

Literacy in a Multimedia Environment

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“Literacy in a Multimedia Environment”

This study explores the relationship if there exists any, between the reading behaviour as a communication activity and other cultural activities of a group of Japanese population. This is being done because it is impossible to study reading habits without relating them to other forms of cultural behaviour. It also explores the place of reading in our diverse, multimedia age characterized more and more by many new visual media. The questions of interest were: are we moving into a period where computer literacy - interactive literacy- will develop and how will reading fit into the new media system? Similarly, is this something that can be observed between the younger and older, working population?

The findings indicate that although majority of the population uses all the available print media, reading, as a cultural behaviour, seems to gratify psychosocial needs that fit particularly well into the individualistic orientations of postmodern society. The increasing use of audiovisual media seems to have caused a sub-culture that falls within what is called as the “traditional illiteracy”.

The Problem:

The study focuses on two distinct but interrelated issues. The first is on reading as a cultural activity. It investigates the reading habits and social characteristics of a group of Japanese population. The second is on reading behaviour and how it relates to one's exposure to print and other forms of media. What are the gratifications one benefits from reading, and is there a possibility of displacement by electronic media.

A review of the literature:

I. 1 Reading as Traditional Literacy and Interactive Literacy

Literacy, in its broad sense, refers to a wide range of reading and writing skills. Definitions of literacy have undergone a dramatic change for more than the past 50 years (Adoni, 1995). In several historical studies (Cipolla, 1969) literacy was measured by the ability to sign one's name on important documents. The levels of literacy in various social groups were measured by standard literacy tests. Reading ability tests were often linked with the number of years of schooling: for each grade there was an accepted standard of reading ability. Several uses and functions of literacy were used by Heath (1983) for anthropological studies of several communities in the United States. Some of these were: reading for instrumental, practical goals, news-related reading, confirmational reading (of religious and political pamphlets) and social-interactive/ recreational reading (as in the case of reading magazines and novels).

The term literacy in this study was based on the basic definition of Kaestle (1991): "the ability to decode and comprehend written language at a rudimentary level. Operationally, reading is defined in a very general sense as the occasional reading of a book, newspaper or magazine.

This study draws a distinction between occasional reading of printed material, referred to as active reading: that is, reading books regularly, and reading as a cultural activity. It is also necessary to refer briefly to two terms that link literacy with the electronic media: media literacy and interactive literacy.

One revolutionary and educational idea in the 1960's and 1970's was to exploit the attraction of television to children and youth, and to promote basic academic skills. Traditional literacy was promoted through the medium of television. One unforeseen consequence was that a generation of young people grew up with sophisticated television technique such as short segments, dazzling video effects, and interactive involvement with television contents. The youth acquired a high degree of media literacy, which was taken to mean a familiarity with television and its imagery, conventions of its various genre, the ability to decode its signs and symbols, and a basic knowledge of the mechanisms and techniques of the production process. The personal computer and the VCR, introduced in the 1980's, had an even more profound and immediate impact on both traditional and media literacy (Levy, 1989). Until the appearance of the personal computer, literacy meant reading and decoding written message.

Conflicting Approaches to Literacy and Reading

The studies of literacy and reading in various societies and social groups mentioned above indicate two rival sets of hypotheses: the technological deterministic study of culture and the sociofunctional approach to media study. According to the technological approach, technological factors are far more influential in producing culture change than social factors. Adoni (1995) noted this in his findings on the changes in reading pattern and culture of Israeli society. In a society

characterized by a rapid rise in educational level and a rapidly expanding communication environment, the following changes are expected: (a) decrease on the scope of the reading public and in the frequency of their reading; (b) a negative correlation between reading and the use of visual and computerized media, such as TV, cable television, VCR's and computers; (c) decrease in the ability of books and newspapers to fulfill the various psychological needs of individuals; (d) minimal differentiation in reading habits between various social groups, both in terms of frequency of reading and content and complexity level.

On the other hand, the rival set of hypotheses which is based on functional and sociocultural approaches to media study, predicts that the new electronic media will not displace the traditional print media. Rather it will create a new functional division of labor between the system's components. Moreover, powerful social factors strongly influence changes in cultural scene. Accordingly, the following changes in cultural behavior are predicted: (a) stability in both the scope of the reading public and in the frequency of their reading; (b) interrelations between print and electronic media, determined by the level of each activity or the required amount of cultural capital (a negative correlation between reading and the use of electronic media is not essential); (c) little or no change in the ability of print media to fulfill various psychosocial needs; (d) differentiation among various social groups, since reading habits depend mainly on the level of schooling and patterns of socialization in the family environment. Even if the frequency of reading is affected by competition with other media, people with more education and greater cultural capital as a consequence of "correct" socialization will continue to use more print media than others.

I.2 Reading and Other Types of Communication Media

The fate of books and reading in the modern and postmodern period is integral to the ongoing debate on modern mass culture (Adoni, 1995). In 1951, Inis argued that civilizations have been shaped by their use of a particular medium of communication over a lengthy period. Inis assumed that a dominant communication medium in any given period is eventually replaced by another that better copes with the problems of communicating knowledge through time and space. This sparked the controversy over the use of books and other printed materials. McLuhan (1962) explored changes brought about by the invention of printing and social transformations caused and anticipated by the widespread use of the electronic media. He predicted that the linear segmented print medium would be displaced by television, which offers a shared experience and enables the homogenization of cultural consumption. More recent studies focused on the effects of various media regardless of their content. For instance, Postman (1982) and Meyrowitz (1985) focus on television, analyzing its primary characteristics and influence on various social phenomena, such as the socialization patterns of children and youth who had greater access to information previously limited to adult newspaper readers, and its effects on the generation gap.

On the basis of an extensive survey of the existing literature and of her own research Neumann (1991) demonstrated that the effects of television on reading have been grossly exaggerated to the

point of being an accepted myth. Empirical findings only partially support the displacement theory of Innis (1951), and McLuhan (1962). Neuman analyzed a “spirited interplay” between various media that demands that young people develop the capacity to use each medium optimally.

The uses and gratification approach of Blumler and Katz (1974), based on functional theories of mass communication, also studied patterns of interaction among various media from the media consumers’ perspective. The authors suggested that individuals utilize various media to gratify personal needs related to their psychosocial predispositions and social variables such as age, education, and socioeconomic status. The consumption of mass media is seen as an active process in which individuals attempt to satisfy some of their needs by selective exposure to specific media.

Empirical studies also indicated that although several media can cater to the same psychological needs, a functional division exists among the various communications media, each specializing in certain types of needs. Books, as a communication media, have been found to be conducive to meeting cognitive needs related to study, expanding one’s knowledge, and satisfying one’s curiosity. In other similar studies (Adoni, 1995), respondents also report that reading books help satisfy their own need for aesthetic experience.

Whereas books as a communication media, tend to fulfill more specific needs, television was found to be the most diffuse medium, capable of serving numerous psychological needs. The relationship between television and the print media is, therefore, one of functional interchangeability and not of substitution and displacement. Studies indicated that the degree of functional interchangeability between books and television is low. Each medium apparently specializes in satisfying different needs, although some degree of interchangeability does exist with regard to entertainment content (Adoni, 1985; Katz and Adoni, 1973; Neuman, 1980)

It is noteworthy that need satisfaction by means of communication media is a dynamic process for both adults and young people. The developmental needs of children and adolescents vary among different age groups and can be fulfilled by different media. For instance Newman (1991) reported that television and books gratify similar needs in different periods of young people’s lives. Using two groups of Japanese samples, this paper aims to expand on previous finding by working on the assumption that needs satisfaction by various communication media is a dynamic process for the younger (students) as well as the older (working) population.

Methodology:

The empirical study presented here is based on notions implicit in a number of theoretical perspectives surveyed above. First the status of each medium and related cultural behaviour, in this case books and reading, must be examined in the context of the total media environment. Any study on reading habits and reading behaviour in the post modern media environment, particularly toward the end of the 1990’s, must be conducted in the context of other communication media and other patterns of cultural behaviour.

Field work was carried out with a representative sample of 55 students (M=30, F=20) within the

age range of 18-22, and 30 adult respondents whose age range was 25 - 55.

Data were collected from a set of questionnaire consisting of more than 20 questions. Ss were asked questions on: frequency of reading, books and other types of reading materials. A list of media-related needs were presented and the respondents were asked to rank the importance of each. Responses were then correlated with responses to similar questions related to reading (of books). Interviews were conducted whenever it was necessary and feasible to clarify answers to some questions

A distinction was drawn between general and active reading. General reading was measured operationally by asking respondents: "Do you sometimes read books?" Only respondents who answered positively (95%) were asked about various aspects of their reading habits.

Three main aspects of reading as a cultural activity were examined: quantitative qualitative and functional. Quantitative refers to how much people read and how reading frequently interacts with the frequency of other cultural activities. Qualitative refers to what they read in terms of literary genres and complexity level. Function refers to what they read: that is, what psychosocial needs are fulfilled by reading. Each aspect was defined by several indicators. The quantitative dimension was measured by: (a) general reading (1 to 11 books per year) versus active reading (at least one book per month); (b) occasional newspaper reading (a few times per week); and (c) magazine reading. In addition, two reading-related variables were investigated: the frequency with which literary columns were read and the frequency with which books were discussed.

Social desirability was measured in part by asking about reading habits in different parts of the questionnaire and by formulating the questions differently. For example: "Did you read a book last month?" and "Approximately how many books do you read per year?" The answers were compared with each other.

Qualitative aspects of reading were examined by: (a) the frequency with which various literary genres were read (fiction, non-fiction, poetry, history, religious literature, travel, science-fiction, mystery, and action; and (b) the categorization of books according to the language in which they were originally written and according to whether they were read in Japanese translation or in a foreign language.

The functional aspect of reading was examined by means of uses and gratifications methodology, used by Adoni (1993) to assess the functions of various mass media for the individual. Data were collected in two consequent parts of the questionnaire. Respondents were presented with a list of media-related needs and asked to state how important each was to them. They were then asked to assess the relative contribution of several mass media books, magazines, newspapers, television, radio and cinema in satisfying these needs. The second battery of questions was only administered to those respondents who defined their needs as being "somewhat important" or "very important".

At this stage, however, the data on one part of the quantitative, aspect as well as those of the qualitative aspects are upcoming and to be reported in a subsequent paper.

In the first part of the questionnaire, respondents were asked how frequently they made use

of the various media types. Only respondents who used these media at least occasionally were asked about the ways in which these media fulfill various psychosocial needs. Two main measures of cultural capital were also used in the present study : years of schooling and the reading habits of the respondent's parents. Other variables such as gender, age, degree of religious observance and ethnic affiliation were recorded for reference purposes.

Discussion:

Table 1 shows the data on active reading comparing the two groups of Ss. As mentioned earlier, active reading is defined as reading at least one book a month. And according to this definition, only 30% of the Japanese younger population are engaged in active reading, while 80% of the adult Japanese read, on the average, 2-3 books a month. A correlational analysis indicates that on the whole, age and active reading are very highly positively correlated: 0.75.

Active reading correlates strongly with computer use. However, at this stage, the data on one part of the quantitative, aspect as well as those of the qualitative aspects are still not available.

Table 1 : Age and Active Reading

	Gr. 1	Gr. 2
active reading:	30%*	85%**
correlation between age and active reading:	0.75	

* one book / month

** 2-3 books / month

Table 2 : Pearson's Correlation results between Frequency of Reading (Books) and other independent variables

	Gr.I	Gr. 2
Age:	0.39	0.85
Newspaper:	0.37	0.88
Magazine:	0.65	0.67
Television:	-0.26	-0.34
Radio:	0.25	0.53
Computer:	0.45	0.79

* significant at $p < .001$ level

The data in **Table 2** show the correlational relation between frequency of reading books and other variables examined. It is clear that the older people read more, and yet use computers much more frequently than the students samples. Active reading correlates strongly with computer use.

Contrary to my expectation that the new media consumption will change the reading behaviour of the modern Japanese, the data show that displacement of print media by the electronic media has not yet occurred. Newspaper reading is more popular with the older population while magazine reading (for fashion information, etc) is popular among the young.

For both groups of respondents, the print media, magazine for the 1st group, and newspaper for the 2nd group, are still the major sources of information and means of communication, with computer coming in second.

Table 3 : Frequency of Media Use in-between groups

	Gr. 1	Gr. 2
Books	4	1
TV watching	1	4
Radio	5	5
Use of computer	3	2
Magazines	2	6
Theatres	8	7
Newspapers	6	3
Concerts	7	8

Table 3 shows the ranking obtained on the most frequently used media forms given by all respondents from the two groups of Ss. The Ss were asked to rank the items from 1 (most frequently used) to 8 (least frequently used). Each item was assigned a number (8 for most frequently to 1 for least frequently). The Spearman rank-order correlation (Rho) was applied. The results were found to be significant.

It is interesting to note that TV watching takes up most of the time of the younger population, followed by reading (magazines) and computer use. Other forms of cultural activities come last in the list. The older population, on the other hand, spend much time on reading (books), computer and again reading (newspapers). In addition, the second group read more variety of newspaper and magazines than their counterpart.

The hypothesis that the functional gratification associated with books has declined with the wide use of other media is not supported by the data in this study. Comparison of uses and gratifications derived from books, newspapers and television shows that the print media is still considered powerful agents in fulfilling a wide array of psychosocial needs, as will be shown in the table below.

Table 4 : Psychological Needs Fulfilled Most by Books

	Gr.I	Gr. 2
To want to study	1	
To escape from reality of everyday life		2
To participate in other people's experience		
To develop good taste	3	
To feel that I'm using my time well	2	1
To know the Japanese tradition more		
To learn how to behave with others		
To know myself		
To re-experience events in which I was involved in the past	4	4
To relax		3

The list of psychosocial needs fulfilled by books is indicated in [Table 4](#) above. The two groups of Ss were asked how important each item is by ranking from 1 (most) to 8 (least). The means of the rank given by each group were compared and checked for significance using the Rank sums test. The scores of the top four items showed a probability of .005 on the Wilcoxon Rank sums test and are indicated in the table above. The scores of the other items with lower probability scores are not indicated.

Books occupy first place in satisfying the cognitive needs such as the desire for learning and self-improvement, the development of good taste, and the best means of gratifying affective needs, such as the experience of other people's lives or reliving the past. It also fulfills the instrumental need to use time effectively. This is the case with the working population for whom books are an indispensable instrument for work. It is also interesting to note that books also occupy a significant place in satisfying two other, somewhat different needs: the escapist need and the need to relax.

The responses to the psychological needs fulfilled by books were compared to those on television, as shown in [Table 5](#) below. This study reveals a low degree of interchangeability between books and television, a finding that points to a functional "division of labor" (Adoni, 1995) among the various media. Reading, as a communication media can cater to the same psychosocial needs that other media do, and therefore a functional division exists among the various

Table 5 : Psychosocial Needs Fulfilled by other Media Types
(across all respondents)

	TV	Computer	Radio
To want to study	2	2	4
To escape from reality of everyday life			1
To participate in other people's experience	3	4	
To develop good taste			2
To feel that I'm using my time well		1	
To know the Japanese tradition more	4		
To learn how to behave with others			
To know myself			
To re-experience events in which I was involved			
To relax	1	3	3

communication media, with each specializing in fulfilling certain types of needs.

The samples were asked to rank the psychological needs fulfilled by each media in a scale of 1 to 10: the best item was given a rank of 1, second best 2, and so on. The responses given each item were given a corresponding score of 10 for items ranked 1, 9 for items ranked 2, 8 for 3 and so on. Responses were analyzed for in-between group significance. To compare the two groups and to consider the spread of the ranks within each group, the Rank sum test was applied, and the first four items found without in-between group differences are reported above. This was done to allow for generalizations to be made across the two sample groups.

On the whole, the escapist need to release tension and to relax, is fulfilled best by the television and radio. At the same time, these two forms of media serve to gratify the affective needs, such as the experience of other people's lives. This gives us an idea of the type of TV programs, and radio programs as well, that are common in Japan. Television is a diffused media that serves to teach culture; social documentary films are abundant as well as informative.

As expected the television is still widely used today, satisfying first in meeting eight of the psychosocial needs for the first group of samples. Books were rated first for eight psychosocial needs among the second group of samples. Books remain the most helpful medium in satisfying cognitive needs, such as the desire to learn and improve, the development of good taste, and the best means of gratifying affective needs, such as the experience of other people's lives or reliving the past.

Computers, on the other hand, fulfill a very instrumental need: to use time effectively. Like

books, they are used by Japanese for both learning - and for work, for adults. At the same time, however, they serve the other end of the psychosocial need: to relax.

On the whole, the uses and gratifications derived from the various media clearly demonstrate that even after the dramatic growth and expansion of the electronic media, books still fulfill central psychosocial needs. Reading books has been found to be conducive in satisfying the cognitive learning needs. It is however impossible to reach sweeping conclusion for all the print media. The data show that television and newspapers are more interchangeable than television and books. Moreover, whereas reading newspapers has been found to be less functional, reading books has remained high in all its unique functions. Comparing the two groups of samples, this study has found that frequency of reading increases with age and with level of schooling. Reading, as a communication media, can cater to the same psychosocial needs, and therefore a functional division exists among the various communication media, with each specializing in fulfilling certain types of needs.

The traditional pastime of reading is at least temporarily jeopardized by the time-consuming computer and video games. At the same time, reading skills help young people master the new forms of interactive literacy. The rise of the electronic media, therefore, has not displaced yet the reading behaviour of the Japanese.

The decline in the frequency of reading among the young must be explained both in terms of social factors, and in terms of changes in the media environment and the emergence of a new, interactive type of media. Interpretations of the data from this study seem to suggest that the use of print is widespread and fulfills a vast array of psychosocial needs and that traditional literacy is making a comeback through audiovisual media.

Conclusions:

The results of this empirical study do not support the displacement theory of Innis (1951) and McLuhan (1962). Rather, it leads to a "spirited interplay" between various media that demands that both the young as well as the working people develop the capacity to use each medium optimally. This need satisfaction by means of various types of communication media is a dynamic process for both young and adults.

By showing patterns of interaction among various media from the media consumers' perspective, this paper adds to the existing data on the uses and gratification approach of Blumler and Katz (1974), based on functional theories of mass communication. The results suggest that individuals utilize various media in different degrees to gratify personal needs that are related to their psychosocial predispositions and social variables such as age, education, and socioeconomic status. The consumption of mass media is seen as an active process in which individuals attempt to satisfy some of their needs by selective exposure to specific media. The findings also lend support to the concept that although several media can cater to the same psychological needs, a functional division exists among these various communications media.

Furthermore, the findings indicate that we are witnessing a new type of computer-interactive literacy, that will fit into the new media system organized along the principle of functional division of labor (Adoni, 85).

* A section of this paper was presented at the International Conference of the International Communication Society held at the University of Miami, Florida on Feb., 2000. For a copy of the questionnaire, contact the author.

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