COMMUNICATION AND THE CITY:
THE CHANGING ENVIRONMENT
THE EAST-WEST CENTER—officially known as the Center for Cultural and Technical Interchange Between East and West—is a national educational institution established in Hawaii by the U.S. Congress in 1960 to promote better relations and understanding between the United States and the nations of Asia and the Pacific through cooperative study, training, and research. The Center is administered by a public, nonprofit corporation whose international Board of Governors consists of distinguished scholars, business leaders, and public servants.

Each year more than 1,500 men and women from many nations and cultures participate in Center programs that seek cooperative solutions to problems of mutual consequence to East and West. Working with the Center's multidisciplinary and multicultural staff, participants include visiting scholars and researchers; leaders and professionals from the academic, government, and business communities; and graduate degree students, most of whom are enrolled at the University of Hawaii. For each Center participant from the United States, two participants are sought from the Asian and Pacific area.

Center programs are conducted by institutes addressing problems of communication, culture learning, environment and policy, population, and resource systems. A limited number of "open" grants are available to degree scholars and research fellows whose academic interests are not encompassed by institute programs.

The U.S. Congress provides basic funding for Center programs and a variety of awards to participants. Because of the cooperative nature of Center programs, financial support and cost-sharing are also provided by Asian and Pacific governments, regional agencies, private enterprise and foundations. The Center is on land adjacent to and provided by the University of Hawaii.

1777 East-West Road
Honolulu, Hawaii, 96848
COMMUNICATION AND THE CITY:
THE CHANGING ENVIRONMENT

Papers by
HIDETOSHI KATO
JOHN MCHA LE
and
DANIEL LERNER

November 1973
Second Printing, September 1978

Papers of the East-West Communication Institute
1777 East-West Road, Honolulu, Hawaii 96848
A NOTE ON THE
COMMUNICATION AND URBANIZATION CONFERENCE

From the 12th through the 16th of February, 1973, 30 university researchers, program administrators, urban planners, and communication specialists from Asia and the United States met at the East-West Center to consider the relation of communication patterns to urbanization. The participants organized themselves into four work groups: (1) Communication characteristics of urban communities, (2) Urban-rural interactions involving media and non-media communication, (3) Information needs of urban communities, and (4) Research, policy, planning, and implementation. This paper is one of a number presented during the conference. Microfiche copies of the conference proceedings are available from the Institute.
FOREWORD

Because of the importance of the city as a setting not only for communication but for development, the issues presented in these three papers are indeed significant to both researchers and policy makers.

The function of the city as a "communication environment" is a new development, as Professors Kato and Lerner point out. Looking back at the past, "the city has been primarily a place for communion rather than communication," in the words of Professor Kato, or a "stronghold and a sanctuary," as Professor Lerner describes it. While Professor McHale looks at modern changes in the form of macro institutions, Professor Kato focuses on changes in "symbolic experiences" as a result of changes in the concepts of time and space in the cities. He explains further that with the development of technological innovations, there has been a trend toward "miniaturization" (mini-space with mini-instruments") and a trend towards a "fragmental time scale" (seen in the uses of fractions of time, characteristic of the modern working-hour system). Similarly, Professor McHale predicts such changes as "the blurring of boundaries between education and entertainment, or education and work."

Professor McHale predicts that communication in the future world calls for a "process orientation in which ends/means, issues, questions, problems, solutions all loop back upon one another in interweaving and overlapping sets of feedback instead of linear cause-effect mechanisms."

Professor Lerner suggests looking again at his concepts of mobility, empathy, and participation, which have been "counter-productive for development" in poorer places in the world. He stresses the need to further examine his "Want: Get" ratio: although the development of mass media and transportation has speeded the development of many areas, it has created frustrations in many more. People from various cultures must be provided various alternatives and the freedom to choose their developmental goals from these alternatives. Communication media can be links for more feedback between decision-makers and the various publics, facilitating a "renewal of a decent respect for the opinions of mankind."

Florangel Z. Rosario
EWCI Research Associate
Conference Coordinator
CONTENTS

A Note on the Communication and Urbanization Conference ........................................ ii

FOREWORD
--Florangel Z. Rosario, EWCI Research Associate, Conference Coordinator ................ iii

FROM PANTHEON TO PRESLEY: CHANGES IN URBAN SYMBOLISM
--Hidetoshi Kato, EWCI Research Associate and Director, Communication Design Institute, Kyoto, Japan ...... 1

I. The City as Communion ........................................... 3
II. From Holy Days to Holidays ..................................... 7
III. The Metamorphosis of the Gods ............................... 10
IV. New Symbolic Experiences ..................................... 13

SOME NOTES ON THE CHANGING INFORMATION ENVIRONMENT FOR MAN
--John McHale, Director, Center for Integrative Studies, State University of New York, Binghamton ........ 17

I. The Changing Information Process .............................. 17
II. Change in the Nature of Resources ........................... 22
III. Change in the Nature of Power ............................... 23
IV. Impacts of Change .............................................. 23
V. Issues and Questions ........................................... 29

COMMUNICATION AND URBANIZATION: SOME RESEARCH ISSUES
--Daniel Lerner, Ford Professor of Sociology, Massachusetts Institute of Technology .................. 33

I. Cities: A Retrospect .............................................. 35
II. Modern Cities: The Communication Nexus .................... 38
III. Future Cities: A Perspective ................................ 40

LIST OF EWCI PAPERS TO DATE ................................ inside back cover
FROM PANTHEON TO PRESLEY:
CHANGES IN URBAN SYMBOLISM

by

HIDETOSHI KATO
I. THE CITY AS COMMUNION

The people of the Shang dynasty of China (1400 B.C.), especially its priests, wrote questions pertaining to all affairs of life on a piece of animal bone, burned it in a fire, and read the resulting oracle through the patterns of cracks which appeared on the surface of the bone. Among many other questions, archeologists found that the people of Shang often asked Heaven about the building of a new city. The question was written as "The making of a city. Does Heaven approve?" Only when the divination from Heaven was positive would people start to build a city-state; a city-state with the support of Heaven could enjoy prosperity and security.

At the center of a city-state of Shang, there was the shrine of a King's ancestor, and many offerings and sacrifices were dedicated there. The King of a Shang city-state was supposed to be a descendant of Heaven, and therefore was called "son of Heaven." The worship of Heaven was synonymous with ancestor worship, and the ancestor-god was the guardian god of a Shang city.

Quite similar developments of cities are found in other parts of the world. For instance, a "Tel" (city) of ancient Sumer was essentially the place where the guardian god of the Tel resided. Ur was the city of Nammu, the moon god; Uruk was the city dominated by goddess Ishtar; and the god of air, Enlil, who was the central figure in Sumerian mythology, had his temple in the city of Nippur. The entire Sumerian civilization can be seen as one great pantheon. Vast numbers of offerings were presented at each temple to console its god, and every city was supposed to be the property of its god. The secular ruler of the city, called Enki, was nothing more than the obedient agent of the guardian god, acting at his instruction, as interpreted by the priest class.
In the case of ancient Egypt, there was no temple-city similar to Sumer or Shang, but it may be safe to say that pyramids, which each Pharaoh commenced constructing at the time of his enthronement, were special types of "cities," because each Pharaoh established his office near the pyramid into which he would enter after his death, thus temporarily establishing the Egyptian capital at each pyramid site.

The emergence and function of the cities in Greco-Roman civilization also were extremely religious and mythological. Greek cities, needless to say, were the headquarters of gods who were worshipped as the symbolic guardian spirits of each city. Delphi was the city of Apollo, Ephesus belonged to Artemis, and Cyprus was the seat of Aphrodite. Of course, Zeus, the highest among the Greek gods, resided on Mount Olympus, the great home of all the deities. Each individual household worshipped Vesta, a goddess of fire, Penates, the family gods, and so forth. The head of a family conducted religious rituals every morning as a token of respect to such gods. These same deities presided over Roman cities.

The historical situation was quite similar in Japan. Japanese urban civilization emerged in the early 6th century as the result of the conscious efforts of Princess Shōtoku, who built Shitennoji and Hōryūji. Beginning with the establishment of these Buddhist temples, urban culture flourished in the Nara basin. Before Emperor Genmei announced the official inauguration of the city of Nara, priests had made divinations regarding the direction and location of the city, and the Emperor followed the old rituals of the Shang and Chou dynasties of China in selecting the site. A number of temples were near the new city site—such as Kōfukuji, Yakushiji, and Hōryūji—and, to commemorate the new capital, a now-famous, gigantic sculpture of Buddha was constructed. The city of Nara prospered as a cathedral city, a perfect example of the fact that ancient Japanese cities emerged with Buddhist temples. Indeed, as Arnold Toynbee said, "Every city—or it might be more accurate to say, every city before the present age of mechanization—has been, among other things, a holy city in some degree."

In these ancient holy cities, the lives of inhabitants were full of religious rituals and ceremonies. Dionysia, for example, was a festival initiated in Athens in the 6th century B.C. As the name indicates, its purpose was to entertain Dionysius, and as a part of the entertainment, competitive performances of tragedy and comedy were staged. The citizens of the cities of Greece and Rome were able to maintain spiritual solidarity with the gods through their participation in the festivals such as this, which formed the origin of the theatrical arts in the West.

In his interesting book, *Magic, Myth, and Money*, William Desmonde points out that the sacrificial bull offered to deities in Greek cities had to be
shared by all citizens of the community, and only citizens were allowed a "ration" out of the sacrificial bull. Sports in Greece, also, were dedicated to holy gods, and the winners of the events were toasted with a cup of blood extracted from the sacrificial bull. The trophy cup which is the prize in many athletic competitions today obviously is a continuation of this tradition.

In Rome, too, similar religious rituals were observed. In the policy decisions of Rome, priests and augurs who made divinations through bird-watching played an important role, and all the sports events on the holy days had as their primary purpose the entertainment of deities. In the early stage of the Roman Republic, there were 66 holy days; toward the end of the Empire, there were 135.

The people of Shang also dedicated their whole lives to their ancestor spirits. A joint feast of gods and men was held on all ceremonial occasions, and the people shared the sacrificed bull, cereals, and wine offered at the shrine after the ceremony. Recent archeological research revealed that both music and dancing were offered along with food and drink in Shang cities, and such festive ceremonies became more sophisticated during the Chou dynasty.

Ancient Japan was no exception. According to Kunio Yanagita, a folklorist, the verb "matsuru" (to worship) is akin to another verb "matsurau," meaning "to be at the service of . . . ." The implication is that man's worship consists of service to the gods. On every special occasion men shared their meals with gods. Yanagita said " . . . in Japanese festivals, the way to entertain gods has been quite similar to the way to host the very important human guest—at the meal time, the best food and drink are prepared with extra care, and men tried their best to prolong the pleasant hours for the guest." People gathered around the fire and exchanged wine cups with the gods. In Greece and Rome, music and sports were presented in front of a shrine to entertain the gods. In Japan, Sumō, or Japanese wrestling, originated as a ceremonial sport at the shrines.

Whether these similarities in the city life of East and West were the result of cultural diffusion or independent parallel development may be an interesting historical and anthropological question. But the important thing here is that in many areas of the world cities have been perceived by human beings as inseparable from superhuman deities. A city belonged to its god, and the citizens of that city were the servants of his temple. The integration as well as reorganization of ancient cities resulted from holy efforts. For instance, Enlil, the master deity of Sumer, was amalgamated with Marduk, the almighty god of Babylonia, and became Bel-Marduk when Babylonia was unified by Hammurabi. The unification of the Babylonian people took place because gods of the city states had decided to be unified: The secular world was only an expression of the heavenly worlds inhabited by the gods.
As we have seen, the people of cities were in constant touch with the
gods by means of priests' mediations or joint feasts. This process was more
than "communication" between human beings and deities: it was a holy com-
munion. And to be a citizen in an ancient city was to be continuously in holy
communion with the guardian deity of the city.

It is clear, then, that one of the basic historical characteristics of
cities, both in the East and West, was the fact that they were established by
gods as sacred places and operated as sacred places. Of course, there were
many other functions in a city: commercial, industrial, and educational func-
tions were also important. But among these functions, religious ones were
fundamental, and the architecture of every ancient city demonstrates its reli-
gious nature through pantheons, temples, and shrines.

A good example is the city of Cologne. In the middle of the 13th cen-
tury, this city, with a population of 25,000, decided to build the greatest
chpurch in the world. It was a fantastic idea. But the people of Cologne started
the construction in the 15th century, and for a period of four hundred years,
they worked continuously. Petrarch visited the city at the very early phase
of construction and was skeptical that the ambitious project would be com-
pleted, but when Goethe visited the same spot 400 years later, he saw that
the church was almost completed.

At last, in 1842, the Cathedral was accomplished. Even today, a
traveler along the Rhine can see the gigantic building from a distance of
10 miles and in the city, the Cathedral overwhelmingly dominates the whole
area. As the developmental map of Cologne prepared by Schneider shows,
the history of the city has been integrally tied to the successive construction
of churches: The city grew with the increase in the number and size of church
towers. It has been a well-known historical fact that Greeks did not pay much
attention to the style of their own residences, yet they worked hard on their
pantheons. The enthusiasm of the citizens of Cologne in the past reminds us
of classic Greek devotion to deities.

Not only in Cologne, but also in many cities of medieval Europe, the
citizens displayed a great zeal for jumbo-size cathedrals. The people of
Ulm, in the mountains of southern Germany, worked five hundred years for
their church, and finally succeeded in building the highest church tower in
the world (161 meters--5 meters higher than the one in Cologne). Similar
religious towers and cathedrals are found among Islamic and Buddhist cul-
tures, too. In Japan, the time and energy devoted to such fantastic temples
of Kyoto as Tōji or Chionin are beyond any realistic measure.

Of course, the world's great religious architectural structures--from
pyramids to the Tōji temple--were designed and financed by the ruling class
of the day, and it is true that the people of the cities were exploited through
taxes and their labor for the construction projects. But at the same time, it
should be noted that a cathedral had an absolute symbolic and spiritual value
in the minds of these city dwellers, and many were really happy to participate
in such great ventures. Just until yesterday in the history of mankind, a city
was the place for communion, rather than communication. At least, every
historical city evolved out of such holy communion with the gods.

II. FROM HOLY DAYS TO HOLIDAYS

As we have seen already, in Rome, there were up to 135 "holy days"
a year, and each "holy day" was filled with particular ceremonial events;
indeed, according to D. James' historical account, the earlier calendar of
Rome was nothing but a list of these festivals.

For example, in Rome, since before the days of Caesar, March was
the beginning of the year, and the month was dedicated to Mars. To enter-
tain this great god of war, chariot races were held at Campus Martius, north
of the city of Rome. A parade of armored warriors was another major event
of the month.

The 21st of April in Rome was a holy day called Parilia, a day for
purification of the pasture and animals at the beginning of the spring season.
Farmers washed their livestock as well as themselves with water, and swept
the floors of their barns with laurel trees. Sulfur was burned with olive
leaves, and the smoke was poured over the animals for purification. Cakes,
cereals, and milk were offered to Pales, the pastoral goddess, and after such
offerings were made, animals were released over the pastures. When all
these complicated rituals were completed, farmers were assured of good for-
tune and a good harvest that year. Romulus later assimilated this festival into
the city life of Rome as the founding day of the city.

On the 9th, 11th, and 13th of May--the Lemuria--the evil spirits of the
dead came back to the earth, and in order to avoid them, Romans had to follow
subtle rituals. First of all, the head of each family had to rise very early in
the morning, wash his hands, and walk around the house in his bare feet,
throwing beans over his shoulder, without looking behind him. Then he washed
his hands again, and all of a sudden made a loud noise. The evil ghost would
disappear as the result of such rituals.

Every holy day of Rome was accompanied by very intricate procedures
through which people displayed their respect and goodwill toward the deities.
A holy day, in other words, was a day which man devoted to his gods.
The situation was identical in Japan. One good example is the Gion Festival of Kyoto. Historical documents show that this festival, a ceremony performed for the god of the Yasaka Shrine, originated in 869 A.D. by order of the Emperor to drive away an epidemic which had attacked the city. The priest of the shrine performed a special prayer to drive the evil spirit of disease into a pond in the center of the city. In the 10th century the Imperial court added horse races and music to the festival ritual, thus making it become one of the major annual events of Kyoto. The holy day tradition still exists in the city. Every year, millions of people gather to celebrate the festival, and most of the local businesses, including banks, are closed. The shrine also is famous for its New Year's festival, known as Okera. In former times, every household of the city was supposed to visit the shrine at midnight on December 31st to obtain the holy fire produced at the shrine and to cook the ceremonial meal of the New Year's day by the fire. Even in recent years, more than one million people would come to the shrine with match-cords in their hands so that they could bring holy fire back to their kitchens. The solidarity of the citizens of the city was achieved through everybody sharing the same holy fire of the city god. Festivals of the city were socially defined as "holy days," and people were very devout on these special days. Similarly in the West, as Max Weber points out, the basic life style of the protestant ethic was "pray and work." Sundays were the days for prayer, and the hours were sacred.

The "holy day" tradition, however, has become transformed gradually since the medieval period. According to Kunio Yanagita, the decisive change in the meaning of Japanese festivals took place with the emergence of "spectators." For example, in the festivals of Japanese shrines, every inhabitant of the city used to participate in the ceremonial occasions. The Mikoshi, a mobile shrine, had to be carried by the hands of the citizens, and everybody had to visit the shrine to pay his respects to the deities. These were the imperatives imposed upon members of any city. However, over the years, a new group of people emerged: the "spectators." The spectators were outsiders to the festival, and therefore, to the community. They came to festive occasions not to be involved in communion, but to have fun at the festivities of the urban life.

As Weber further notes, the shift from "participation" to "spectatorship" may be defined as the "secularization" of "holy days." Religious festivals began to lose their significance and become secular entertainment. A "holy day" became a "holiday" in the contemporary sense. The more the cities developed, the less the religious functions of the cities were felt by the people, and finally the basic integrating process in the city life—com-
munion—became forgotten. Significantly, in ancient cities, the temple was located in the center of a city, with commercial and industrial areas often in the peripheral sections; but the priority has reversed both in the East and West. Handlin has said that this reversal took place in western Europe after the 16th century. Now the center of a city is dominated by commercial firms and banks, and traditional churches and temples are sandwiched by the bigger new office buildings. In Frankfurt, many traditional "holy days" of the city were observed until the 18th century, but with the rapid industrialization most of the festivals just disappeared. "Holy days" were transformed into "holidays" or "leisure," and "holy events" became "entertainments."

If we reflect on the history of our contemporary public "leisure" activities and "entertainments," we are struck by the fact that they have, without exception, religious origins. According to Reuel Denney, football in England developed from religious competitions between communities; as we have seen, Japanese Sumō also came from sacred sports. Kabuki, Japanese traditional art, was founded in the 17th century by a woman named Okuni, who originally was a shaman attached to Izumo shrine. She secularized her talent and attracted spectators to the city of Kyoto. Horse racing, a universal spectator game, needless to say, has another religious origin, and music in general has been religious, too.

Indeed, Western music until the Baroque period was essentially church music, and even the composers of the Romantic and Impressionist eras did not forget to write church music.

Commerce is another area connected with sacred events. In both the East and West, the market place originated at religious festivals. Even today, Ennichi—temporary, small retail shops—are open in the yards of Japanese temples and shrines; the term "Ennichi" simply means "holy day market."

Probably the most striking example of the shift from sacred events to leisure activities is the changes that have taken place in traveling. For instance, take some of the temples of Kyoto. As was discussed earlier, some shrines of the city were the residences of local city deities, but some others, such as Honganji or Myoshinji, have been the headquarters of various Buddhist sects with nation-wide organizations of memberships which reached millions. The fact that the headquarters is there means that the members of the sect should visit the temple at least once in their lifetime. Since the 15th century, the Buddhist worshippers belonging to such sects have tried their best to come to their headquarters temples in Kyoto.

For a while, a trip to Kyoto was a sacred pilgrimage. But historically speaking, the period during which people traveled purely because of religious motivation was extremely short: the visit to the city quickly came to
mean "fun" for most of the people. Of course, upon their arrival to Kyoto, they visited the temple. But after they finished their rituals, they came to spend more time on sightseeing, and a reversal of the goals-and-means relationship took place. In the earlier stage, the sightseeing part of the travel was permissible pleasure which came with religious pilgrimages. But soon, the pleasure became the major purpose of travel. People traveled to Kyoto for fun, and, in that context, the visit to the temple was a good means of justifying it. The temple visit, indeed, was a psychological compensation for the feeling of guilt at having pleasure and fun. In the case of the Yasaka shrine, for instance, though its Gion festival was a religious occasion, as soon as the shrine became famous, it became surrounded by entertainment facilities. Today, Gion, the name of the neighborhood of the shrine, is associated with a prosperous amusement zone with hundreds of teahouses. Very few people would associate Gion with the shrine and practically nobody knows the name of the god and all the historical and religious background of the shrine.

III. THE METAMORPHOSIS OF THE GODS

The secularization of holy experiences has been going on with amazing speed. The places of worship have been transformed into objects of sightseeing, and holy days have become holidays. The quality of the time-space relationship in cities has completely changed. A visit to any cathedral in the world—Notre Dame of Paris, Canterbury Cathedral, the Temple of Dawn in Bangkok, or Chionin of Kyoto—would be sufficient to see the changes in sacred time and space in the past two hundred years. Of course there are still monks, priests, and other people of holy professions in these holy places. There has been no change in their service in the cathedral in the past several hundred years. Changes have taken place, however, in the nature of people who visit the famous cathedrals. A few hundred years ago, the people who went to a church or temple were those who participated in sacred services. But today, most of the people inside the church are tourists poured out of guided city tour buses. They take pictures of each other in the church yard, with the gigantic architecture as their background, and they are approached by many vendors who try to sell small souvenir items of the holy place. The cathedral is not a place of communion, but a place of petty commerce in postcards and tiny replicas of religious icons.

While most of the tourists are happy merely to see the cathedrals and to take pictures of their pleasant tour, there remains an ambiguity in
their minds. On the one hand, the sacred places are perceived as "something to see," but on the other, they are still regarded as somehow sacred, regardless of their affiliation or non-affiliation with particular religious sects. This ambiguity gives people an uneasy psychological experience, which perhaps forms the basis for certain continuities in the sacred time-space complex which can be seen in contemporary cities. One example of this is the architectural style of the central part of many cities.

Take a five minute walk in the center of a city, practically any city in the world, and you will find that the major governmental buildings such as government departments, courts, the capitol, as well as financial buildings such as banks, are built exactly following Greco-Roman style. Wide and dignified steps in front of the buildings, Ionic or Doric pillars surrounding the buildings, decorative sculptures of deities, Latin inscriptions—these form the standard and universal architectural style adopted for the central buildings of the cities, at least until the 1950's. And interestingly enough, such a style has been adopted even in countries like Japan, which has no Greco-Roman tradition.

Money reveals another continuity. According to Desmonde, the origin of coins can be traced back to Greek city-states where people inscribed the image of a sacrificial bull on a piece of metal, and he notes that with the secularizing trend of the Roman period, the sacred bull image was replaced by the image of great power symbols such as Julius Caesar. This ancient symbolism has persisted in money, even though economic systems have become more complex. Indeed, Desmonde said, in reference to an aspect of the monetary symbolism of today: "...we can notice upon one side of the five-dollar bill a picture of Abraham Lincoln, partially framed in two sprays of wheat, and on the other side a depiction of Lincoln Memorial in Washington, D.C. This... is in the architectural style of the Greek temple. Surrounding the building are thirty-six columns, surmounted by state seals... On the pedestals alongside the steps in front of the memorial are tripods holding a bowl, and dimly under the great pillars we can make out Lincoln himself, seated in majestic pose."

The sprays of wheat, needless to say, have been the symbol of "prosperity of the land" since the time of Greece, and the bowl in front of the monument is an exact replica of the "paterae" used to hold sacrifices. As we have seen, Greek citizens shared their sacrificial bull through this utensil. The United States, while it has historically shown other discontinuities from Greco-Roman tradition, certainly has inherited Greek style. As a matter of fact the Capitol building is more similar to the Greek Pantheon than to any American-style architecture.
It is quite probable that the heroes after the time of Caesar were the new gods of each city, society, and period. It may not be too rude to say that, in spite of all obvious differences, there is little psychological distance between the people who worshipped the Big Buddha of Nara ten centuries ago and the contemporary Americans who have looked up to the statue of Lincoln in his memorial as a symbol of national unity.

The cities of the world seem to have been very conscientiously replacing old gods with the new. For example, we can notice many new sacred memorials in such big cities as Paris or London. The Arch of Triumph in the center of Paris is a memorial, again following Roman tradition, to commemorate Napoleon Bonaparte. There are the Revolution Memorial, Republic Memorial, National Plaza, statues of Henri IV and Joan of Arc, and numerous other memorial objects in the city. In London, Admiral Nelson looks down on Trafalgar Square, and the Marble Arch is at a corner of Hyde Park. Not only these two cities, but also most of the cities in the world in the modern period have been building new memorials and towers, and this process may be seen as the metamorphosis of "sacredness," if not religion.

Modern cities of Japan have not been exceptions. Tokyo, which emerged as the new capital of Japan in the middle of the 19th century, especially has been trying to establish new sacred places, following the models of western Europe. The Yasukuni shrine was built to commemorate the souls of those who died in the successive wars from the 1860's to the second World War, and Emperor Meiji has been worshipped at the Meiji shrine. Heroes of the Meiji Restoration, such as M. Ohmura and T. Saigo, have inspired memorial parks. The nation's capital was in need of new gods for the nation as well as for the city. And exactly like the gods of ancient cities were worshipped, these new gods have been perceived as the sacred core of the city. Especially in the case of Tokyo, because of the sudden shift of the capital from Kyoto, new gods--including the Emperor himself--had to be invented instantaneously.

The relationship of a city to its deities, old and new, can be demonstrated rather easily if one takes a sightseeing bus of that city, because in such tours one visits the various shrines of the city. The cities where sightseeing tours are prosperous are those with many shrines and sacred places: Paris, Rome, Kyoto, and London, to mention a few. In cities which do not have any pantheon--such as Los Angeles--there are practically no sightseeing tours. The stereotypic images of cities as represented by postcards are another indication of urban symbolism in connection with sacred places. Most of the historical cities have many sacred places and can make many kinds of postcards, but newer cities with practically no sacred background have little material for postcards.
As we have seen, the prototype of the holiday was the festival day, accompanied by many kinds of ceremonies and rituals in the sacred places. Such sacred places also provided the prototypes for leisure space. As the festivals were secularized, the places which had been the most holy spaces in the cities were transformed into secular spaces for recreation. Historical cities, such as Kyoto or Paris, contain many plazas and parks in their central parts, and the origin of such space can be traced back sometimes to the 15th or 16th centuries. It is interesting to note that the old Japanese "Jōkamachi," or castle cities, where the feudal lords constructed their huge castles, converted the castle or the castle site into a recreation park, and very often the festivals of the modern city, such as the cherry-blossom festival, take place at the castle site. Of course, there are more spectators than participants, but in the case of the "Awaodori" of Tokushima or the Gion Festival of Kyoto, one can still see the total mobilization of a city devoted to the festivities. Despite the metamorphic cycles of gods, there has been continuity in the time-space complex of sacred festivals as far as most of the historical cities are concerned.

IV. NEW SYMBOLIC EXPERIENCES

From what has been discussed, it seems that cities traditionally have been places for symbolic interactions, starting as communion with the gods and continuing as interpersonal human communication mediated by the sacred. It may be safe to say that at any stage of city development, to live in a city was to be exposed to an extremely complicated symbolic environment, and city people have been characterized by their readiness and willingness to participate in symbolic interaction rather than to deal with substantive environments. Indeed, they have wanted more symbolic sophistication all the time. Voltaire observed that the citizens of Paris were happy with the presence of aristocracy because through the literate noble people, common man could learn better language and better manners; still today, cities are admired, in spite of all their difficulties, for their "cultural" values--i.e., better schools, museums, concert halls, and so on.

A city, for man, is something to be experienced. It is an agent for special types of socialization. People learn and develop their ability in symbolic interaction by living in cities. Urban people often seem to be a special human species, with their own peculiar traits and social characters developed through constant exposure to symbolic environments. "City people," in other words, specialize in the production and consumption of symbols rather than
substantive objects. Of course, the nature of the symbols they have worked with has changed from sacred to quasi-sacred to secular, but the city life has remained filled with huge amounts of symbols throughout the past 10,000 years. Further, with the rise of modern communication industries, the city experience became even more symbolic. It is so symbolic that it is almost impossible for a man living in contemporary cities to cope with anything substantively. His experience is essentially symbolic, and his symbolic experiences must substitute for his would-be direct experiences.

For example, in the past few decades, the nature of children's play in cities has undergone tremendous changes. When cities were still developing, there remained small lots in the city where children could play baseball, ride bicycles, and simply run around: they could be physically mobile. But when cities developed and overdeveloped, children could no longer enjoy such physical movement. Some parks might have remained, but they could not accommodate the ever-increasing population of children. In the big urban areas in the U.S., Europe, and Japan, children's leisure activities have turned to more symbolic indoor playing rather than outdoor activities. As the physical density of indoor space has been getting tighter, even the size of the toys children play with has become smaller. More and more, the toys have been miniaturized. The prosperity of "matchbox" automobile models (whose size is actually smaller than a real matchbox) may be attributed to the very limited space children can use in their homes. Children in the past could enjoy bicycle riding, but in the cities like Tokyo, the only way children can spend their leisure time is to play with "matchboxes" and other similar miniature toys. In contrast to the children who achieved motor sensory development through direct physical movement, today's urban children have, through their imagination, a pseudo motor sensory development. In this sense, children's play in contemporary cities is extremely symbolic. Indeed, a simple inventory of toys sold at toy departments over the past 30 years--especially the past 10 years--reveals the trend toward miniaturization of toys. And thanks to the technological innovations in electrical engineering, adult entertainment equipment, such as radio, has also become miniaturized. One must now spend his leisure within a "mini-space" with "mini-instruments."

Not only space but also the concept of time has changed in modern industrial cities. With the adoption of the modern working-hour system, workers in contemporary cities have fragments of "off" hours. A worker, white collar or blue collar, can enjoy an hour or two in the morning and evening on every work day as well as institutionalized weekly holidays. And the uses of these fractions of "time" form another aspect of contem-
porary city life. In other words, a symbolic experience, within a small limited space on a fragmental time scale, is one of the basic characteristics of city experience today.

In this context, the invention of TV achieved a new era in urban communication. As a matter of fact, there seems to be a mutual cause-and-effect relationship between high-density, overpopulated urban life and the success of TV. The TV screen is very small, but yet there are constant movements going on all the time, with many kinds of sounds. In that tiny screen, one can experience the vast plains of the American West, where hundreds of Indians gallop on horseback, or can feel as if he were in a spaceship from which he can see the infinite extension of outer space. With the manipulation of a simple switching device, one can go to a baseball stadium, a race track, a concert hall—all these and more are at one's disposal. Living in a confined space made of steel and concrete, people can experience all kinds of scenes and places through this small bright box. Furthermore, the time module is very flexible. A person can watch TV for 10 minutes or 60 minutes, even 24 hours if he wants to. TV seems to be a magical box which has introduced us to an expandable time-space continuum.

In the 18th century, when urban problems became explicit, city inhabitants put paintings of ponds, birds, and mountains in their surroundings to compensate for their loss of contact with a substantive natural environment. TV has now become decisive in this continuum of symbolic compensation. In reality, there is no physical space left in the cities, but symbolic space is plentiful. Physical density in the cities has already passed the saturation point, but there is practically no saturation point to symbolic experience.

These thoughts, in the light of historical experience, lead us to suspect that the heroes whom we see everyday through the TV screen may be the gods of our age. The classic deities were replaced by newer gods called Kings, Emperors, and Generals. But in an age when even the statues of these new gods are decaying and melting through increasing exposure to sulphurous acid gas, the metamorphosis of the gods has come into another cycle, and the new gods have brilliantly made their debut on the 20-inch screen of every household.

Indeed, it is quite symbolic and significant to see that the ultra-modern "cathedral towers" of the industrial age—such as the Eiffel Tower, the Empire State Building, and Tokyo Tower—are being used to transmit television waves. In the past, people communicated with each other through their shared experiences, through identification with their church tower; but today, our shared experience is watching Elvis Presley, whose image is transmitted to our living room TV screen from our new "cathedral spire"—the TV transmission tower. Isn't Elvis our god? Isn't our holy day an occasion to celebrate Elvis?


Kato, H., Toshi to Goraku (Cities and Amusements). Tokyo, 1969.

Kato, H., Misemono Kara Terebi e (From Sideshow to Television). Tokyo, 1967.


SOME NOTES ON
THE CHANGING INFORMATION ENVIRONMENT FOR MAN

by
JOHN MCHALE

A brief and cursory overview of man's changing information environment must consider:

1. What we mean by the information process—and how it may develop in the next few decades;
2. What kinds of changes we might expect—changes in the nature of resources and in the nature of power, and individual changes in perception, attitudes, values, and capabilities;
3. How these changes might impact upon society—on business, politics, education; and
4. What kinds of key issues and initiative may emerge.

I. THE CHANGING INFORMATION PROCESS

The "information process" as such is not new! Human information processing is unique, however, in the degree to which man has consciously elaborated and transmitted his personal information interactions through sophisticated symbol systems; human society is essentially dependent on its common symbolic systems, which provide both its cohesion and its "reality."

What is new and critical in human affairs is the recent externalisation of these software information processes into hardware tool systems which perform various types of information processing for man—at greater speeds, with greater precision and with the capacity to deal with greater quantities of information than the unaided human senses.

The core of this transformation, and its most visible component, is electronic data processing via the computer.

Rapid increase in the growth and interlinkage of large computer networks and in their control capacities also represents a significant change, not only in magnitude, but in the qualitatively pervasive impact on human society—
as it begins to rely more and more on cybernetic control systems for myriad routine production, service, and maintenance functions—a new symbiosis.

![Diagram showing the convergence of communications and information technology]

Fig. 1

The crucial developmental point in the swift growth and diffusion of these systems has been the convergent interaction of information technology and communications.

In combination with other technical developments, such as digitized transmission of graphic and audio inputs, image technology, holography, etc., this portends a further quantum jump in the uses and impacts of these vastly simplified capabilities.

It is precisely this convergence and interlinkage which creates the changing information environment which is now emerging.
It should be noted also that we are dealing with a phenomenon (not unprecedented in socio-technical innovation) in which the characteristics of any one set's technical aspects considered in isolation may not enable us to predict the overall implications and potential consequences of their interactive combination. The behavior of the whole is more than the sum of its parts.

We are faced, therefore, with the emergence of a new and powerful fusion of technological capabilities which not only potentially amplifies our capacities to deal with our social and physical environs, but which by its function actually reshapes the information content and perception of society—in ways that our conventional wisdom and traditional means may not be able to foresee, comprehend, and effectively control.
II. CHANGE IN THE NATURE OF RESOURCES

Information and knowledge have several unique properties which do not pertain to other forms of resources.

(1) All other resources are dependent upon them for their evaluation and utilisation.

(2) As resources in themselves, they are not reduced or lessened by increased use of wider sharing—rather, they tend to gain in the process.

The possibility is, therefore, that increased dependence on information as key resource will move society towards new forms of institutions, governance, and value systems about which we can only conjecture.

![Physical Resource Diagram](image)

![Information as a Resource Diagram](image)

Fig. 3
Such societies could be as different from the industrial society we have known in the past century as that society differed from all the preindustrial societies; the impact may be greater than was occasioned by the introduction of the new energy sources and capabilities of the first Industrial Revolution.

Yet we may note that most of our current concepts of wealth and power are still tied closely to pre-industrial value systems, in which survival was marginal and competitive due to underlying scarcities.

Survival in these pre-industrial terms was essentially a zero-sum game--the winners only secured advantage if their opponents lost!

The new social wealth generated by information/communications technologies is less dependent on the older forms of land, materials and property ownership.

The only unique resources input into the socio-industrial process is human knowledge--the organised information which programs and governs machine performance.

The whole character of the survival game has been changed. It is now more clearly a non-zero-sum game--success or gain are predicated on all winning. The new wealth generators, information, knowledge and organisation, are not depletive but cumulative in use. They do not lose in value or amount by wider distribution, access and sharing--they can only gain.

III. CHANGE IN THE NATURE OF POWER

This shift has considerable implications for the nature of power in society. Older forms of power were based on possession or control over physical assets--land, money, the ownership of tangible properties. The new information environment creates new forms of "property," i.e., organised information with transfer and transformative capacities far greater than before. It may tend to create a new and powerful "property class," whose property is in their heads, i.e., those possessing the specific skills required for access to, and manipulation of, vital knowledge and information.

IV. IMPACTS OF CHANGE

On the Individual

Many of the negative impacts have already come into public attention--

- the invasion of privacy of various forms,
- the manipulation of information to mold public opinion,
• increased surveillance and monitoring of personal data (in the social interest), and so on.

Less attention has been given to such positive aspects as:

• The increased availability of highly personalised information and communication systems.
• The enhancement of inter-personal and inter-group dialogues through more sophisticated means.
• The capacity to make more free choices in wider areas of individual interaction.

Neither negatives nor positives are inherent in the technologies themselves, but are inherent in the ways in which we choose to use the technologies, both individually and collectively. One example is the sharp divisiveness which could occur due to the rapidity of developments in information technology: individuals could become stratified into divergent information communities whose attitudes, needs, and desires may be in conflict.

**TYPOLOGY OF INFORMATION COMMUNITIES**

<table>
<thead>
<tr>
<th>SIZE OF INFORMATION COMMUNITY 3</th>
<th>SIZE OF INFORMATION COMMUNITY 2</th>
<th>SIZE OF INFORMATION COMMUNITY 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>THOSE LITERATE IN NEW INFORMATION TECHNOLOGY</td>
<td>THOSE ESCHEWING INFORMATION TECHNOLOGY</td>
<td>THOSE STILL ORIENTED TOWARDS TRADITIONAL MEANS</td>
</tr>
</tbody>
</table>

**SCHEMATIC AGE DISTRIBUTION**

![Fig. 4](image-url)
We may look at this central question of the use of the new technologies in another dimension, describing it in terms of individual responses to them (the types of responses listed below are only impressionistic, and patterns of response change and overlap):

(1) Those who accept them may become skilled in and make extensive use of new information capabilities.

(2) Those who reject the larger implications may become actively or passively resistant.

(3) Those who are unable to use, or participate in, the changes in the information environment--due to inadequacy in its use, lack of education, discrimination, or similar factors--may feel increasingly frustrated and ineffective.

(4) Those who are able to remain indifferent to changes through "functional" affluence or subsidy may become progressively disenfranchised and unresponsive to other social changes.

For both the individual and the policy maker, coping with the information-rich environment of the next decade will require the cultivation of a high tolerance of ambiguity and capacity to act under uncertainty, offset by a more deliberate acceptance and conscious admission of error. Making mistakes will be even easier than before--but the earlier these are incorporated into corrective feedback for effective action, the less chance of compounding errors towards catastrophe.

On Education

Now, as never before, the level and quality of education largely determine the degrees of freedom of the individual, the prosperity of a nation, and, perhaps in the final analysis, the survival of human society. A number of changing aspects appear to be important. The age range of participants in the educational process is widening. The educational process is becoming diffused to include "real life" experience and extramural attainment, and boundaries between education and other institutions--e.g., between education and entertainment, education and work--are becoming blurred. Education may be progressively detached from the structure now used for educating, and new options, approaches, and "entries and exits" may be opened up. Education may in fact move from being a service-oriented institution towards taking on aspects of a "goods-oriented" industry, that is, in terms of the availability of presequenced and packaged programs, of decentralised access to services, and so forth. The ability to communicate cheaply and conveniently and the change in the locus of "educational experience" within and across institutions will weaken the identification of participants with a particular institution.
Along with all this will come a major shift in emphasis from learning what is known toward learning to learn: learning the means of finding out what one needs to know when the need arises. We may now program or "can" a lot of the expertise of many professionals. With these specialised programs, persons can perform highly complex tasks without having explicit "professional" knowledge of these tasks, e.g., in the use of calculus and other mathematical functions, etc. This is a new kind of recorded knowledge which the individual can "clip on," as needed, without prior detailed assimilation in the educational process.

Our present linear pattern of separate, narrowly channelled, and fixed increments of one type of education typically leading to one occupation, thence to an empty retirement, was imposed by the constraints of early industrialisation.

Changes in technology, in information and knowledge have already forced many individuals to take up two or more "field" careers sequentially. The new possibilities enlarge this sequence so that individuals may be able to move more flexibly from education(s) to career path(s) to different forms of re-creative leisure.
On Politics

The central dialogue in the political process is concerned with the allocation of power in society. In an information-dependent society, power tends to be associated with knowledge; we may assume that there will be an increasingly large number who gain power—if not to make policies, at least to intervene, question, and have additional leverage to influence the policy process.

We have noted particularly in the past two or three years that, due to increasingly swift diffusion of information, the "time cushion" between the occurrence of perceived problems and issues and their entry into the public dialogue has dramatically decreased. Consequently, policy makers are increasingly placed in postures of day-to-day crisis-management with regard to issues in public view.

As one of the possible consequences of the new information environment, the policy process becomes more open. This is not limited to the political sector: we may note the growing sensitivity of business, education, the church, and others to public issues and the same pressures by their consumer and stockholder "publics" to intervene, question, and seek leverage to influence policy.

Competition for control of the new information resources will certainly lead to conflict between competing groups. New sources of competitiveness
may fragment attitudes formed via new information and communication
technologies. The polity may become much less homogeneous and more
diversely organised, hence more difficult to reach on broad issues.

Desire for economies of scale and development could lead toward
information and communications becoming centrally controllable resources--
especially in a political climate characterised by central organisation
and surveillance. However, an increase in the numbers of highly educated
individuals with capacities to organise and use the new information tech-
nology may exert a counter influence towards such central control—though
their influence, in turn, may be limited by their position as a stratified class.

On Global Reality

Information and communications regarding our global crises now
impinge more immediately, more vividly, and more swiftly on each individ-
ual than at any other time in history. (In this one respect, U.S. society is
already somewhat shaken by the impacts of the information technology.)

This situation has already contributed in a major way to those trans-
formative accelerations which have thrust us into a new and unprecedented
global reality in the past two decades. We live in a world which has been
made into one small community—less by political and ideological ideas than
by scientific and technological facts.

Fig. 7
The trends which force us, collectively, into this community are not the old bonds or agreements between nations or even regions: they are forces which operate across national frontiers and with lessening regard for local territorial sovereignty.

World communications provide commonly shared cultural experiences in a manner unparalleled in human history. Within this network, movies, TV, radio, magazines, and newspapers are a common cultural environ diffusing and transmitting man's symbolic needs and expressions on a world scale.

Accompanying this diffusion there has also been the relatively invisible development of the inter-national regulatory agencies, the multi-national corporations, and the new economic blocs and communities whose function and steady growth have been little interrupted by our surface wars and tensions.

Many critical decisions affecting the global economy now occur outside of the local national political system.

We may well reflect, in terms of real world control, that if all access to such transnationally sustained information networks--such as telecommunications, airlines, world weather, and health information, etc.--were cut off, no developed nation could survive for more than a few days.

V. ISSUES AND QUESTIONS

What the new information environment actually does is to set the consideration of "issues" and approaches to problems in a quite different context. It is one in which we cannot tackle one issue, one question, or one problem at a time, as isolated items. All must be viewed as critically inter-dependent and interactive elements in a new systemic context--in which the perturbation of one component in one subsystem can grossly affect other components in ways that are quite different from the predictable behaviors of any isolated part of the system.

To add a further perspective to our understanding, at this point it may be useful to back up historically and examine the larger pattern of change displayed in the Figure.

Many of current conceptual difficulties still stem from this historical transition to relative intangibility and indeterminacy which emerges in the latter part of the 19th century.

From being a relatively contained, fixed, determinate, and "rationally" apprehendable Newtonian world to the generally educated person, the whole order of reality began to shift its outlines, to become ambiguous and infused with relationships which were neither visibly nor logically apparent before. Alice not only voyaged into Wonderland, but went through the Looking Glass.
If we accept this kind of transformation, then we have to accept its dilemmas. In order to arrive at ends, we must accept that these are also, simultaneously, means—like waves and particles—often mutually complementary and identical.

It is the kind of world picture which is "instinctively" resented, especially if one is action-oriented and conceives of actions in series of neatly connected linear cause and effect mechanisms. It calls for a "process orientation" in which ends/means, issues/questions, problems/solutions all loop back upon one another in interweaving and overlapping sets of feedback systems.

We now have few reliable models or institutional means for resolving our issues, problems, and effective initiatives in this new context. This may well be our most urgent single issue.
QUESTIONS FOR POLICY MAKERS

**QUESTIONS**

1. Do current decision makers have the appropriate conceptual apparatus to perceive the wider problems facing society?
2. Do they have the information technology required to gather the data for problem formulation, solution, and monitoring of results in a timely and effective fashion?
3. Can incentives be provided to stimulate decision makers to take more timely and effective action?
4. Are policy makers willing and able to plan in a time frame beyond their tenure of office or position?
5. Do they realize that short-run problems may be best dealt with via long range goal formulations?
6. Do they have the techniques, including hardware, software and communications, to structure solution models and procedures?
7. Do they have the appropriate organizational structure and mechanisms to solve the problems?

**ANSWERS**

If answers to questions are mainly negative
If no provision for change is made

If answers are not all negative
If institutions and policies can be changed

**POSSIBILITIES**

Current problems become even more complex and critical
The control and stabilization of society may only be achieved through increasingly coercive means

Demands for change overwhelm present institutional forms
Revolution occurs

Changes are made
Institutions are adaptable
Possibility of disruptive but evolutionary revolution of society

Fig. 9
FIGURE REFERENCES

Figures 1, 2, 3, 4, 5, 6, and 9 were taken from "The Changing Information Environment: A Selective Topography," by John McHale, chapter in Information Technology: Some Critical Implications for Decision Makers, sponsored by the Conference Board. New York, 1972.

Figure 7 was taken from The Future of the Future, by John McHale, published by George Braziller, Inc., New York, 1969, p. 269.

Figure 8 was taken from The Ecological Context, by John McHale, published by George Braziller, Inc., New York, 1970, p. 68.
COMMUNICATION AND URBANIZATION:
SOME RESEARCH NEEDS

by

DANIEL LERNER
I. CITIES: A RETROSPECT

The city has been central in the development process during all of modern Western history and much of prior world history. In considering the present and future of the city, it is valuable to scan the historic past, for most of the issues of urban life today first became salient as the great cities emerged in the ancient and medieval worlds. The past reminds us of many urban functions that nowadays are taken for granted and thereby minimized. It reminds us as well of the older functions that have disappeared in the modern world.¹

For example, two prime functions of the historical city were to serve as a stronghold and a sanctuary. Perhaps the most delightful exemplification of these functions is their exploitation in the Isphahan of caravansary and cathedral by that beguiling rogue Hajji Baba.² The stronghold function of the city diminished with long-range artillery ("Big Bertha") in World War I and disappeared with air warfare in World War II. The function even produced a "boomerang effect" as air bombing made cities the easiest of targets.³

The sanctuary function also declined in the modern West as church was separated from state and police methods became urban-systematic.⁴ A major scholar in the shaping of urban studies, Fustel de Coulanges, ranked the cathedral-sanctuary function high in his account of the ancient city.⁵ This version of the sanctuary city persists in contemporary conceptions of early urbanism despite scholarly challenges, as witnessed by the fanciful American musical comedy on life in old Baghdad titled Kismet. Separation of church and state virtually eliminated the cathedral as sanctuary. The urban-systematic development of police procedures reduced the value of the city as a sanctuary in which to "get lost."
As cities lost their stronghold and sanctuary functions, they gained others. The main reshaping of urban life was conditioned by the new emphasis upon economic functions. This new emphasis is revealed in the subtitle of Henri Pirenne's classic essay on medieval cities: "Their Origins and the Revival of Trade."\(^6\) Pirenne's emphasis on the Mediterranean and the impact of its waterfront cities on social life throughout Europe (he was, after all, a Belgian living in a waterways system far north of the Mediterranean) led scholars to explore the wealth-water dimension over the historical past. A major set of studies led by Karl Polanyi at Columbia from 1947 to 1956 greatly augmented our understanding of "trade and market in the early empires."\(^7\) Next came, with scholars interested in the Columbus legend, studies of maritime cities—of which my hometown, Boston, is a beautiful example. The interest in this area even went so far as to lead a brilliant young historian at Harvard to involve his lovely statistical bride with him in the enterprise of tallying "all the ships at sea" on the Atlantic Ocean in the 18th century. Men were fascinated by the fact that they had really learned to "walk on water."\(^8\)

With maritime technology came the development of seaport cities. What centuries of invention, exploration, and growth are evoked by the mention of Genoa and Venice! The name Christopher Columbus is the symbol of the ferment caused by his voyages onto the great oceans. Cosmologies based on a flat earth collapsed, calendars based on a lunar calculus were rewritten in solar terms, religions went with fear and trembling through a dramatic reformation. The world has never been the same since Columbus.\(^9\) For maritime exploration was to the fifteenth century of the Western world what cosmic exploration is to the twentieth century.

The transportation of living people to unknown places became a wonder of the world. The then-new technology of maritime transport (maps, sextants, sundials, astrolabes, etc.) brought a new world of seaport cities into being. Transportation has remained a principal component of urbanization in our lives today. Harlan Gilmore has traced this evolution in a neglected book that richly merits study today.\(^10\) But, with all due deference to the importance of transport as the technology of physical mobility in human history, those of us who are interested in communication will recall that a half-century before Columbus left Genoa to explore the open sea, Johannes Gutenberg in Mainz invented movable type. This was the start of modern Western communication. It initiated a process of psychic mobility that was to become an even more momentous input to human history.

In our brief reference to the pre-Columbian city, we concluded that its traditional stronghold and sanctuary functions evaporated over the course
of modern history. The major redirection of urbanism after Columbus was the seaport city. Everywhere in Western Europe grew cities-by-the-sea. All Britain was ringed by such cities in a U-shaped distribution from Hull on the West coast through Southampton in the South to Bristol on the East coast. The French built their great Northern Channel ports at Calais, Le Havre, and Cherbourg; their array of Atlantic Ocean cities at Brest, St. Nazaire, and Arcachon; their Mediterranean seaports at Marseilles, Toulon, and Villefranche. The other Atlantic powers—Holland and Belgium, Portugal and Spain—followed suit. Italy, separated from the Atlantic, focused on a Mediterranean strategy that led Mussolini, centuries later, to declare that Sea an Italian mare nostrum. Germany, cut off from all but Northern waters, developed the trading Hanseatic towns and seaports from Lubeck to Hamburg in their support. Russia, with no all-weather access to the West by water, tried unsuccessfully to vie with the Germans and British for access via the Dardanelles to the Persian Gulf, Mediterranean Sea, Indian Ocean. The British won.

The Russians then tried the costly experiment of reaching the Pacific Ocean by constructing the Trans-Siberia Railroad and building the seaport city of Vladivostok. Before the Russians could bring their big guns and numerous soldiers into position, however, the more apt and agile Japanese had handed them a terrific defeat. The Russians signed a humiliating peace treaty at Port Arthur in 1905. The Berlin-to-Baghdad dream ended in the German nightmare at Versailles in 1918.

This brings our story of physical mobility via maritime technology into our own century in West-East terms of peace and war. Much had been going on in East-West relations during these centuries. War issues were being fought. Peace issues were being legislated. The Chinese, driven by drought and famine, were moving into all of what we now call Southeast Asia—the still current problem of the "Overseas Chinese." The Indians, driven by poverty and loss of purpose, spread into a vast region ranging from East Africa to Pilipinas. Recall that Gandhi came home to India from East Africa.

This brief resume of past cities sets a skeletal historical framework for some brief comments on the problems of the modern cities, to which we now turn. Only as our retrospective analysis of the past, and our diagnosis of the present, can approximate an acceptable "context" is our concluding specification of "research issues" likely to seem deserving of high priority in the deliberations of this Conference.
II. MODERN CITIES: THE COMMUNICATION NEXUS

As the medieval city with its role of stronghold-sanctuary gave way to the seaport city based on maritime technology, so the seaport city shared (then yielded) pride of place to the industrial city based on manufacturing technology in Europe. Britain, as always in the 17th to 19th centuries, led the way with the growth of its great Midlands cities of Sheffield, Birmingham, Manchester. France followed suit with Lille, Lyon, Clermont-Ferrand. Germany, lacking real national unification until 1871, concentrated its industrial growth in the Ruhr cities of Essen, Krefeld, Dusseldorf. Italy a latecomer to the European drive for national unification (using urban-industrial-maritime cities as a source of national power), has yet to recover from its Dynamic North/Static South split.

Nowhere in the Western, rapidly industrializing world was this North/South split entirely absent. It continues vigorously today in Italy, and is not yet entirely settled between "Prussia" and "Bavaria" in Germany. In France, the gap between Paris and the French desert did not even begin to be closed until several years after World War II. Only the British had early recognized the importance of decentralizing urban functions as the key mode of nation-building: Oxford and Cambridge were early established as the academic centers; the U-shaped seaport cities followed a perimeter that served Britain both for defense and commerce; the industrial Midland cities were then developed to serve British wealth and power. London, large as it was, controlled the Empire through power (Whitehall), money (The City), and communication (Fleet Street).

The many lessons of dynamic Britain were not lost on some newly modernizing countries, notably Japan and America. About Japan, I will only report three startling facts—startling because many people think that the "Japanese miracle" began with the democratic regime installed by the American occupation in 1945, or, if they are better informed, with the Meiji takeover of Japanese government in 1868. The facts are these: (1) At the time of the Meiji takeover, Japan was already modernizing by the tests of urbanism and literacy—with over 30,000 public schools already in operation; (2) By 1900, Japan was already more literate per capita than both Greece and Italy (the two great sources of classical civilization for the West); (3) By 1970, Japan was the world's largest per capita consumer of all communication media (print, radio, film).

The U.S.A. had picked up the "signals" of dynamic Britain a bit earlier than Japan. The margin was not great; the Meiji Restoration came in 1868, the American Civil War in 1861. Both had to fight the North/South
(Dynamic/Static) battle. The Americans had the advantage that they were largely English-speaking, ferociously devoted to the idea of literacy as the passport to personal freedom, and endowed with a large continent to test the British (and other European) experience. This the early Americans did very well.

The revered Jefferson was a French Physiocrat at heart and regarded land as the main source of wealth. Without a landed French aristocracy to murder, this could take the easy form of "land grants" over a large continental space. Hamilton, with his eye on the British Midlands, wrote a "Report on Manufactures" to show that Jeffersonian agriculture needed a strong and protected urban industrial base. Then, Madison and Jay clarified the principles of coexistence for a continental federation of large and small, urban and rural, industrial and agricultural regions endowed with a large measure of self-government. These principles have endured, with the modifications imposed de facto by the Civil War, into contemporary America. 15

What the Civil War certified was the predominance of the urban-industrial sector in American society. This, with the continuous Westward expansion already foreshadowed by the earlier purchases of Louisiana (from France) and Alaska (from Russia) as well as the Gold Rush of 1849 to California, produced a distinctive pattern of American urbanism that is noteworthy in the world today for its creation of a unique national communication nexus to which we here call attention.

Throughout the 20th century, America has led the world in number of cities with over 1,000,000 population. The U. S. urban pattern has alleviated the single-metropolis congestion typical of Latin America--where over half of all Cubans live in Havana, over half of all Uruguayans live in Montevideo, and about 80% of all Venezuelans live in the Caracas-Maracaibo urban region. The dozen largest American cities are deployed throughout every area of the country and are often specialized by economic functions: Houston is an oil city, Pittsburgh a steel city, Detroit an automobile city, Seattle an aircraft city, Boston a university and engineering city. The three greatest cities span the continent--New York on the Atlantic coast, Chicago on the midwestern Great Lakes, Los Angeles on the Pacific coast.

The growth of American cities was integrated with the growth of the national communication networks. Throughout the continent, the great new railroads laid their tracks. Alongside these tracks, as a classic feature of the American landscape since 1870, the telephone-telegraph companies planted their poles and strung their wires. Skeptical traditionalists brooded over this frenetic outburst of nation-building activity. The wry Thoreau even quipped: "We are in great haste to build a magnetic telegraph between..."
Maine and Texas, but it may well be that Maine and Texas have nothing particular to say to each other." Despite the hemming and hawing of skeptics, the unprecedented construction of a continental communication network proceeded apace.16

This American achievement, essentially technological at first, enabled the U.S. to move ahead of the world rapidly as the new "mass media" appeared in the 20th century. In the print media appeared the great news agencies (A.P., U.P., I.N.S.) and press syndicates (Hearst, Scripps-Howard, N.Y. Times, Washington Post, Chicago Tribune). In radio, media organization moved rapidly toward the creation of "national networks" (NBC, CBS, ABC)—often linked with control of the industrial products of radio transmission, notably David Sarnoff's welding of RCA-NBC. The same drive toward "national networks" was animated by the new technology of television, made commercially viable only twenty years ago. Radio networks, film producers, newspaper publishers "merged" and "conglomerated" so that virtually all Americans could watch the assassination of President Kennedy (and the assassination of his assassin Lee Oswald by Jack Ruby) "live" on their TV screens at home on that fateful Thanksgiving of 1963.

The American mode of "network-building" has now become global through the agency of COMSAT-INTELSAT, in which some 70 nations around the world are "partners." This American mode of international "sharing"—as well as the alternate American mode of "donating" experimental NASA satellites for educational purposes to India, Brazil, and others—must figure in our deliberations on research needs in communication. Along with the new American high-cost technology of satellite transmitters goes the new Japanese low-cost technology of transistor receivers. Between them, these technologies are creating a "pincers" effect that most of the rest of the world appears to find irresistible.

My view of the gravity of this problem was given last year to a Japanese audience at their International House in Tokyo. Many of their top communication specialists—industrialists, managers, technologists, programmers, evaluators—were there.17 They listened attentively, as did a comparable audience in Washington, D.C. last month. The issues here sketched, and there articulated, define the "Research Issues" I see as top priority in communication today.

III. FUTURE CITIES: A PERSPECTIVE

Central in our perspective on the future is that the urbanization of the world will continue and, indeed, accelerate over the decades ahead.
Already one considers seriously the import of the proposition that there is no longer a rural America. In the sense that mass media and mass transport have diffused urban lifeways throughout the sparsely settled areas of the U.S., this is an important indicator of the shape of things to come elsewhere in the world. By the year 2000 there may be few or no rural lifeways, as we have historically known them, left anywhere on planet Earth.

It is even possible to foresee some characteristic forms that accelerating urbanization will take in the proximate future: (1) larger cities; (2) more cities; (3) linked cities. The notion of the supercity—the megalopolis—has already been formulated conceptually by Jean Gottmann and explored systematically by Richard Meier. The increasing size of existing metropolitan centers is a process already underway in the more developed regions of the world. So is the increasing number of cities—as exemplified by my own home city of Newton, which represents an amalgamation of some 17 former townships into a single new municipality.

A virtually inevitable outcome of the drive toward more and larger cities is the third characteristic—linked cities—which has sometimes been designated "urban region." A prime example is the Atlantic coastal chain of cities that link Boston-Providence-Hartford-New York-Newark-Philadelphia-Baltimore-Washington, D.C. (eight "states"). A growing urban region in the Middle West links Buffalo-Cleveland-Detroit-Gary-Chicago-St. Louis-Kansas City (seven "states"). On the Pacific Coast, the urban region links Seattle-Portland-San Francisco-Los Angeles-San Diego (three large "states").

These linkages involve cities that average well over one million population. I mention the number of "states" involved in each linkage because, under the American Constitution, each state has certain "sovereign" rights—militia, taxation, education and, more generally, governance. The push of urbanization has avoided or evaded or reinterpreted the Constitutional strictures reserving "residual rights" to the states.

Amateurs of American constitutional history are bemused by the skill with which the Federal government used the "interstate commerce clause" to transform American lifeways in this dramatic shift from local to national control of most things that matter. Indeed, in many countries around the world that are organized on Federal constitutional principles (Philippines, India, West Germany, Brazil) the American experience is being ransacked for usable leads to their current problems.

But, some of the most important countries in the world today are organized on "central" rather than "federal" constitutions and have been
able to ignore legal strictures and proceed on the same urbanizing pathways under the same economic, technological, sociological, and even psycho-political compulsions. France, with its highly centralized system of préfectures, has watched its "urban region" linking the triangle Paris-Lille-Lyon grow to monstrous proportions—and has started to "decentralize" by investments in Grenoble, Bordeaux, Toulouse in the eastern, western, and southern regions. Japan, facing what may well be in fact the most congested "urban region" in the world between Tokyo and Osaka—already extended to include Yokohama and Kyoto—has devised ingenious ways of handling this massive concentration of urban dwellers. In addition to its program of population control via "family planning" (perhaps the most effective program of this type in the world), it has used the transportation and communication media ("bullet trains" and NHK) to keep people moving fast or satisfied to stay where they are (outside of Tokyo).

What such developed countries as Japan and West Germany can do is not usually feasible for the poorer countries of the world today. There the urban-communication raising of expectations produces rising frustrations. The Want:Get Ratio is rapidly imbalanced by the mass media. People cannot get what they have been led to want. This is the point Sukarno of Indonesia had in mind when he accused an astounded audience of Hollywood moguls of being "revolutionaries." One wonders how many of them understood his explanation: "A refrigerator is a revolutionary symbol in a hot country like mine." Nasser of Egypt sharpened this economic protest by bringing it to a political point: "It is true that most of our people are still illiterate. But that is less important than it used to be... Nowadays, radio reaches people in the most remote villages and they form their opinions. We cannot govern as we once did. We live in a new world."

The "new world" perceived by Nasser was precisely the urbanizing world that was linking the traditional rural periphery to its political center by the unprecedented, and even revolutionary, technologies of mass media and mass transport. In Egypt, as this new world was beginning to take shape two decades ago, it was the cheap (or free) community radio receiver mounted on village mosque that brought the fellahen in "the most remote villages" into new, intimate, continuous contact with the hitherto-unapproachable center of their civilization in Cairo. In Turkey, the community radios installed in Ataturk's halk-everi (People's Houses) were supplemented by cheap public bus service over the proud new concrete roads that brought Balgat, and hundreds of similarly isolated villages along the Anatolian periphery, into physical (as well as vicariously mediated) contact with Ankara—and such other burgeoning urban centers as Izmir, Konya, Adana.
Today, two decades later, urbanization of the poor as well as the rich countries continues at an accelerating tempo around the whole of our planet. Today in Hong Kong, where only yesterday I was assured by seasoned observers that the traditional Chinese family structure would successfully resist the intrusion of mass media, one sees hundreds of youngsters strolling along Nathan Road with two transistors glued to their ears to get a "stereo effect" from whatever frequency is transmitting the rock music or "underground news" they have tuned in. Today, in Malaysia an unofficial national holiday occurs—and "modern managements" rent virtually all available television receivers so that people who used to be "peripheral" can watch the Joe Frazier-Muhammad Ali boxing match, transmitted globally via the INTELSAT system. This system, operated by three American communication satellites positioned "synchronously" with Planet Earth 22,300 miles above the Equator, is the omen (threat and/or promise) of our human future.

It creates the first technology in history that transforms the notion of a "world communication network" from a fine phrase into an operational reality. We now have at work the first machinery that makes, instantaneous, simultaneous, and massive communication feasible throughout our little planet. The technological achievement is impressive; the human value is problematical. We need, most of all, to inquire deeply into the meanings of the American Founding Fathers when they wrote into their Declaration of Independence the need for "a decent respect for the opinions of mankind." That simple phrase bequeaths to our world the concern all decent persons, everywhere on little Earth, must consider as we face and foresee the moral consequences of what our technological skills have wrought.

As one who has lived with this range of issues over the past quarter century, let me conclude by saying that all is not well with the world communication network today. I was optimistic when the late President Truman, in 1949, announced the "bold new program" modestly titled Point IV to aid poor countries become richer, healthier, perhaps even happier. I even shared the early American optimism of the 1950's that the "revolution of rising expectations" was a Good Thing.

I then wrote a large book entitled The Passing of Traditional Society to express my optimism by such concepts as Mobility (Physical, Social, Psychological, Political), Empathy, and Participation. It seemed to me then, in an euphoric mood, that people everywhere in the poorer places would respond positively to the accelerating stimuli of mass media and transport—and get richer.

They didn't. Exploring these failures of American (and European) policies in those poor places that did not respond "properly" to the handouts
from rich places, I turned pessimistic. During most of the 1960's, I sounded like a shrill Cassandra—rising expectations turning into rising frustrations, frustrations leading to regression or aggression—neither productive for growth, both usually counter-productive for development. The pattern that emerged, in most poor countries, was the "military takeover." The best educated, organized, disciplined social formation—the military—decided that mass media and mass transport had led people (particularly those on the periphery) to want more than they could get.

This led me to give thought to the "revolution of rising frustrations" as an empirical problem we could study, describe, perhaps even explain. The outcome was my concept of the Want:Got Ratio. I shall spare you further exegesis of this concept, which is already widely diffused in our customary readings. On behalf of this concept, I would say only that it is an operational guide to research and reflection. It also leads us, in my own deepest hopes, to the renewal of "a decent respect for the opinions of mankind."
NOTES


3. For artistic expression of the dramatic downfall of the stronghold city in our own time: the painting "Guernica" by Pablo Picasso, the poem "Fall of the City" by Archibald MacLeish, and the novel Bomber by Len Deighton.

4. The neologism "urban-systematic" derives from the creation at M.I.T., and elsewhere, of Urban Systems Laboratories which handle the city as a problem for systems analysis. This, as we shall see, is a major input to any consideration of the "research issues" facing urban studies today and tomorrow.

5. N. D. Fustel de Coulanges, La Cité Antique (Paris, 1864; also available in many English versions as The Ancient City).

6. Henri Pirenne, Medieval Cities (No longer available to most people in the original French; generally available in several English versions, including Doubleday Anchor paperback, since 1955).

8. It would take too many pages to cite all the studies that are relevant to this point. The reader is advised to consult the admirable "Select Bibliography" given in Oscar Handlin and John Burchard, The Historian and the City (1963), pp. 270-290.


11. The attack on Paris as bloodsucker of French skill and talent goes back to Maurice Barrès, Les déracinés, and beyond. There are fine reports of this resentment of Parisian domination by préfecture from Montaigne through Tocqueville to J. F. Gravier in Paris et desert francais and such recent studies as Henri Mendras, The Vanishing Peasant (trans. Jean Lerner, M.I.T. Press). A set of papers by my former French students on the "arrière-pays d'Alpes-Maritimes" has been summarized in my unpublished paper, "France Static and Dynamic" (available from CENIS/M.I.T. at xerox cost--from which paper derives many of the thoughts expressed here).

12. Of the many useful books available on the British ascent to world power, I recommend to scholars of international communication the volume (in the series published to commemorate Queen Victoria's Jubilee Year) entitled Press and Communication of the Empire.


15. The salient documents produced by the Founding Fathers are, of course, the Declaration of Independence and the U.S. Constitution. The most careful and lucid exposition of the underlying political principles is The Federalist Papers. For comprehensive documentation, see S. A. Morison and H. S. Commager, Documents of American History.

16. The story is well told in James Thompson, Wiring A Continent.
17. See the current (1972) Bulletin of The International House of Japan in Tokyo.