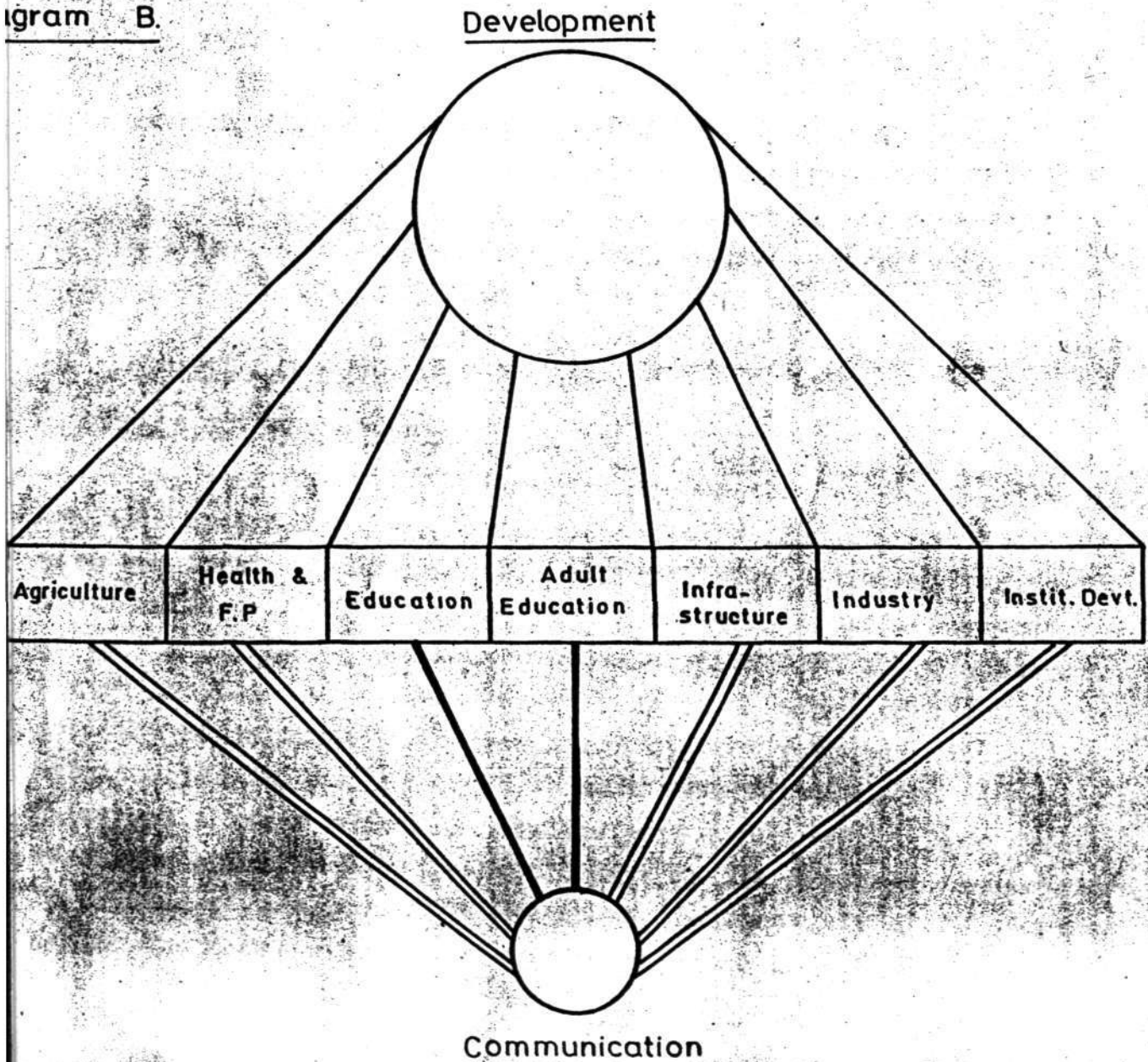
As development research became more departmentalized into what were referred to as the nation-building sectoral departments with one co-ordinating or super-ministry each of these departments or sectoral ministries had a communication component with a separate national or state department of information, broadcasting or communication. This re-aggregated whole is depicted as communication. The de jure or de facto parts of the actuality called development communication was actually studied as development administration, agricultural extension, community health workers, 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 over 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
dependant 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 dis-
covered 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 mass 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, 1968) and later by SITE (Agarwal 1981). Specialized 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 specialized 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 upto
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 caste 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 revising 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-most
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
sattelites, 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 superceded: 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 integ-
ation 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 the
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 develop-
ment and communication over the last half century would be a kaliedoscope
of varying forms and colours.

The <u>Indian Empire</u> has been dismembered partly by the earstwhile
rulers into the new nation states of Pakistan, India, Bangladesh, Burma,
Sri Lanka and the Maldives. The <u>Japanese Empire</u> has had its rises and falls
over the past fifty years. After World War I the Japanese empire stretched
from the Kuriles in the north to include parts of Manchuria, Korea, to the
Ryukus; during World War II it expanded its military campaigns into China,
whole of Indo-China, the Philippines, Indonesia, Malaysia, Burma to
the state of Assam in India; two of mankind's most destructive weapons the
atomic bombs dropped on Hiroshima and Nagasaki were needed to destroy
the Japanese Empire of 1945. The economic relisience of Japan has created
new super-state which economically has spread not only throughout Asia
and threatens the economies of America and Europe. The rise of <u>Communist</u>

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 categorized 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 Thailan 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, dustry roads and overcrowded buses are the means of physical communication. In ountainous 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, particularly 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
yet 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 wase 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 are 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 satelites, 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 C). 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
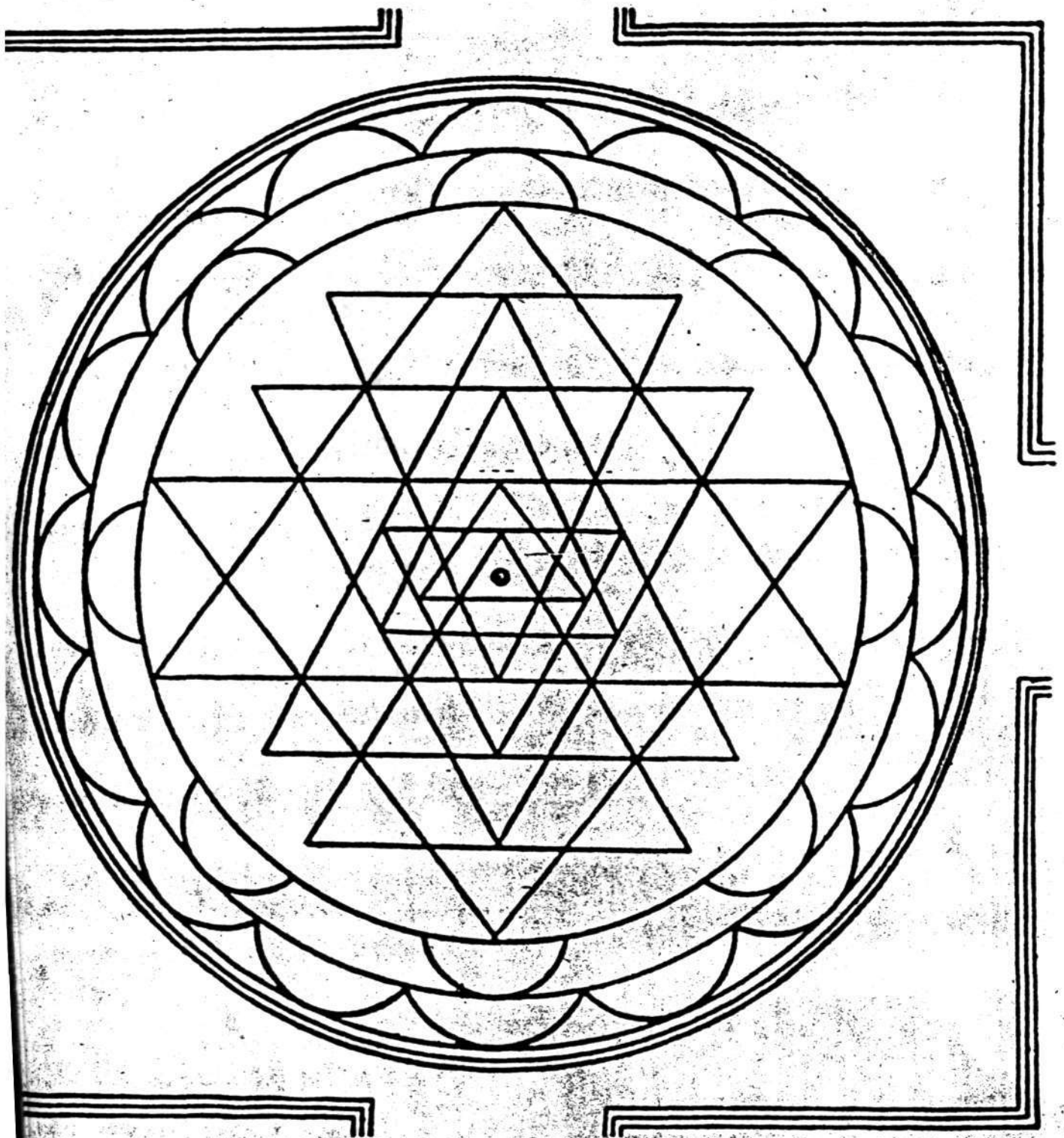and dynamic and changing parts of the world or universe.

Diagram C The Mandala of the Śrīcakra

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