The Internet as Mass Medium

1. Merrill Morris[1],
2. Christine Ogan[2]

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Author Information

1 Merrill Morris is a doctoral candidate in the School of Journalism at Indiana University, Bloomington

2 Christine Ogan is a professor, School of Journalism, Indiana University. The authors would like to thank John Newhagen, Carolyn Punitha, and Lisbeth Lipari for their help with this paper.

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The Internet has become impossible to ignore in the past two years. Even people who do not own a computer and have no opportunity to "surf the net" could not have missed the news stories about the Internet, many of which speculate about its effects on the ever-increasing number of people who are on line. Why, then, have communications researchers, historically concerned with exploring the effects of mass media, nearly ignored the Internet? With 25 million people estimated to be communicating on the Internet, should communication researchers now consider this network of networks[1] a mass medium? Until recently, mass communications researchers have overlooked not only the Internet but the entire field of computer-mediated communication, staying instead with the traditional forms of broadcast and print media that fit much more conveniently into models for appropriate research topics and theories of mass communication.

However, this paper argues that if mass communications researchers continue to largely disregard the research potential of the Internet, their theories about communication will become less useful. Not only will the discipline be left behind, it will also miss an opportunity to explore and rethink answers to some of the central questions of mass communications research, questions that go to the heart of the model of source-message-receiver with which the field has struggled. This paper proposes a conceptualization of the Internet as a mass medium, based on revised ideas of what constitutes a mass audience and a mediating technology. The computer as a new communication technology opens a space for scholars to rethink assumptions and categories, and perhaps even to find new insights into traditional communication technologies.

This paper looks at the Internet, rather than computer-mediated communication as a whole, in order to place the new medium within the context of other mass media. Mass media researchers have traditionally organized themselves around a specific communications medium. The newspaper, for instance, is a more precisely defined area of interest than printing-press-mediated communication, which embraces more specialized areas, such as company brochures or wedding invitations. Of course, there is far more than a semantic difference between conceptualizing a new communication technology by its communicative form than by the technology itself. The tradition of mass communication research has accepted newspapers, radio, and television as its objects of study for social, political, and economic reasons. As technology changes and media converge, those research categories must become flexible.

Constraints on Internet Research

Mass communications researchers have overlooked the potential of the Internet for several reasons. The Internet was developed in bits and pieces by hobbyists, students, and academics (Rheingold, 1994). It didn't fit researchers' ideas about mass media, locked, as they have been, into models of print and broadcast media. Computer-mediated communication (CMC) at first resembled interpersonal communication and was relegated to the domain of other fields, such as education, management information science, and library science. These fields, in fact, have been doing research into CMC for nearly 20 years (Dennis & Gallupe, 1993; O'Shea & Self, 1983), and many of their ideas about CMC have proven useful in looking at the phenomenon as a mass medium. Both education and business researchers have seen the computer as a technology through which communication was mediated, and both lines of research have been concerned with the effects of this new medium.

Disciplinary lines have long kept researchers from seeing the whole picture of the communication process. Cathcart and Gumpert (1983) recognized this problem when they noted how speech communication definitions "have minimized the role of media and channel in the communication process" (p. 267), even as mass communication definitions disregarded the ways media function in interpersonal communication: "We are quite convinced that the traditional division of communication study into interpersonal, group and public, and mass communication is inadequate because it ignores the pervasiveness of media" (p. 268).

The major constraint on doing mass communication research into the Internet, however, has been theoretical. In searching for theories to apply to group software systems, researchers in MIS have recognized that communication studies needed new theoretical models: "The emergence of new technologies such as GSS (Group Support Systems, software that allows group decision-making), which combine aspects of both interpersonal interaction and mass media, presents something of a challenge to communication theory. With new technologies, the line between the various contexts begins to blur, and it is unclear that models based on mass media or face-to-face contexts are adequate" (Poole & Jackson, 1993, p. 282).

Not only have theoretical models constrained research, but the most basic assumptions behind researchers' theories of mass media effects have kept them from being able to see the Internet as a new mass medium. DeFleur and Ball-Rokeach's attitude toward computers in the fifth edition of their Theories of Mass Communication (1989) is typical. They compare computers to telephones, dismissing the idea of computer communication as mass communication: "Even if computer literacy were to become universal, and even if every household had a personal computer equipped with a modem, it is difficult to see how a new system of mass communication could develop from this base alone" (pp. 335-336). The fact that DeFleur and Ball-Rokeach find it difficult to envision this development may well be a result of their own constrained perspective. Taking the telephone analogy a step further, Lana Rakow (1992) points out that the lack of research on the telephone was due in part to researchers' inability to see it as a mass medium. The telephone

also became linked to women, who embraced the medium as a way to overcome social isolation.[2]

Rethinking Definitions

However, a new communication technology can throw the facades of the old into sharp relief. Marshall McLuhan (1960) recognized this when, speaking of the computer, he wrote, “The advent of a new medium often reveals the lineaments and assumptions, as it were, of an old medium” (p. 567). In effect, a new communication technology may perform an almost postmodern function of making the unpresentable perceptible, as Lyotard (1983) might put it. In creating new configurations of sources, messages, and receivers, new communication technologies force researchers to examine their old definitions. What is a mass audience? What is a communication medium? How are messages mediated?

Daniel Bell (1960) recognized the slippery nature of the term mass society and how its many definitions lacked a sense of reality: “What strikes one about these varied uses of the concept of mass society is how little they reflect or relate to the complex, richly striated social relations of the real world” (p. 25). Similarly, the term mass media, with its roots in ideas of mass society, has always been difficult to define. There is much at stake in hanging on to traditional definitions of mass media, as shown in the considerable anxiety in recent years over the loss of the mass audience and its implications for the liberal pluralist state. The convergence of communication technologies, as represented by the computer, has set off this fear of demassification, as audiences become more and more fragmented. The political and social implications of mass audiences and mass media go beyond the scope of this paper, but the current uneasiness and discussion over the terms themselves seem to indicate that the old idea of the mass media has reached its limit (Schudson, 1992; Warner, 1992).

Critical researchers have long questioned the assumptions implicit in traditional media effects definitions, looking instead to the social, economic, and historical contexts that gave rise to institutional conceptions of media. Such analysis, Fejes (1984) notes, can lead to another unquestioning set of assumptions about the media's ability to affect audiences. As Ang (1991) has pointed out, abandoning the idea of the mass media and their audiences impedes an investigation of media institutions' power to create messages that are

consumed by real people. If the category of mass medium becomes too fuzzy to define, traditional effects researchers will be left without dependent variables, and critical scholars will have no means of discussing issues of social and political power.

A new communication technology such as the Internet allows scholars to rethink, rather than abandon, definitions and categories. When the Internet is conceptualized as a mass medium, what becomes clear is that neither mass nor medium can be precisely defined for all situations, but instead must be continually rearticulated depending on the situation. The Internet is a multifaceted mass medium, that is, it contains many different configurations of communication. Its varied forms show the connection between interpersonal and mass communication that has been an object of study since the two-step flow associated the two (Lazarsfeld, Berelson, & Gaudet, 1944). Chaffee and Mutz (1988) have called for an exploration of this relationship that begins "with a theory that spells out what effects are of interest, and what aspects of communication might produce them" (p. 39). The Internet offers a chance to develop and to refine that theory.

How does it do this? Through its very nature. The Internet plays with the source-message-receiver features of the traditional mass communication model, sometimes putting them into traditional patterns, sometimes putting them into entirely new configurations. Internet communication takes many forms, from World Wide Web pages operated by major news organizations to Usenet groups discussing folk music to E-mail messages among colleagues and friends. The Internet's communication forms can be understood as a continuum. Each point in the traditional model of the communication process can, in fact, vary from one to a few to many on the Internet. Sources of the messages can range from one person in E-mail communication, to a social group in a Listserv or Usenet group, to a group of professional journalists in a World Wide Web page. The messages themselves can be traditional journalistic news stories created by a reporter and editor, stories created over a long period of time by many people, or simply conversations, such as in an Internet Relay Chat group. The receivers, or audiences, of these messages can also number from one to potentially millions, and may or may not move fluidly from their role as audience members to producers of messages.

Viewing the Internet as Mass Medium

Producers and audiences on the Internet can be grouped generally into four categories: (a) one-to-one asynchronous communication, such as E-mail; (b) many-to-many asynchronous communication, such as Usenet, electronic bulletin boards, and Listservers that require the receiver to sign up for a service or log on to a program to access messages around a particular topic or topics; (c) synchronous communication that can be one-to-one, one-to-few, or one-to-many and can be organized around a topic, the construction of an object, or role playing, such as MUDs (Multi-User Dungeons and their various transformations as MOOs, MUCKs and MUSHs), Internet Relay Chat and chat rooms on commercial services; and (d) asynchronous communication generally characterized by the receiver's need to seek out the site in order to access information, which may involve many-to-one, one-to-one, or one-to-many source-receiver relationships (e.g., Web sites, gophers, and FTP sites).

Reconceptualizing the audience for the communication that takes place on the Internet is a major problem, one that becomes increasingly important as commercial information providers enter the Internet in greater numbers. To date, thousands of commercial sources have created home pages or gopher sites for people to access their services or information about those services. As of September 1995, search tools on the Internet turned up as many as 123 different U.S. newspaper services and more than 1,300 magazine services with distinct web sites. Some newspapers seem to be creating home pages to mark their place in cyberspace until their managers determine how to make them commercially viable. Others may be moving to the Internet out of fear of the electronic competition. Thus, it remains difficult to envision the future of traditional mass media on the Internet-who will be the audience, how will that audience access the information and entertainment services, and what profit might be made from the services?

A parallel question investigates the impact of Internet communication on the audience. Mass communications researchers will want to examine information-seeking and knowledge gaps as well as a range of uses-and-gratifications-based questions concerning the audience. Since the Internet is also being used for entertainment as well as information, effects researchers will want to know whether the Internet is a functional equivalent of other entertainment media and whether there are negative effects in the distribution of pornography and verbal attacks (e.g., flaming and virtual rapes) on members of the audience. There are also questions of audience addiction to certain types of Internet communication and entertainment.

When the uses of the Internet as a mass medium are explored, questions arise about the nature of its communicative content. As commercial providers increase on the Internet, and more political information is provided, the problem of who sets the agenda for the new medium also becomes a concern.

Credibility is another issue with mass media. Traditional mass media make certain claims about the veracity of their information. The Internet makes few such claims at the moment, and it is possible that the concept of credibility will also change as a result. Recently, on a feminist newsnet group, an individual began to post what appeared to be off-base comments to a serious discussion of feminist issues. Several days later it was determined that “Mike” was a computer-generated personage and not a real contributor to the discussion at all. At present there is no way to know when the Mikes on the Internet are even real, let alone credible (Ogan, 1993). Consequently, we wish to underscore the fundamental importance of this issue.

Traditional mass media have addressed the issue within their organizations, hiring editors and fact checkers to determine what information is accurate. Source credibility will vary on the Internet, with commercial

media sites carrying relatively more credibility and unknown sources carrying less. A much greater burden will be placed on the user to determine how much faith to place in any given source.

Another question relates to the interchangeability of producers and receivers of content. One of the Internet's most widely touted advantages is that an audience member may also be a message producer. To what extent is that really the case? We may discover a fair amount about the producers of messages from the content of their electronic messages, but what about the lurkers? Who are they and how big is this group? To what extent do lurkers resemble the more passive audience of television sitcoms? And why do they remain lurkers and not also become information providers? Is there something about the nature of the medium that prevents their participation?

Other questions concern production of culture, social control, and political communication. Will the Internet ultimately be accessible to all? How are groups excluded from participation? Computers were originally created to wage war and have been developed in an extremely specific, exclusive culture. Can we trace those cultural influences in the way messages are produced on the Internet?

Applying Theories to CMC

In an overview of research on computers in education, O'Shea and Self (1983) note that the learner-as-bucket theory had dominated. In this view, knowledge is like a liquid that is poured into the student, a metaphor similar to mass communication's magic-bullet theory. This brings up another aspect to consider in looking at mass communication research into CMC-the applicability of established theories and methodologies to the new medium. As new communication technologies are developed, researchers seem to use the patterns of research established for existing technologies to explain the uses and effects of the new media. Research in group communication, for example, has been used to examine the group uses of E-mail networks (Sproull & Kiesler, 1991). Researchers have studied concepts of status, decision-making quality, social presence, social control, and group norms as they have been affected by a technology that permitted certain changes in group communication.

This kind of transfer of research patterns from one communication technology to another is not unusual. Wartella and Reeves (1985) studied the history of American mass communication research in the area of children and the media. With each new medium, the effects of content on children were discussed as a social problem in public debate. As Wartella and Reeves note, researchers responded to the public controversy over the adoption of a new media technology in American life.

In approaching the study of the Internet as a mass medium, the following established concepts seem to be useful starting points. Some of these have originated in the study of interpersonal or small group communication; others have been used to examine mass media. Some relate to the nature of the medium, while others focus on the audience for the medium.

Critical mass

This conceptual framework has been adopted from economists, physicists, and sociologists by organizational communication and diffusion of innovation scholars to better understand the size of the audience needed for a new technology to be considered successful and the nature of collective action as applied to electronic media use (Markus, 1991; Oliver et al., 1985). For any medium to be considered a mass medium, and therefore economically viable to advertisers, a critical mass of adopters must be achieved. Interactive media only become useful as more and more people adopt, or as Rogers (1986) states, "the usefulness of a new communication system increases for all adopters with each additional adopter" (p. 120). Initially, the critical mass notion works against adoption, since it takes a number of other users to be seen as advantageous to adopt. For example, the telephone or an E-mail system was not particularly useful to the first adopters because most people were unable to receive their messages or converse with them. Valente (1995) notes that the critical mass is achieved when about 10 to 20 percent of the population has adopted the innovation. When this level has been reached, the innovation can be spread to the rest of the social system. Adoption of computers in U.S. households has well surpassed this figure, but the modem connections needed for Internet connection lag somewhat behind.

Because a collection of communication services-electronic bulletin boards, Usenet groups, E-mail, Internet

Relay Chats, home pages, gophers, and so forth-comprise the Internet, the concept of critical mass on the Internet could be looked upon as a variable, rather than a fixed percentage of adopters. Fewer people are required for sustaining an Internet Relay Chat conference or a Multi-User Dungeon than may be required for an electronic bulletin board or another type of discussion group. As already pointed out, a relatively large number of E-mail users are required for any two people to engage in conversation, yet only those two people constitute the critical mass for any given conversation. For a bulletin board to be viable, its content must have depth and variety. If the audience who also serve as the source of information for the BBS is too small, the bulletin board cannot survive for lack of content. A much larger *critical mass* will be needed for such a group to maintain itself-perhaps as many as 100 or more. The discretionary data base, as defined by Connolly and Thorn (1991) is a "shared pool of data to which several participants may, if they choose, separately contribute information" (p. 221). If no one contributes, the data base cannot exist. It requires a critical mass of participants to carry the free riders in the system, thus supplying this public good to all members, participants, or free riders. Though applied to organizations, this refinement of the critical mass theory is a useful way of thinking about Listservs, electronic bulletin boards, Usenet groups, and other Internet services, where participants must hold up their end of the process through written contributions.

Each of these specific Internet services can be viewed as we do specific television stations, small town newspapers, or special interest magazines. None of these may reach a strictly mass audience, but in conjunction with all the other stations, newspapers, and magazines distributed in the country, they constitute mass media categories. So the Internet itself would be considered the mass medium, while the individual sites and services are the components of which this medium is comprised.

Interactivity

This concept has been assumed to be a natural attribute of interpersonal communication, but, as explicated by Rafaeli (1988), it is more recently applied to all new media, from two-way cable to the Internet. From Rafaeli's perspective, the most useful basis of inquiry for interactivity would be one grounded in responsiveness. Rafaeli's definition of interactivity "recognizes three pertinent levels: two-way (noninteractive) communication, reactive (or quasi-interactive) communication, and fully interactive

communication" (1988, p. 119). Anyone working to conceptualize Internet communication would do well to draw on this variable and follow Rafaeli's lead when he notes that the value of a focus on interactivity is that the concept cuts across the mass versus interpersonal distinctions usually made in the fields of inquiry. It is also helpful to consider interactivity to be variable in nature, increasing or decreasing with the particular Internet service in question.

Uses and Gratifications

Though research of mass media use from a uses-and-gratifications perspective has not been prevalent in the communication literature in recent years, it may help provide a useful framework from which to begin the work on Internet communication. Both Walther (1992b) and Rafaeli (1986) concur in this conclusion. The logic of the uses-and-gratifications approach, based in functional analysis, is derived from "(1) the social and psychological origins of (2) needs, which generate (3) expectations of (4) the mass media and other sources, which lead to (5) differential patterns of media exposure (or engagement in other activities), resulting in (7) other consequences, perhaps mostly unintended ones" (Blumler and Katz, 1974).

Rosengren (1974) modified the original approach in one way by noting that the "needs" in the original model had to be perceived as problems and some potential solution to those problems needed to be perceived by the audience. Rafaeli (1986) regards the move away from effects research to a uses-and-gratifications approach as essential to the study of electronic bulletin boards (one aspect of the Internet medium). He is predisposed to examine electronic bulletin boards in the context of play or Ludenic theory, an extension of the uses-and-gratifications approach, which is clearly a purpose that drives much of Internet use by a wide spectrum of the population. Rafaeli summarizes the importance of this paradigm for electronic communication by noting uses-and-gratifications' comprehensive nature in a media environment where computers have not only home and business applications, but also work and play functions.

Additionally, the uses-and-gratifications approach presupposes a degree of audience activity, whether instrumental or ritualized. The concept of audience activity should be included in the study of Internet communication, and it already has been incorporated in one examination of the Cleveland Freenet (Swift,

1989).

Social presence and media richness theory

These approaches have been applied to CMC use by organizational communication researchers to account for interpersonal effects. But social presence theory stems from an attempt to determine the differential properties of various communication media, including mass media, in the degree of social cues inherent in the technology. In general, CMC, with its lack of visual and other nonverbal cues, is said to be extremely low in social presence in comparison to face-to-face communication (Walther, 1992a).

Media richness theory differentiates between lean and rich media by the bandwidth or number of cue systems within each medium. This approach (Walther, 1992a) suggests that because CMC is a lean channel, it is useful for simple or unequivocal messages, and also that it is more efficient "because shadow functions and coordinated interaction efforts are unnecessary. For receivers to understand clearly more equivocal information, information that is ambiguous, emphatic, or emotional, however, a richer medium should be used" (p. 57).

Unfortunately, much of the research on media richness and social presence has been one-shot experiments or field studies. Given the ambiguous results of such studies in business and education (Dennis & Gallupe, 1993), it can be expected that over a longer time period, people who communicate on Usenets and bulletin boards will restore some of those social cues and thus make the medium richer than its technological parameters would lead us to expect. As Walther (1992a) argues: "It appears that the conclusion that CMC is less socioemotional or personal than face-to-face communication is based on incomplete measurement of the latter form, and it may not be true whatsoever, even in restricted laboratory settings" (p. 63). Further, he notes that though researchers recognize that nonverbal social context cues convey formality and status inequality, "they have reached their conclusion about CMC/face-to-face differences without actually observing the very non-verbal cues through which these effects are most likely to be performed" (p. 63).

Clearly, there is room for more work on the social presence and media richness of Internet communication.

It could turn out that the Internet contains a very high degree of media richness relative to other mass media, to which it has insufficiently been compared and studied. Ideas about social presence also tend to disguise the subtle kinds of social control that goes on on the Net through language, such as flaming.

Network Approaches

Grant (1993) has suggested that researchers approach new communication technologies through network analysis, to better address the issues of social influence and critical mass. Conceptualizing Internet communities as networks might be a very useful approach. As discussed earlier, old concepts of senders and receivers are inappropriate to the study of the Internet. Studying the network of users of any given Internet service can incorporate the concept of interactivity and the interchangeability of message producers and receivers. The computer allows a more efficient analysis of network communication, but researchers will need to address the ethical issues related to studying people's communication without their permission.

These are just a few of the core concepts and theoretical frameworks that should be applied to a mass communication perspective on Internet communication. Reconceptualizing the Internet from this perspective will allow researchers both to continue to use the structures of traditional media studies and to develop new ways of thinking about those structures. It is, finally, a question of taxonomy. Thomas Kuhn (1974) has noted the ways in which similarity and resemblance are important in creating scientific paradigms. As Kuhn points out, scientists facing something new “can often agree on the particular symbolic expression appropriate to it, even though none of them has seen that particular expression before” (p. 466). The problem becomes a taxonomic one: how to categorize, or, more importantly, how to avoid categorizing in a rigid, structured way so that researchers may see the slippery nature of ideas such as mass media, audiences, and communication itself.

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Notes:

1 For a discussion of what the Internet is, See Request for Comment 1492 at: http://yoyo.cc.monash.edu/au/~mist/Folklore/RFC1462.html (http://yoyo.cc.monash.edu/au/~mist/Folklore/RFC1462.html). The 'network of networks' description is taken from Krol, 1992.

2 This is despite the fact that the telephone had been used for what Carolyn Marvi calls a "protobroadcasting system" before World War I in the Telefon Hirmondo system in Hungary, where news reports were transmitted over the telephone (Marvin, 1988).

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