

A STUDY OF THE SOCIOECONOMIC AND CULTURAL EFFECT ON THE USE OF COMMUNICATION MEDIA AND TECHNOLOGIES

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Abstract

In this "information age," new communication technologies are invented and expanded in a very rapid way and the adoption of the technologies often falls behind the development of technologies. The variables of socioeconomic and cultural factors in the world of communications should not be ignored.

In the past few decades, there was a sizable amount of empirical knowledge in

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communication research , and most of the experimental studies, however, were carried out against western cultural background. We have come to the question to whether western knowledge about communication technologies can be employed with enough application beyond the boundaries of western society.

This paper, based on some researches and observations, will attempt to review some current communication media and technologies and to examine the effect of socioeconomic and cultural elements on their applications, with special emphasis on the cultural aspect of the Chinese and the Americans.

Introduction

Culture is a familiar term with a variety of meanings. It is a way of life of a group of people, the behaviors and beliefs that they accept. From the point of view of communication, culture includes the language we speak, the nonverbal rules we follow, the system of family arrangements we accept, the goals which we think are worthy or unworthy, our attitudes

about how men, women, and children should behave, our feelings about time and space, our notions about our personal roles in the world, our assumptions about life after death, our feelings about the importance of individuals as contrasted with the community, and the significance that we attach to material things. Some of these learnings are precisely habits of communication; all emerge in communication'. In a broader sense, political orientation and economic philosophies are also the dimensions of culture. Cultures have a number of characteristics: they are complex and multifaceted, change over time, and are largely invisible².

The relationship between culture and communication is an intimate one. Without communication, it would be impossible to pass along the elements of our culture from one generation to the next and one place to another. There is a reciprocally influencing relationship between human communication and culture. Through communication, we shape our culture, and in turn, our cultures shape our communication rules and patterns.

With the advancement of information technologies, the means of communicating among people expand. The following list of communication media and technologies provides an overview of the current information industry.

Face to face communication

Group discussion

Informal meeting

Formal meeting

Video teleconferencing

Audio teleconferencing

Picture phone

Telephone

Computer teleconferencing

Facsimile

Telex

Telgram

Teletext

Television

Closed circuit television

Video cassette

Videodisc

Cable television

Movie

Radio

Mobile radio

Letter (personal/form)

Electronic mail

Electronic fund transfer

Newspaper

Poster

Magazine

Book

As noted, many new devices in communication industry have been added to the traditional communication media. These expansions are basically driven by electronic computer system. Facing this great change in an information society, one is expected to adjust his or her culture to be adopted to the groups, organizations and societies to which one belongs. "Culture Shock" is a term used to refer to the process of adjusting to a new culture.

Discussion

According to the degree of sense of participation by the end users from the above list, the following six categories will be discussed.

Face to Face Communication

Face to face communication is important for interpersonal communication tasks and intense situations such as settling the conflict of conducting negotiation³. It is a "friendly"

medium. People generally prefer face to face communication to other media. This is particularly true with Chinese people who believe that "intimate feeling comes with a face to face meeting." Their emotion or feeling is ranked higher than logic. While American people are more pragmatic, their logic usually is ranked higher than emotion or feeling.

Chinese people are more conservative or disciplined which, in some cases, are much less apparent in American social behavior. They will not exchange greetings by kiss or other "too" intimate physical contact like American people. Also, Chinese people will not openly speak with someone unless they know who he/she is. As frequently noted, Chinese people usually like to exchange business cards before they are engaged in discussions with other people.

The following table attempts to compare the communication patterns between the Chinese and the Americans.

Communication Patterns

Chinese

Americans

Between Public Officials

Outwardly formal, reacting closely to official procedures, concerned about rank and status

Outwardly informal, not too concerned about rank or status, but serious when official business is discussed

Between Close Friends

Very informal on surface, often joking, poking fun at one another

Highly vocal, usually favor telling jokes

Between Casual Friends

Usually polite, hesitant to reveal inner feelings, more on formal side

Slightly formal on surface, but anxious to know more about friends

Between Business Associates

Usually inquiring about each other's business fortunes, but hesitant to reveal his profits

Always ready to reveal his business fortunes, and like to talk about his business

Chinese

Americans

Between Parents and Children

Parents do most of talking; expect children to listen and obey

Conversations mostly on equal basis; children are not hesitant talk back to elders

Between Teachers and Students

Formality usually prevails between teachers and students. Teachers do most of talking

Conversations are informal in open class discussions. Students not hesitant to voice opinions

Turn-taking in Conversation

Persons in highest status normally speak first, following with the second, third....

Not so strict in group discussion setting

Video Conferencing

In recognizing the advantages of face to face communication and realizing the cost and time spent for traveling, video conferencing is designed to bring two groups of people appearing on the screen from distant locations through satellite.

Some major U.S corporations such as Arco, Citibank, Aetna Life and Casualty, and Allstate have set up their own private videoconferencing rooms for intracompany meetings. The cost to equip a video teleconferencing room with the necessary TV cameras, monitors, controls, lighting, and codes is about \$50,000. Transmission costs are approximately \$25,000 a month.

American Bell's PMS (Picturephone Meeting Service) has about 70 full-motion video conferencing rooms in the major U.S. cities which can be used by the public. Hourly rates vary from \$1180 (New York to Philadelphia) to \$2460 (Boston to San Francisco)⁴. The cost will go down as time goes by.

The video teleconference, undoubtedly, has its strengths, particularly for handling regularly scheduled meetings and giving and receiving information⁵. However, due to its high cost, it is still in its developing stage. Moreover, the human factor was cited by Bell Canada and the University of London concluding that "people who first meet via video conference stand a higher-than-average chance of disliking each other"⁶. That tendency scares away potential users as too "unnatural." Therefore, organizational and user

implementation issues are as important as the technology. There is a need to get beyond the technology and let "natural" interaction take place in video conference.

Audio Teleconferencing

Audio teleconferencing is designed to bring three or more people communicating through telephone at one time from two or more locations. This is the simplest form of teleconferencing and the one which is most widely used. Researches show that audio meetings are adequate for a number of typical business and research situations. They are particularly satisfactory for communication tasks which stress information exchange and problem solving.⁷ It permits rapid communication with less travel. The main disadvantage is its inability to immediately exchange graphics or documents when needed. However, facsimile can serve as an aid to transmit graphics or documents through telephone line.

Technically, audio teleconferencing uses only telephone or speakerphone. The user generally has three ways of conferencing: (a) mutually dial the involved parties, (b) operator assistance, where the user dials the operator who then completes the conference

bridge with the other participants, (c) meet-me circuit, where each participant dials an access code and meets the other on the conference bridge.

According to the Comelia Report, about 40% of existing business meetings could be conducted by audio and its cost is affordable for most corporations.⁸

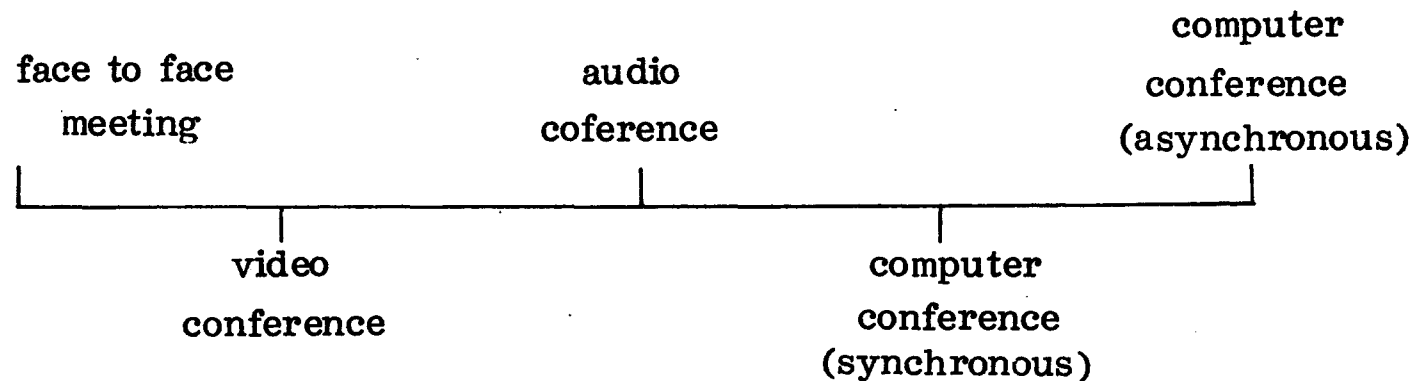
Computer Teleconferencing

Computer teleconferencing uses the computer to structure, store and process written communications among a group of people. A computer terminal is like an electric typewriter. The terminal is connected to a telephone line. We dial the telephone network service, which provides a low-cost link to the computer-host conference system (such as Telenet, Tenex) and type in a few code words to identify ourselves. If there is any message for us, it will be shown on the screen and a hard copy will be available. Then we can send the message or enter a conference with other end terminal.

Computer conferencing can record discussion comments and statistics. It is particularly suitable for tasks involving the management of technical information. Also, the main advantage of this asynchronous system is its flexibility, permitting involvement at

the user's convenience. However, this medium often tends to over-emphasize the value of information at the expense of interpersonal relationship.

To briefly sun up the above communication media and new technologies, the following diagram, from left to right, shows the degree of feeling of participation. Face to face meeting is the highest and asynchronous system of computer conference which conducts meeting at different time from different terminals has the least feeling of personal participation. However, it is convenient for one to choose his own time.



For an organization to consider adoping a new communication technology, it should undertake a needs assessment-whether it is in high demand to adopt the new technology.

If so, what would be the most optimum way to get the most adequate service for the least cost? Meanwhile, human factor should be considered. People who work for an organization for a long time have their established working habits. Sometimes, they just don't want to change. Therefore, in order to avoid the possible resistance to change, the decision maker of person-in-charge should share the innovation idea with the users. If possible, the decision makers or the person involved in making decision should try to extensively consult with the employees in order to enhance the quality of decision.⁹

Telephone and Satellite

Telephone was invented by Alexander Graham Bell in 1876 and has directly and profoundly affected our daily life. It provides quick and private access to others at a time of one's choice.

The advancement of computer and electronics contributed greatly to the development of more sophisticated and automated telephone system. Many special features, such as call forwarding, call holding, call waiting, speed calling, three-way calling, credit card calling calling for pleasure or calling for joke, etc., are available in the telephone services.

Telephone usage correlates highly with gross national product (GNP). In U.S., Canada, Sweden, their people are among the nations with high income; the usage of telephone is more frequent than other nations with lower GNP.¹⁰

Social and family structures are also the factors of telephone usage. In United States, families tend to disperse and children go to distant universities; friends and relatives keep in touch by telephone. (A record shows that the busiest day of the year in telephone usage in Pacific Telephone is Mother's Day). Meanwhile social mobility is very common in the United States. It is estimated that the average American family moves about every five years. These social and cultural factors, together with the on-going commercial activities, domestically and internationally have generated high volume of U.S. Federal Communications Commission, there were 58 phones per 100 population in the United States at the end of 1981.

Like in many developing countries, telephone in Republic of China on Taiwan was developed from urban to rural areas. Because of the cost of wiring in rural areas, telephone was not popular as recently as ten years ago. Statistics shows that in 1974,

there were only 901,000 telephones in Taiwan which was 5.7 telephones per 100 persons.¹² A family with a telephone represents certain social status. And there is a title right of ownership for the telephone user.

As a result of the successful economic development and government efforts to upgrade people's quality of life, telephones have grown substantially. In April 1984, the number of telephones in Taiwan, according to the Directorate General of Telecommunications, surpassed the five million mark and is increasing at an average rate of 40,000 sets per month. It means there are now 26.4 telephones for every 100 persons in Taiwan.

Much related with Chinese concepts of status and hierarchy, it seems a superior is using the telephone more frequently to direct his/her subordinates or ask them for information, and a subordinate usually meets the superior in person if circumstances permit.

With the installation of modern facilities, including two earth stations for satellite communication, which were inaugurated in Taipei in January 1974 for the Indian Ocean Region and in December 1979 for the Pacific Ocean region, the efficiency and quality of international telecommunication services in Taiwan have been greatly improved.

What are the political, economical and cultural effects of telecommunication to the Republic of China on Taiwan? Politically, the people and government are able to learn instantly what is

happening in the world. The media, with their direct UPI, AP or Reuter services, have acted as a doorkeeper to watch how government's reaction to a particular issue, which has increased the citizens' democratic participation. Economically, the efficient communication technologies have brought the country into a world trade market and achieved successfully in international commercial activities. Culturally, the exchange cultural program with the outside world has become available and popular.

One of the concerned issues of telephone usage is the rising cost of telephone expenses which ranks, in many corporations, only next to personnel and rent. Many organizations are, therefore, trying to make the telephone usage more cost-effective. As found in many corporates, some phone calls are unnecessary, unidentifiable, calling too long or using wrong lines when less expensive routes such as WATS, tie lines are available. In order to monitor the above abuse, misuse or unauthorized calls, some corporations are installing computerized PBX systems which can provide data and reports showing what station made what call, when, how long and what trunk line was used. Systems such as AT&T's Dimension, InteCom's IBE (Intergrated Business Exchanges), Northern Telecom's

SL-1 (Storage Logic), Rockwell's ACD (Automatic Call Distributor) and American Telecom's Focus etc., all have the common features of cost-saving and usage flexibility. Most of the system have direct output for SMDR (Station Message Detailed Recording) for this purpose. The system keeps the telephone users aware of the monitoring existence and improving the telephone usage habit. This effect can be explained as the Hawthorne Effect which says the desirable performance occurs due to knowledge that one is being observed.¹³

For a medium or small company, the sophisticated system is not cost-effective. Proper education and urging employees to self-restraint are recommended to control telephone cost.

Print Medium and Computer Applications

Print medium includes letters, newspapers, magazines and books which are easily to keep for reference and for future use. The Chinese people consider print medium as having higher credibility than other media. The reason may be that the Chinese people traditionally respect the intellectuals and scholars. And print materials are the image of

the intellectuals. Also, the Chinese invented printing in 11th century. Reading print materials has become part of their life through generations.

Several years ago, a survey was made in Taipei to study the information seeking behavior of the Chinese people residing in the city. The results showed that the majority of the people obtained news information from newspapers rather than from television. And very few of them obtained information from radio. This may be a little different in the United States since more people here drive cars to work and they may listen to news from their car radios while driving. Radio and television, although with their advantage of speedy distribution of news, still can not replace newspapers. Nevertheless, television has become an integrated part of people's life in Taiwan. There were 102.8 television sets for each 100 households in 1982. The research also found that some people hear the news from radio or TV, but still read newspapers in order to confirm or supplement what they have heard.

The advanced technology of electronic medium, particularly computer, has improved the speed and quality of traditional printing technique. Some computers also

have the capabilities to produce color graphics. And facsimile, telex can provide hard copy too. Literacy is important for the use of print medium. In Republic China, literacy rate is 89.7%.¹⁴

Computer applications in banking, airlines, and information service prove to be very effective. However, Americans are beginning to fear the loss of privacy associated with electronic devices and computerized information system. Problems resulting from the emerging telecommunication system in the United States such as information overload, electronic criminals are worth noting. Some developing countries are also concerned about the impact of global satellite communication which may cause potential cultural invasion and loss of sovereignty.

Conclusion

Socioeconomic and cultural factors play an important role in the adoption of communication media and technologies. In turn, through the use of communication media,

citizen of the world are beginning to share an increasingly common pattern of experiences. However, there remains differences among groups of people, organizations, societies or nations in their respective socioeconomic and cultural environment.

In today's" information age,"it is estimated that more than 50 perecent of all economic activities in some of the developed countries are information related. New communication technologies are fast becoming a realistic option. The professionals should be aware of the economic theories of choice. The interaction between the technologies and the social and cultural elements should always be considered.

As some examples given in this paper, the Chinese people have an established history of thousands of years. The concept of life stemmed from the roots of Chinese civilization. They usually take the steady and conservative approaches to gradually absorb the magic of modern technologies. On the other hand, the Americans, a young and energetic people, are more accustomed to modern technologies. They are eager to test new things. As a result, their involvement in developing and adopting new communication media and technologies is far ahead of other people.

Notes

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4. Herb Brody, "Reach Out and See Someone", High Technology, August 1983, p. 53
5. Ibid. #3, p. 395
6. Ibid. #4, p. 59
7. Ibid. #3, p. 399
8. Robert Johansen, "Study of Technical Alternatives and Social Choices in Teleconferencing", Institute of the Future, 1977
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*This figure is based on bureau of Census estimated resident population as of July 1, 1981. Another statistics from Handbook of Economic Statistics, '83, published by U.S. Intelligence Agency shows U.S. Telephones in use in 1979 were 79 telephones per 100 population.

