AUDIENCE ACTIVITY AMONG USERS
OF THE WORLD WIDE WEB

A Thesis in
Mass Communications

by
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Submitted in partial fulfillment
of the Requirements
for the Degree of

Doctor of Philosophy

December 2003
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This dissertation examines audience activity among users of the World Wide Web. Specifically, it looks at two aspects of audience activity: selectivity and involvement. Drawing upon uses and gratifications theory, the study was designed to determine whether the concept of audience activity is still valid when applied to a new medium of mass communication. The study also considers the motivation of users of the Web—the purposes behind their choice of medium.

An online survey collected data from a volunteer sample of 288 Web users. Survey questions were similar to those used in previous uses and gratifications studies of audience activity among television viewers.

Factor analysis of the online survey data indicated that Web users, like television viewers, exhibit two broad types of motivation: instrumental and ritualistic media consumption. The study demonstrated that the level of audience activity is determined by the motivation of the user to access content. Generally, a user with instrumental motivations wants to gain something from exposure to media content, while ritualistic users use media to escape or pass time.

Multiple regression analysis of the hypotheses showed that instrumental Web users are somewhat selective before their time online, but so are ritualistic users—a surprising finding, since one of the characteristics of a ritualistic media consumer is to use media to kill time, without paying particular attention to media content. During Web use, instrumental users were found to be more selective, and to make an effort to gain information from the web pages they accessed. The main difference between instrumental and ritualistic Web users is that instrumental users were also found to be more involved with content on the Web, both before and during their online sessions. This involvement is reflected in a higher degree of anticipation of the online session, and in greater interaction with Web-based content among instrumental users. Ritualistic users were more prone to distraction from content, shifting their attention to
other pursuits. Overall, the study showed that a key concept of uses and gratifications theory—an active audience—does hold when applied to a new communications medium.
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ACKNOWLEDGMENTS

A project of this magnitude cannot be completed without the help of others. I would like to thank them for their contributions to this effort.

First, Patrick Parsons, dissertation adviser, committee chair, mentor and friend. His gentle guidance kept me pointed in the right direction throughout this seemingly interminable experience, and his support kept me on track at times when I might have been derailed.

Robert Baukus, committee member, was invaluable for his advice on methods and statistical analysis. His enthusiasm for the project was heartening, and his rigor was necessary.

Kyle Peck and John Mathews, the other committee members, contributed quite different expertise and observations during the process. I greatly appreciate their service on the committee.

Ralph Zerbonia, the general manager of Cboss, endorsed the project from the beginning and pledged the backing of Cboss, its resources, and facilities. Dave Wilkeson, the System Master at Cboss, directed that company’s involvement in preparation and posting of the online survey. He always responded promptly and cordially to my questions, requests, and complaints. Without him, this project would not have been done.

Pat Niekamp, my loving wife, was originally the inspiration for me to leave television news and enter academia. She provided financial and moral support throughout, and the necessary prodding to move the project along. She put up with my slow progress and procrastination, and did it at a time of some personal difficulties of her own. I only hope I can even partially repay her.
Chapter 1

INTRODUCTION

This dissertation investigates whether users of the World Wide Web have the same motivations for using the Web as had been identified in previous research into television viewers, and engage in the same types of audience activity as television viewers. Because the Web is now a routine part of media consumption for a growing number of people, understanding the motivations for using the Web and what people do while using it are important areas for study. It will also be important to determine if the Web is similar to other media in terms of user experiences.

Television viewers have been identified as instrumental or ritualistic in their motivations to view TV (Rubin, 1984, 1983, 1981a, 1981b; Jeffres, 1978; Kippax and Murray, 1980). Briefly, instrumental viewers tend to use television for information gain (Rubin, 1984, 1983) and tend to be selective in their viewing habits. Ritualistic viewers tend to use television as a time-filler, and are relatively non-selective in their viewing. Also, during use, instrumental viewers pay attention to the media content (Rubin, 1984, 1983). They concentrate on it and think about it. Ritualistic viewers are much less involved with media content. Their viewing tends to be done more out of habit and to pass time.

When the World Wide Web became widely used in the mid-1990s, the instrumental and ritualistic motivations for using television were extended to the Web in a taken-for-granted manner (Morris and Ogan, 1996; Hoffman and Novak, 1995). That assumption would seem to make sense; the Web is delivered over a computer monitor which is analogous to a television screen. Both the Web and television offer informational and entertainment content, and for many, the Web has served as a substitute, if not a replacement, for television (Ferguson, 2000).

But the Web offers a different kind of media use experience than television viewing—interactivity (Ruggiero, 2000; Heeter, 1989; Dutton et al., 1987). Interactivity would seem to engage the Web user in a way that television viewing does not. If users of the World
Wide Web do fall into instrumental and ritualistic use patterns, would they also exhibit similar activity during use, i.e., selectivity and involvement with content? This question has yet to be investigated. Much research to this date has focused on effects of online media and their applications to commercial ventures (for example, Heeter, 1989; Hoffman and Novak, 1995; Raman, 1996; Riley et al., 1998). Most research done on the reasons people use the Web does so from a Diffusion of Innovations perspective (Lin, 1999b; Atkin et al., 1998; James et al., 1995) which focuses on the demographics of Internet users and how rapidly they adopted the new technology.

Therefore, this investigation of the motivations and activities of Web users is exploratory in nature. Such an investigation is important because it adds to the body of knowledge about users of mass communications media, specifically why and how people use the Web. Beyond that, it may also provide guidance for the designers and operators of Web sites to reach and engage a larger online audience. This dissertation will draw upon uses and gratifications theory to determine whether people will use this new medium differently than they use “old” media.

The uses and gratifications approach to mass communication research has been applied to the study of most kinds of mass media, from newspapers (Berelson, 1949) to radio (Herzog, 1944) to television (Rubin, 1981), and on to nontraditional media such as VCRs (Levy, 1987), cable TV (Reagan, 1984) and home computers (Perse and Dunn, 1995). Rather than investigate the effect a given medium might have on the individual user, uses and gratifications examines media use from the audience’s perspective. Therefore, it serves as a useful approach to answer the how and why questions of media use, and will help determine whether the motivations and activity of television viewers do, in fact, apply to the Web as well.

**The World Wide Web--Background**

The World Wide Web is one application of the Internet, a worldwide network of computer networks which grew out of a computer-based system of communications begun by the defense and academic establishments. Developed about 1989 by scientists at the Swiss-based CERN, or European Laboratory for Particle Research, the World Wide Web goes beyond the simple transmission of textual information. It uses a concept called hypertext to deliver information. Hypertext, as defined by Internet researcher Jakob Nielsen (1995), departs from the
linear progression of textual information to a nonsequential arrangement of text. The individual is not constrained to reading a document in the order in which the information is presented. Instead, the individual can select the order in which to read a document, by using the computer’s mouse to click on a hyperlink to different information. The hyperlink is usually portrayed as an underlined word or phrase in blue, but depending upon the Web site, may be in a different color, or in the form of click-sensitive “buttons.” (The CNN Interactive home page features both types of hyperlinks.) Clicking on a hyperlink will take the user from the current Web page to a new one. Market researchers attempt to determine the amount of traffic on a Web site by tabulating “page views.” A page view does not measure the number of different visitors to a site, but the number of times individual pages within a site are accessed. One person visiting the CNN Interactive site, and using the computer’s mouse to click to seven different news stories within that site, is tabulated as seven page views. Some Web sites refer to page views as “impressions.”

The colloquial term “hit” is also commonly used to refer to Web site traffic, but it lacks precision. There is disagreement about the meaning of the term. Some observers use “hit” as a synonym for page views, while others contend it represents individual visitors to a site. Under this operationalization, our hypothetical visitor to the CNN Interactive site would count as one “hit,” regardless of how many pages within the site he or she accessed.

Information is not necessarily limited to text in a hypertext environment. Images, audio and moving video can all be transmitted over the Web. Such non-textual material is often referred to as “hypermedia,” to differentiate it from text, although the use of the term hypertext is commonly extended to include multimedia as well. In other words, the terms hypertext and hypermedia are interchangeable (Nielsen, 1995).

Information is sent over the Internet and Web in bursts, or “packets” of digital bits (Negroponte, 1995). Most often, the electronic information is sent via ordinary telephone lines to personal computers, which tie into the phone lines by means of a modem, an electronic device that converts the bits into information that can be readable on the computer. In recent years, coaxial cables, such as those used by cable television companies, and advanced telephone services, such as ISDN (Integrated Services Digital Network) and ADSL (Asynchronous Digital Subscriber Line) have been used to transmit information over the Web.
The growth in use of the Web by the general public has been astounding. As early as 1993, news reports were taking note of the rapidly growing numbers of Internet users. At that time, about 20 million Americans were estimated to be using the Internet (“A Growing Internet...” 1993). Nielsen Media Research, the well-known television ratings company, now gathers figures on Web usage. A recent survey reports the “active Internet universe” (those actually using the Web) is about 167 million in the United States (Nielsen Net ratings, 2001). Cahners Instat, a market research firm, reports that broadband (high speed) Internet access is has already reached 21 million Americans, and 84 million are expected to have it be 2005 (Instat, 2001).

Those who use the Web seem to have adopted it wholeheartedly. A 1997 Georgia Tech survey found that 84 percent of those who use it consider it indispensable (Georgia Tech Web User Survey, 1997). One survey reported that more than half the Web users accessed the Web within the previous week (Pew Research Center, 1996a), while another, less representative survey found that an astounding 41.7 percent of Web users reported accessing the Web more than four times a day (Kehoe & Pitkow, 1996).

In addition, Web users are becoming more representative of the general population, at least in the United States, than just a few years ago. Georgia Tech’s Graphics, Visualization and Utilization team has conducted surveys of Web users in the Spring and Fall each year from 1994-98. In the first Georgia Tech survey, 45 percent of Web users described themselves as computer professionals (Georgia Tech Web User Survey, 1994). Just a year later, computer occupations had fallen to 31 percent of Web users, with those working in education and management showing increased presence (Georgia Tech Web User Survey, 1995). Females account for an increasing percentage of Web users, going from only six percent in 1994 (Georgia Tech Web User Survey, 1994), to about 34 percent in 1998 (Georgia Tech Web User Survey, 1998b). Interestingly, a majority of novice Web users, who have been online for less than a year, are now female — 51 percent (Georgia Tech Web User Survey, 1998a). The Web is also no longer the domain of the highly educated, although 80 percent of users do report having attended some college. Those using the Web for four years or longer are more likely to hold advanced college degrees (Georgia Tech Web User Survey, 1998a). Web users, at least in the United States, are
older than before. The average age is now 37, with more than a third over 40 (Georgia Tech Web User Survey, 1998b). In the first Georgia Tech survey, 56 percent of Web users were in their 20s (Georgia Tech Web User Survey, 1994). It must be noted that the Georgia Tech surveys are a non-representative sample, which includes volunteers who find the survey site on the Web and contribute their responses.

**News on the Web**

Since instrumental media users are seeking information, it is likely that many people who log on to the Web do so from that motivation. News is an obvious type of information people might be expected to seek on the Web. Early users of the Web expressed interest in getting news from online sources (RTNDF, 1996; Negroponte, 1995; Hume, 1995). A review of the delivery and consumption of news on the Web will provide perspective on the role news plays among online information content.

In a landmark study of news seeking about political information, Graber (1988) determined that Americans have been socialized to regard the consumption of news about politics as a civic responsibility. Since the Web offers yet another option for news because of the variety of sites with news content, it follows that people would consider the Web a likely news source. But Graber also noted that the news seeking behavior or methods of most people is haphazard, because most people have low interest in the news. They are content with getting the few stories each day that personally matter to them. The Web can be harnessed in such a way as to provide an organized, methodical way to get that news of particular interest, but whether it offers a compelling enough option to increase the overall interest quotient of the news remains to be seen.

However, it appears that people are turning to the Web for news, and in ever growing numbers. In 1995, only four percent of the public went online once a week or more to get news (Times Mirror Center, 1995). A year later, according to a Radio-Television News Directors’ Foundation survey, the number had increased, but to only six percent (RTNDF, 1996). The survey found that only one percent of Americans get their “most critical” information online (p. 3), and only three percent get news from the Web three or more days a week (p. 16). In a
summary of the survey for a broadcast trade publication, the study’s author concluded that online news seekers can be classified as “news junkies” — people addicted to keeping in touch with the latest news — who will actively seek out news in whatever medium they can find it (Thalheimer, 1996).

By the election of 1996, however, interest in online news was gaining momentum. The Pew Research Center found that about 11 million Americans got some of their election news from online sources. Large proportions were going online to learn about Congressional or local races. Of perhaps greater importance, even larger electronic audiences — more than four-in-ten online users — regularly followed news of science, health, and technology on the Internet (Pew Research Center, 1996).

By 1998, the Pew Center reported use of the Web for news was growing at an “astonishing” rate — more than tripling since 1996. A total of 36 million Americans are now getting some of their news from the Web. Twenty percent of Americans go online for news on at least a weekly basis (Pew Research Center, 1998).

Georgia Tech’s Fall, 1998 Web User Survey confirmed that substantial numbers of Web users are accessing news via the Web. About 55 percent of Web users report accessing news once per day. About 21 percent say they access news sites less than once a week (Georgia Tech Web User Survey, 1998b). Again, it must be pointed out that the Georgia Tech surveys are not representative.

The latest available information on news use is that nearly half of online users in the United States now get at least a quick headline read from online news sources. Online sources are replacing some traditional news media, such as newspapers and radio, as sources of information for breaking news (Jupiter Communications, 1998). However, the news interests of online news consumers seem to be changing. As the typical Web user begins to more closely resemble the average member of society, interest in general news subjects is growing faster than interest in specialized subjects, with weather the top draw on news sites (Pew Research Center, 1998).

Traditional news organizations have been quick to realize the potential of the new medium. Newspapers and television stations have established Web sites over the past few years that feature varying amounts of news content (Yahoo, 2003; Niekamp, 1996). The Yahoo! search
engine lists 32 different categories of news on those sites, including business, religion, science, sports, and even what Yahoo! calls “weird news” — usually offbeat human interest stories (Yahoo, 2003). In addition, 140 different sources of regional news are listed. Editor & Publisher’s online site includes links to 2,984 online newspapers and 1,245 television station Web sites as of July 8, 1998 (Editor & Publisher, 1998). Many services not necessarily considered to be news providers now offer news content as well, such as Internet search engines like Yahoo! and Altavista, and Internet Service Providers (ISPs), including the big national ones like America Online, and smaller locally-oriented ISPs, such as Youngstown, Ohio-based cboss (Yahoo, 1998; Altavista, 1998; AOL, 1998; cboss, 1998).

One benefit of the Web to news organizations may be that it provides them a place to make use of their surplus news content (Lasica, 1996; Harris, 1996; Pogash, 1996). In fact, the digital world is not bound by time or space, since stories can be kept on a Web page indefinitely, and news organizations suddenly find they have a “bottomless” news hole (Fulton, 1996; Hume, 1995; McAdams, 1995). Some local news organizations have been able to increase traffic to their Web sites by providing extensive coverage of local stories that take on much wider significance. Town Online, the Web site of Community Newspaper Company in Newton, Massachusetts, enjoyed a tenfold increase in page views during the 1998 manslaughter trial of British nanny Louise Woodward, who was accused of killing a child in her care, with many accesses coming from interested readers in England. After the furor died down, the Web site’s traffic was still up three to four times over its pre-trial use (Outing, 1998).

Non-news Information on the Web

Besides news, however, the Web is a repository for a wide variety of information on specialized topics. The home page of the Web directory, Yahoo!, gives a cursory overview of the types of subject information accessible online. It includes headings for finance, sports, medicine, astrology, gardening, history, and more (Yahoo, 2003). For many Web users, Web sites specializing in certain topics may be the best places to get current information on those topics, especially if they are obscure enough not to get regular coverage in the mainstream news media. As such, these Web sites are offering a type of “news” of their own.
Web browsers such as Netscape and Microsoft Internet Explorer offer users the opportunity to “bookmark” their favorite Web sites; that is, save their URLs, or Web addresses, in the browser so they can be retrieved with one click of a pulldown menu, and without the bother of entering sometimes long and complicated URLs by hand. The author’s own bookmark file includes several sites for personal finance information, public opinion polls, the Civil War, and golf.

Information alone is hardly the only reason to use the Web. Like television, with its comedy, dramatic, and musical offerings, the Web offers a variety of content types. A relatively new technology, MP3 audio, has taken the Internet by storm (Greenfield, 1999; Keller, 1999, “MP3.com passes milestone…, 2000). College students first discovered the ability to download music files coded in MP3 format, and play the music back on their computers without paying for a commercially-produced CD. The explosive growth in MP3 popularity led the record industry to sue companies that made the music files available online (A&M Records et al., v. Napster, 2000).

The use of the Web for shopping has grown as well. One report found that 73 percent of women who shopped online in 1999 would increase their online shopping in 2000 (“Online shoppers…” 2000; ). The leading Internet ratings company, Media Metrix, found that online shopping during the 1999 Christmas season increased by 27 percent over the previous year (“Online shopping peaks… 2000). The best-known online shopping site is arguably Amazon.com, which began selling books over the Web in the middle 1990s and has branched out to music and other household items. Georgia Tech’s most recent survey found that less frequent Web users tend to make significantly more purchases online than weekly or daily Web users (Georgia Tech Web User Survey, 1998b).

Web Effect on TV Viewing

The advent of a new medium of mass communication prompts investigators to look at the effect the new medium has on old media. Radio was expected to kill newspapers. Television was expected to kill the motion picture industry. Eventually, society managed to adapt to the new media, without eliminating the old. There were changes in the old media, of course, with
radio becoming mostly a provider of popular music, and morning newspapers supplanting evening papers to a large degree. If people get much of their news from the World Wide Web, what effect will that have on traditional news media — mostly newspapers and television?

One jumping-off point for a discussion of one medium’s effect on another is an economic theory. McCombs (1972) studied media spending patterns between 1929-1968, and developed the principle of relative constancy, which posits that spending on mass media, as a percentage of consumers’ disposable income, would remain constant. For instance, the purchase of a color television set for $600 would tend to reduce expenditures for newspaper subscriptions. That implies that if consumers adopted new technologies, relatively less would be spent on traditional mass communication media; e.g., the adoption of the Internet and World Wide Web would result in less spending on television.

Although some support has been found for the principle of relative constancy, there are alternative explanations. New media does not necessarily have to replace existing media, since consumers might divert disposable income from non-media uses to new media (Fullerton, 1991). However, the relative constancy principle is concerned with money spent on media technologies rather than time spent with media or information sources. Would consumers spend less time with traditional media than with new media? McCombs suggested they would (p. 61). If a household spends $2,000 on a new computer, they would want to get their money’s worth from it, and would presumably spend more time with the computer at the expense of newspapers and television.

The computer-based nature of the Internet and World Wide Web is worth considering at this point, since past research indicates that computer users tend to watch less television than the general public (Perse and Dunn, 1995; Dutton et al., 1987; Reagan, 1987). Reagan found that the addition of a personal computer to the household negatively affected use of radio, newspapers, and television, and that videotex users exposed themselves to less television news. Dutton et al. likewise found that people who adopted computers in the household were those who tended to watch less television than the average person. Those studies set the context for a discussion of the effects of computers on television viewing, but they might be somewhat dated now. As computers have become more commonplace in American households, are they triggering a drop-off in television viewing?
In a study of computer bulletin board use, James et al. (1995) found that television was the medium most affected by bulletin boards. In fact, television use may have been replaced altogether in some instances. In any case, 55 percent of respondents reported their television viewing time had been cut after they started using the bulletin boards. Book reading was also affected, but magazine reading was not. Curiously, the study did not ask about newspaper reading habits.

As far as news consumers are concerned, there has been disagreement over the effect of new media on television and newspapers. Gantz et al. (1991) reported that people seeking information on specific topics tended to do so using the same media they normally use for general information. On the other hand, Zerbinos (1990) concluded that the displacement of one medium by another is a possibility. In an experimental situation, she had one group read the Wall Street Journal and another group use the electronic Dow Jones News Retrieval Service. Those who used the online (then videotex) service exhibited more information-seeking behavior for specific information, while newspaper readers scanned a broader selection of news, leading Zerbinos to suggest that different media might lend themselves to different uses.

Because computer owners tend to watch television and newspapers less than non owners, a Web site operated by a television station or a newspaper might be a way for these traditional media to keep them as members of their overall audience. Newspaper circulations have been declining over the years (Folkerts, et al., 1998), and television stations are especially concerned about a loss of audience to competing media. Viewership of network television in prime time has taken a well-publicized drop over the last 15 years, and is now at about 58 percent of the audience (“People’s Choice”, 1998). If computer users are spending time with the World Wide Web, they are not spending that time watching television. Younger people have grown up with personal computers and are comfortable with them, and are more likely to use them for entertainment than the over-30 age group (RTNDF, 1996). In fact, more than 50 percent of people aged 16-34 are now Internet users (CommerceNet, 1998). A recent Nielsen survey finds that 167 million households are now use online (Nielsen net ratings, 2001), and although the distinction is not as great as it used to be, computer owners still tend to be better educated, in a higher income group, and less avid television watchers than society in general (Georgia Tech Web user Survey, 1998; Perse and Dunn, 1995). A Web site might blunt the effects of audience
losses by attracting these less-avid TV watchers to a Web site operated by a TV station. Many stations are now selling advertising on their Web sites as an added-value attraction for advertisers (Niekamp, 1997); if the audience doesn’t see the sponsor’s commercial on TV, they might see the sponsor’s ad on the Web site. That strategy might be on target. Internet news consumers preferred to get news from the Web sites of broadcast and cable television outlets (Barringer, 1998).

Research that has been done on news-seeking on the World Wide Web supports the supposition that the Web has potential as a news source; one that might pose a serious threat to traditional news media such as newspapers and television. Surveys show that people think news is an important benefit of the Web (RTNDF, 1996; Thalheimer, 1996; Georgia Tech Web User Survey, 1995), and will become a main source for their daily news (RTNDF, 1996). A later survey found that 86 percent of Web users are using the Web to find information of interest to them (Pitkow, 1997).

As ownership of personal computers was rising, viewing of television news by computer owners did not immediately drop off (Coffey and Stipp, 1997; Schweitzer, 1991). Bromley & Bowles (1995) found that during the startup period for Internet use, consumers spent the same amount of time on newspapers, television and radio as they had before the Internet. The first Times Mirror survey (1995) of Internet use found few signs that use of online services or the Internet changed traditional consumption patterns for news. It found only four percent of all Americans getting the news online at least once a week, and the overwhelming proportion of them (87 percent) said this activity had not affected their reliance on traditional news sources. As found in previous Times Mirror Center surveys, users of advanced information technology were heavier news consumers than demographically-comparable samples of non-users.

The Georgia Tech user surveys, however, report a definite trend among computer users away from television and toward the Internet. In the Spring, 1996 survey, researchers specifically asked for the first time how often users log onto the Web instead of watching TV. Thirty-six percent of respondents reported using the Web instead of television on a daily basis. An additional 29 percent reported that they used the Web instead of television at least once a week. The Fall, 1996 survey reported a one percent gain in both categories (Georgia Tech Web User Survey, 1996). But the Fall, 1998 survey found that 55 percent of respondents said they
accessed the Web rather than watched TV on a daily basis (Georgia Tech Web User Survey, 1998b).

According to the 1996 survey, older users are more inclined to use the Web instead of watching TV. Seventy-four percent of those over 50 report using it at least several times a week compared to 60 percent of those aged 26-50 and 57 percent of those aged 19-25 (Georgia Tech Web User Survey, 1996).

At about the same time, the Pew Research Center (formerly the Times Mirror Center — the Pew surveys are a continuation of the ones done by Times Mirror) noted a continuing falloff in television news viewing, and at the same time found computer users and those going online were watching less television news than non users. Newspaper reading also dropped off among those groups, but listening to radio news did not (Pew Research Center, 1996a). But even in the election of 1996, when the Pew researchers noticed an increase in online news seeking, the online excursions served mainly to supplement news coverage Web users had already seen on television (Pew Research Center, 1996b). In its 1998 survey, the Pew Center found once more that going online did not lead to less viewing of television news or reading of newspapers (Pew Research Center, 1998). Television may still be the preferred source of news for most people, even those who do get some of their news online (Jupiter Communications, 1998a). However, among heavy news consumers, television viewing did drop off more than newspaper reading (Pew Research Center, 1999). One reason for the dropoff may be, as the Pew Center suggests, that much news that is accessed online more closely resembles the kind of news found on television — especially cable television — than in the newspaper, and new online users are coming from lower socioeconomic and younger groups than before, groups which tend to watch more television than average (Pew Research Center, 1999). It could also support the viewpoint that new technologies simply add to the “repertoire” of an individual’s information sources, and depending upon the individual’s interest in a given topic, the information “repertoire” could vary. More information sources will be consulted on topics which hold more interest for the individual (Reagan, 1996; Lowden, et al., 1994). The Pew Center’s research has found that online news consumers tend to go to Web sites to supplement their information on stories they have already seen in traditional news media. Only about a fifth of online news consumers first learn of stories on the Web (Pew Research Center, 1999).
This chapter has served to introduce the general topic of the World Wide Web and the growing use of the Web by news consumers. It raises the general question of why people are going to the Web for news. What does the Web offer that traditional news media do not? The next chapter will look at a theoretical basis for the investigation of use of the World Wide Web.
CHAPTER 2

THEORY

The Uses and Gratifications Approach

One approach to the study of mass communications focuses on the reasons people use a given medium. Called the uses and gratifications approach, it is not considered a theory in and of itself, although the tenets of uses and gratifications are used to provide a theoretical underpinning for studies of mass media. Since its goal is to identify why people make use of a given medium, it is often applied in the study of new and emerging media, such as the World Wide Web. Because of the differences in the way the Web reaches its audience, however, we should first discuss the appropriateness of labeling the Web as mass medium.

Although newspapers and television are regarded as mass media because they reach a large number of people with the same message at roughly the same time (mornings, evenings, three hours later on the West Coast), some observers have questioned whether the Internet and the World Wide Web similarly qualify for mass media status, largely because of their potential to fragment the audience (Fulton, 1996; Williams, et al., 1994). Audience fragmentation can be the result of technologies that allow greater choice of media content, such as cable television, or the ability to “time shift,” and receive media content according to one’s own schedule, as is the case with videocassette recorders (VCRs). Other technologies allow the consumer to alter media content upon reception, for example, the ability of a VCR user to fast forward through commercials, or to edit content, as with computers (Negroponte, 1995; Williams et al., 1994). Others argue that the Web is indeed a mass medium, and mass media theories should be applied to its study (Perse & Dunn, 1998; Morris & Ogan, 1996).

Approaching the study of a new medium from a theoretical base can also settle disputes based on gut-level reactions to that medium. In the case of online content, there have been disagreements over news consumers’ preferences regarding its presentation. Should it be dense, with built-in opportunities to retrieve lots of information about a single topic? Or should it be brief, presented in an abbreviated headline fashion? Some market researchers embrace the latter
view. Mark Mooradian, of the new media market research firm Jupiter Communications, says online news, for example, is read in small blocks of time, and consumers want “quick headlines and breaking news, not...deep analysis” (Jupiter Communications, 1998b). Others note that online news consumers are more interested in the news than those who don’t go online, and want a more detailed presentation of stories (Kehoe and Pitkow, 1997; Hume, 1995). Many of these kinds of generalized statements reflect points of view, more than conclusions based upon scientific research. Basing a study of the World Wide Web on a mass communications theory should result in more reliable findings than reactions based on intuition.

The focus on the user of the World Wide Web raises the possibility that as a receiver-based theory, uses and gratifications might be applicable to its study. Uses and gratifications investigates the “why” of media use, and has been used for many years to learn about the mass media audience (Herzog, 1944; Lazarsfeld, Berelson, and Gaudet, 1948; Berelson, 1949). The early studies did not ground themselves in a formal uses and gratifications theory, however, because it was not until much later that uses and gratifications became identified as a discrete approach to mass communications research. It resulted from researchers’ efforts to shift the focus of communications research from the effects mass communications had on the audience to the ways in which the audience made use of mass communications (Katz, 1959).

Because of its focus on reasons for use of a given medium, uses and gratifications has been the approach often taken in research on new media, from the radio soap operas of the 1940s (Herzog, 1944), to television in the late 1950s (Schramm, Lyle, and Parker, 1961), to videocassette recorders, cable television, and videotex in the 1980s (Perse and Ferguson, 1993; Baldwin, Barrett, and Bates, 1992; Rubin and Bantz, 1989; Reagan, 1986; Reagan, 1984), to computers in 1990s (Schweitzer, 1991; Cowles, 1989). For these reasons, it has been suggested that uses and gratifications would lend itself to the study of the Internet and online communication (Ruggiero, 2000; Lin, 1999a; Morris & Ogan, 1996; James et al., 1995).

Uses and gratifications’ emphasis on the user of mass media presupposes an “active” audience, that is, one that makes decisions about media consumption with the intent of attaining a goal. As stated in the classic volume on uses and gratifications, the approach 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 (6) need gratifications and (7) other consequences, perhaps mostly unintended ones (Blumler & Katz, 1974, p. 20).

The uses and gratifications approach makes a number of assumptions about media use. Palmgreen et al. (1985) list the following:

1) The audience is active.
2) Much media use can be conceived of as goal-directed.
3) Media compete with other forms of communication.
4) Audience initiative links needs to media choice.
5) Media consumption can fill a wide range of gratifications.
6) Media content alone cannot be used to predict gratifications.
7) Media characteristics can determine which needs are gratified at different times.
8) Gratifications can originate in media content, exposure to media, or the social situation in which exposure takes place.

The key assumption, that of an active audience, leads to several corollaries. One is the idea of the functional alternative. Since media compete with other forms of communication, those other forms may be considered alternate ways to satisfy some need or gain some gratification (Rubin & Windahl, 1986; Rubin & Rubin, 1985; Katz, Gurevitch and Hass, 1973). The presentation of information online can be considered a functional alternative to television or newspapers.

Another corollary is the assumption that since audience members know what they want, they are able to report on their motivations for using media (Babrow, 1988; Katz, Blumler, and Gurevitch, 1974; Katz, Gurevitch, and Haas, 1973). The most-often used uses and gratifications research techniques are surveys and self-reports. Although self-reports have limitations, Palmgreen (1984) points out that they have a long tradition of use in the social sciences, and he cites more than twenty studies of the media which show consistent results. In fact, he states that such empirical studies are “at the core” of uses and gratifications research (p. 22).
A final corollary is a belief that “value judgments about the cultural significance of mass communication should [or at least can] be suspended while audience orientations are explored on their own terms” (Katz, Blumler, & Gurevitch, 1974, p. 22).

These tenets of the approach have opened uses and gratifications to a variety of criticism. Cultural scholars accuse it of a type of “tunnel vision” for a narrow concentration on the audience’s actual mediated communication experiences, at the expense of other important matters, such as long-term effects of the communication, or the cultural significance of the experience (Rubin & Windahl, 1986; Swanson, 1977; Elliott, 1974). McQuail (1984), among others, defends uses and gratifications, and suggests that different research models are better for addressing certain concerns than others. The researcher, says McQuail, must determine if he or she wants to know most about audience behavior, people in the audience, society, or culture. The answer will determine which approach is likely to work best. Palmgreen (1984) reviews the seven-point precis in Katz et al’s (1974) definition of uses and gratifications, and notes that research up to that point had mostly addressed the “broad center” of the precis, but no part of it has been totally neglected (p.21).

Another common criticism of uses and gratifications is that it is “atheoretical” (Swanson, 1977; Elliott, 1974). While that argument may have had merit in the 1970s, Palmgreen (1984) provides a rundown of the development of the research tradition since those objections were first raised, and contends that the 1980s were a time of theory building. Later, Palmgreen, Wenner, and Rosengren (1985) state that uses and gratifications has gone through four phases: the 1940s and 1950s saw a “descriptive” phase, the 1960s an “operationalization” phase, the 1970s an “explanatory” phase, which sought to connect communication processes with audience motives and experiences, and by the 1980s, a “theory building” stage had begun.

**Audience Activity**

Palmgreen (1984) cites six areas of investigations in uses and gratifications studies: (1) gratifications and media consumption, (2) social and psychological origins of gratifications, (3) gratifications and media effects, (4) gratifications sought and obtained, (5) expectancy-value approaches to uses and gratifications, and (6) audience activity. He then proposes a theoretical
model that integrates all six areas. This study will concentrate on the sixth area, audience activity.

A key assumption of the uses and gratifications approach is that the audience is an active one, one which makes deliberate decisions regarding the selection of a particular medium and the types of content to access within that medium. Early uses and gratifications researchers seemed to accept the idea of an active audience as a given, and did little work to explicate or operationalize audience activity (Palmgreen et al., 1985; Windahl, 1981; Elliot, 1974). Because audience activity is a central tenet of the uses and gratifications approach, this untested acceptance opened the field to a round of criticism (McQuail, 1984; Swanson, 1979) that led many scholars to abandon it as a legitimate venue for audience research. In response to the criticism, efforts were made to test the concept of activity.

Rubin (1984, 1983) found two general categories of orientation toward television. One type of viewer sought entertainment and information. Rubin called this an “instrumental” viewing motive. It was purposeful, selective, and goal-driven. The other type of viewer viewed out of habit, and some viewing was done just to kill time. Rubin considered this type of media use to be “ritualistic,” characterized by frequent, habitual viewing by people who wanted to pass time or who sought diversion.

Audience activity, therefore, is variable between different people. Ritualistic viewers exhibit less selectivity or intentionality than instrumental viewers, who are intentional, selective, and who expect to get something out of the viewing experience (utility). Even here, Rubin cautions against a ritual-instrumental dichotomy, since those orientations can vary within an individual during a single media consumption episode. A television news viewer may pay close attention to the weather forecast, but very little to the sports.

Hoffman and Novak (1995) suggested the same general categories can be applied to World Wide Web users. They identified “goal-directed” and “experiential” users. Goal-directed Web users are equivalent to Rubin’s instrumental media users: they intend to visit specific Web sites and to get something out of their visit to a given site. Experiential users are the so-called “surfers,” who move from site to site as the hyperlinks take them. Their Web use practices seem to resemble those of the ritualistic television viewer.
Levy and Windahl (1984, 1985) developed a typology of audience activity based on two dimensions: audience orientation and temporal sequence. Orientation typified the individual audience member as being selective in media choice, involved in media content, and “using” the content after exposure for social or psychological purposes (Levy and Windahl, 1984). The temporal dimension dealt with audience activity before, during, and after exposure to media content. Represented graphically, the typology resembles Figure 2.1:

<table>
<thead>
<tr>
<th>COMMUNICATION SEQUENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AUDIENCE ORIENTATION</strong></td>
</tr>
<tr>
<td><strong>SELECTIVITY</strong></td>
</tr>
<tr>
<td><strong>INVOLVEMENT</strong></td>
</tr>
<tr>
<td><strong>UTILITY</strong></td>
</tr>
</tbody>
</table>

**Figure 2.1**
The Levy-Windahl Audience Activity Typology (Levy & Windahl, 1985)

This typology indicates that different types and levels of activity take place within different phases of the communications process. Selectivity before exposure to media has long
been synonymous with the broad activity concept (Katz et al., 1974). This involves the individual’s decisions about which media or media content will be most likely to satisfy needs, based upon the individual’s ideas about what to expect from the media and the individual’s learned experiences with a given medium (Levy and Windahl, 1984). It represents the purposive and planned use of media, including activities such as consulting program guides before viewing television, or “making an appointment” to watch the news at a certain time (Rubin and Perse, 1987). Instrumental viewers are more likely to engage in preexposure selection than ritual viewers (Perse, 1990a; Rubin, 1984). Since the World Wide Web is accessed by the personal computer, through a software product known as a “browser,” logging onto the Web is obviously a deliberate, active endeavor. Its use demonstrates that preexposure selectivity is taking place.

Selectivity during exposure is evidenced by the individual’s inattention to certain elements of media messages. Television viewers may use the remote to tune out a commercial (Perse, 1990a), and newspaper readers will attend to only certain parts of the paper (Bogart, 1981). When such selective behavior is the result of a conscious decision, the audience can be considered relatively active (Levy & Windahl, 1985).

Selectivity after exposure reflects the ability (or inability) of people to recall all the information to which they are exposed. Those who can recall more are considered more active audience members than those who cannot (Levy & Windahl, 1985). This activity is likely to be the result of the individual’s orientation toward a particular medium, probably with the aim of getting something out of media exposure — or using the media to gratify certain needs.

Involvement before exposure is a reflection of anticipation of a media experience. A person who makes a special trip to the corner store for a Sunday paper, or who looks forward to watching a certain television program that night, is considered to be involved before exposure to the media. While not as important an activity as some others within the grid, preexposure involvement can play a role in determining patterns of exposure, for instance, to television reruns (Levy & Windahl, 1985).

Involvement during exposure has often been measured by the distractions audience members experience (Rubin & Perse, 1987). Those who have fewer distractions while consuming media are involved with the content at a greater level. Conversely, attentive media consumers are more involved with the media than inattentive consumers, and try to determine
the meaning of media content (Levy & Windahl, 1985). Instrumental cable television viewers are more involved during exposure than ritualistic viewers (Perse, 1990a). Lin (1993) uses the word “engagement” to describe involvement with media, reflecting the input-output process between the audience and medium during media use.

A news consumer who clicks on various links within a Web site, or clicks from one Web site to another (an “engaged” user), is taking advantage of the salient characteristic of online media: interactivity. Using the input-output idea of engagement, we can suggest that the more a person clicks on links within a site during the online experience, the more involved that person can be regarded.

Post-exposure involvement is, perhaps, the least obvious, but can be observed in children, who act out the exploits of their favorite superhero long after their exposure to the character. Levy & Windahl suggest daydreams based at least in part upon media exposure are other examples of post-exposure involvement.

Because there is little evidence of some types of activity represented within the typology, for example, postexposure selection and preexposure involvement, the variable nature of audience activity is further supported. In addition, the paucity of evidence for some types of activity has led to a modification of the typology, with emphasis on the sequence of the types of activity (Lin, 1993). Selectivity before exposure, involvement during exposure, and utility after exposure are given greatest emphasis as the types of activity with the greatest explanatory power in audience research.

A number of studies were done in the 1980s and early 1990s which examined the role of audience activity among television viewers. Most of those studies dealt with television news viewing. Presumably, news viewers have an instrumental motive, and watch to gain information — part of the surveillance function of the media. There could also be ritualistic behavior among news viewers. Rubin (1981) identified instrumentally and ritualistically oriented viewers of the television program “60 Minutes.” While some watched the program to seek information and learn, others watched out of habit, or to pass time, “when there’s nothing better to do” (p. 48).

Rubin (1983) refined his instrumental-ritualistic viewer types in a study of television news viewing, to “information-seeking” and “escapist” viewers. Information-seeking viewers use television to learn, or to get information about a specific topic. Their focus is on content.
“Escapist” viewers are not using the medium to promote their own social isolation, but are using it to get away from problems, tasks or people (p.49). They engage in active content seeking, but not of informational content.

Levy and Windahl (1984) sought to explain their concept of audience activity by studying news viewers, and found that during exposure, news viewers were relatively inattentive, since they were often engaged in other behaviors besides watching news, such as eating or child care. Another explanation for inattentiveness was the tendency of viewers to focus only on items of interest to them as individuals. Therefore, a range of activity took place among viewers.

Rubin and Perse (1987), in a study of local television news viewers, found that instrumental viewing motives were linked to intentionality and involvement, while ritualized motives were linked to nonselective exposure and coviewing distractions. Those who sought information, but not entertainment, were likely to be more involved with the content of the program.

This idea of audience activity extends to selection of media. People tend to select media that closely matches their needs and interests (Coffey and Stipp, 1997; Reagan, 1996; Palmgreen, 1984). For example, different news outlets may emphasize coverage of different news topics. During the Persian Gulf War, people tuned to the cable news service CNN for breaking news on the war. In times of crisis, people tune to cable television news services more often than the over-the-air broadcast networks (Baldwin, Barrett, & Bates, 1992).

An individual’s interests were found to have an important bearing on which media were used. In earlier studies, news was found to influence program choices made by television viewers (Palmgreen, Wenner & Rayburn, 1981), and audience members differentiated among five media choices based on gratifications obtained (Katz et al., 1973). Prior knowledge of a topic is also an important determinant of media use (Greer, 1994). Reagan found that interest in a topic affected the number of news sources selected. Low interest topics result in the selection of easy-to-use media, but higher interest topics result in more complex repertoires of information sources. Reagan concluded that the active audience will become more active in selecting media (Reagan, 1996).

Not only interests, but individual differences at basic levels are associated with different levels of audience activity. A person’s age, for example, affects the way in which a person
processes television messages (Rubin, 1984; Levy and Windahl, 1984). Social factors, too, may have an effect, such as the education level attained by an individual (Levy and Windahl, 1984; Rubin, 1984).

**The Role of Interactivity in Audience Involvement**

Mention has already been made of an operationalization of involvement during media use as “engagement”. Engagement with media extends the attention dimension of the audience member to an input-output relationship with the medium during media use (Lin, 1993). A news consumer who clicks on various links within a Web site, or clicks from one Web site to another (an “engaged” user), is taking advantage of the salient characteristic of online media: interactivity. Using the input-output idea of engagement, we can suggest that the more a person clicks on links within a site during the online experience, the more involved that person can be regarded.

Interactivity has been regarded as one of the key features of new media (Ruggiero, 2000; Negroponte, 1995; Cowles, 1989; McQuail, 1986; Rice, 1984; Rogers and Chaffee, 1983). However, in many articles about the role of interactivity in new media, the concept has been treated in a taken-for-granted manner. An examination of trade press stories about online news ventures leaves the impression that interactivity is nothing more than the action of the news consumer clicking on hyperlinks with a mouse (see, for example, Fulton, 1996; Oppenheimer, 1996; Tobenkin, 1995; Gunther, 1995). For others, interactivity is “feedback,” the ability of the Web user to comment on a program item directly to the television station or network (Harris, 1996; McAdams, 1995). The inclusion of these types of interactivity on Web sites has been linked to the attractiveness of the site (Ghose and Dou, 1998), and the creation of regular visitors to the site (Berthon et al., 1996).

These conceptions of interactivity are valid, as far as they go. Linking and feedback are components of interactivity, but interactivity can be considered on a continuum (Rafaeli, 1988). At one end is declarative (one-way) communication (e.g., broadcasting). Reactive (two-way) communication is further over. In reactive communication, one side responds to the other side. Fully interactive communication requires that later messages in any sequence take into account
not just messages that preceded them, but also the manner in which previous messages were reactive (Rafaeli & Sudweeks, 1997).

Interaction implies an exchange of ideas, as in a conversation. A conversation between two people is sometimes used as an idealized example of interaction. It draws upon the classic communication model which includes a feedback loop in the flow of messages from one party to another (Shannon and Weaver, 1949). Since the Web is a computer-based medium, it may be worthwhile to consider how research in computer-mediated communication (CMC) has regarded the interaction-as-conversation concept. Walther (1996) maintains that the conversation model is less than ideal when applied to CMC. He says conversation requires an immediate response, which puts pressure upon the responding party and may lead to responses that are less satisfactory than they might be if the respondent had time to consider them. Much study of CMC investigates the asynchronous nature of computer-based communication (see, for example, Walther, 1996; Steinfield, 1992; Sproull & Kiesler, 1986) and there is some evidence that the ability to respond on one’s own timetable, in a relaxed state, actually enhances the quality of the interaction between parties (Walther, 1996). But the point is that each party to the communication is interchangeable with the other(s) — everyone is both a sender and a receiver, a participant in the communication process (Rafaeli, 1988).

However, CMC generally focuses on interactions between individuals or groups of individuals within a work or computer-mediated social setting. In the online news and entertainment environment, the situation is different. News providers are still, in many cases, in a “telling” mode (Riley et al., 1998). The job of the journalist has always been to tell people what is happening. Interactivity in this setting has traditionally consisted of a letters to the editor section, while broadcast stations and networks seldom provided even that much. Traditional news media has viewed the World Wide Web as just another delivery vehicle to use to accomplish the job of “telling.” Interactivity in a Web-based news environment generally takes place at a relatively low level of the continuum — often just an opportunity for the news consumer to exercise some control over how quickly or how much of a story to read, rather than adding a new dimension to online news (Noth, 1996). Some would argue that the Web is primarily a form of publishing, and offers little opportunity for interactivity (Walther, 1996).
Others maintain that the Web provides news organizations with a vital tool to encourage interaction with their audiences. In order to make use of the tool, journalists will have to rethink the way they work, and what they produce. Interactivity will allow news consumers the opportunity to be in greater control over the material they want to see. That control can be exercised simply by selecting links between certain types of news stories (Hume, 1995; McAdams, 1995). Additional links might also take the viewer from the news organization’s page to related information, perhaps dealing with politics or consumer news. Far from being simply a reactive use of the Web, links may add a personal dimension — one that non-interactive electronic media lack. The requirement that users must make a deliberate choice to get another layer of information, involves a type of interpersonal activity missing in traditional media (Cowles, 1989). Lack of this personal interactivity may be one of the reasons for the failure of the World Wide Web's direct predecessor, videotex (Pryor, 1994).

Perhaps another way to consider interactivity is to look at its characteristics as part of the online environment. Heeter (1989) identified six dimensions of interactivity resulting from the use of online services: Complexity of choice available; effort users must exert; responsiveness to the user; monitoring of information use; ease of adding information; and facilitation of interpersonal communication. One benefit of considering interactivity in this manner is the measurability of each of the six dimensions once they are adequately operationalized (McMillan, 1998). Each of these points will now be discussed in more detail.

The complexity of choice available on a Web site increases the opportunity for interactivity between the user and the site. Choice has long been cited as one of the great advantages of new media (Negroponte, 1995; Perse, 1990a; Heeter & Greenberg, 1988) over traditional media. Consumers not only can choose which news stories to view, and in what manner, but they can customize their news selections so that they receive only the categories of news of greatest interest to them. The same is true of entertainment sites. Users can choose to get as much or little involved as they want. While some commentators draw a distinction between customizing and interactivity (Noth, 1996), others see customizing as a relatively high level of interactivity (Maes, 1994; Negroponte, 1995).

The availability of choice depends upon a user who takes an active role in accessing content, and selects specific material to view. At some risk of losing the Web user temporarily,
or at least for that session, a Web site might offer links to other sites so the user could get more
information on a topic. For example, if a news story deals with rudder problems in the Boeing
737 jet, an online news site might provide a link to Boeing’s Web site, or that of the Federal
Aviation Administration. Niekamp (1997) found that links to other sources of information
related to the story being viewed on a Web page did trigger more page reads within a Web site,
lending support to the idea that news seekers are interested in deeper levels of information about
topics that interest them.

Links to related sites for additional information would, therefore, attract the instrumental
news consumer rather than the more casual Web surfer. The process of compiling links and
getting them onto a Web page could be a new type of journalism, or, at least, a new role for some
people practicing more traditional roles in a newsroom. McAdams (1995), in an account of
developing an online service for the Washington Post, described “packagers,” whose job it was
to organize and archive online stories so they might easily be accessed via links in the future.
The challenge for Web sites is to provide layers of information on a single story that news
consumers can access all the way down to original documents (Hume, 1995).

In addition, a site might offer users the opportunity to download information to their own
computers. Such information might be in the form of audio or video clips which accompany
certain stories, or software files. A link to sites, which allow a user to download Web
enhancement tools such as Shockwave, adds an interactivity element. Some Web sites let a user
download a screensaver, featuring perhaps an animated company logo (Niekamp, 1996).

Many news providers began their Web sites as an online version of the printed or
broadcast product, simply dumping digitized versions of newspaper stories or television news
scripts onto their Web pages (Thalheimer, 1994). But many providers found other uses for their
sites. They are often used now during weather emergencies to keep the public up to date on
developments. Some news services are creating online chat rooms for visitors to talk about

The effort users must exert may be viewed as a reverse measure of difficulty (McMillan,
1998). If a Web site has a number of navigational buttons that repeat on each page, the site will
require relatively less effort to get around than another site with fewer choices. Some sites
contain links to the next page and the previous page, but not to all pages within a site. That site
would be relatively harder to navigate. Another measure of effort might be the amount of time a Web page takes to load. Graphics or video clips stored in large files take longer to load than small, simple graphics. On the Web, time is effort. This concern may soon be moot. Broadband delivery of Internet services is starting to gain acceptance, with cable modems and digital subscriber lines (DSL) adding customers. These technologies offer the hope of vastly increased speed for Internet users.

Responsiveness to the user is the feedback loop. If a Web site contains an email link which allows a user to correspond with the news organization, that is one measure of responsiveness. Whether it actually responds by sending email in reply is another measure. Some welcome email, but won’t bother to answer it. Even in those cases, the site is perceived as more interactive than those without a feedback loop (Newhagen et al., 1995).

Monitoring of information use has been measured by noting the presence of a counter on the Web site (McMillan, 1998). McMillan also noted whether the site had a notice of the last time it had been updated. Although a site can count page views and visitors, and update content without making it obvious to the user, the visual evidence of those elements can add a dimension of interactivity by letting the user know the news organization is paying attention.

An important measure of interactivity is measured by the ease with which a user can add information to the Web site. This is different from a feedback component. Bulletin boards allow users to post information or opinions for general viewing. Some sites require users to register before being allowed to post (Motley Fool, 1998), but others are open to anyone (CNN Interactive, 1998).

Some sites have gone the extra mile and added a chat room or newsgroup to their site (Washington Post, 1998). This moves the level of the interactivity to the right on our continuum, since the one-to-many mass media model is now giving way to a many-to-many model characteristic of CMC. It is also worth noting that this is still a comparatively rare level of interactivity.

Because it is so closely related to the concept of audience activity, interactivity will not be considered separately in this dissertation. It will, however, play a role in the investigation of audience activity among consumers on the World Wide Web.
The study is based on the uses and gratifications assumption of an active audience that varies in its selectivity and involvement with media content. It is expected the study will show that news consumers on the Web exhibit a different degree of audience activity than those who are not motivated by seeking information. Recognizing that escapist motivations for Web use can still incorporate an activity component, the study will try to determine how activity differs between these two types of Web user.

**Hypotheses**

One component of audience activity is selectivity. Selectivity deals with content preferences of the individual audience member. Based on the earlier discussion of selectivity of news media, it is clear that instrumental television users are purposive and goal-directed in their media choice. We can infer that instrumental Web users log onto the Web because they expect to find certain information that can be useful to them.

It must also be remembered that instrumental and ritualistic media use motives are not discrete. People can exhibit characteristics of both an instrumental and a ritualistic media user during the same media use period. Instrumental television viewing is generally regarded as content-centered behavior, but that content need not be exclusively informational. Entertainment content may also fulfill an instrumental media use motive.

Selectivity can also be regarded as limiting exposure to certain content. Users can determine which Web sites to visit by using search engines to winnow the field of possible choices. Search engines eliminate Web sites that are not of interest to the user, and allow the user to narrowly define the scope of material of interest. In addition, the Web browser offers the ability to “bookmark,” or save, the address of a site, so the user can easily return in the future without having to type in the full Universal Resource Locator (URL, or Web address). Since instrumental users exhibit greater intentionality in their media use, they are likely to return to those sites which they know from experience should provide the information they seek. Because instrumental use is marked by selective exposure to content, Web use for instrumental reasons should be related to greater use of search engines and bookmarks before exposure to locate
specific news and information. Therefore, in Hypothesis 1, selectivity is operationalized as use of search engines and bookmarks to choose Web sites.

H1: Instrumental use of the World Wide Web is a positive predictor of selectivity before exposure.

Selectivity occurs during Web use sessions as well. Users may be selective in terms of choices they make regarding navigation within a Web site, or around the greater Web. Hyperlinks within a site give the user the option of getting additional information about the present topic, or passing that information up in favor of different subject matter. Since instrumental users are likely to be looking for information during media use, they are likely to click links which hold the promise of adding to their information cache, or to select links taking them to other sites, where there may be additional information on the topic. Some Web sites are primarily informational, such as the sites operated by nationally known news organizations such as CNN and ABC News, or major newspapers such as the New York Times and Washington Post. Other informational sites may concentrate on a particular type of content. A plethora of financial information is available on the Web, furnished by sites such as Yahoo! Finance, the Motley Fool and Morningstar.com. Science information is handy via the news sites, or such organizations as NASA, Web MD and the Biotechnology Information Center.

H2a: Instrumental use of the World Wide Web is a positive predictor of the selection of informational content sites.

Unless H1 is supported, H2a cannot be supported. The selection of a particular type of site, in this case informational sites, presumes that the type of audience activity known as selectivity is taking place.

Ritualistic use of television has been found to involve escapist viewing (Rubin, 1984; 1983), which prefers programming of an entertaining nature over that of an informational nature. However, Rubin (1984) found that ritualistic television viewers are not as selective as instrumental viewers, a finding which reinforced the characterization of ritualistic viewers as
using television to pass time. As with informational content, there is no shortage of entertainment on the Web. Sports, show business and even pornography are prevalent, as are computer sites, which feature games and technological advancements like streaming audio and video.

Therefore, just as ritualistic television viewers tend to favor escapist programming, it is likely the ritualistic Web user would favor escapist Web use, operationalized here as the selection of entertainment content.

**H2b:** Ritualistic use of the World Wide Web is a positive predictor of the selection of entertainment content sites.

Because ritualistic media use implies that the user is not particularly involved with the content of the medium, the ritualistic user is less likely to make decisions about selecting content during media use (Rubin, 1984, 1983). The intent is to use media as a diversion, a means to pass time. Instrumental users, on the other hand, are purposefully using media to get information. They are more likely to be involved in media content (Perse, 1990a; Levy & Windahl, 1985), and more likely to select content during use. For Rubin (1984, 1983), that meant changing television channels. For the purposes of this study, selectivity during use means clicking on links to other Web sites, or clicking on links to other information within the same site.

**H3:** Instrumental use of the World Wide Web is a positive predictor of selectivity during use.

Another component of audience activity is involvement, or personal participation with content. As discussed earlier, involvement can be reflected by several dimensions. Pre-exposure involvement reflects anticipation of media use. This study operationalizes pre-exposure involvement as setting aside time for Web use, and looking forward to Web use.

**H4:** Instrumental use of the World Wide Web is a positive predictor of intentionality before use.
Involvement can also be engagement with the media content; the attention paid to media content. Since instrumental media users expect to get something from their media use, they are more likely to pay attention to content within Web sites, and to exert mental effort in that endeavor. In addition, they are more likely to think about the content they encounter. Earlier, it was suggested that engagement is an input-output relationship with the medium. On the Web, that input-output can, in part, be measured by the selection of hyperlinks within a site. There is evidence that the presence of hyperlinks will trigger more visits to a site than those with few links (Ghose and Dou, 1998; Niekamp, 1997, Berthon et al., 1996). Hyperlinks are provided to get the Web user to related information, and most probably deeper information than that obtainable at the Web page in use. In order for a Web user to select a hyperlink, he or she must have a level of interest in the topic to want to find out more about it. Ritualistic users therefore would be likely to skip the hyperlink, and move on to another Web site on a different topic. Instrumental users, who are more involved with content than ritualistic users, would be more likely to select the hyperlink for additional information, and to follow hyperlinks within a site to learn more about a topic. Therefore, instrumental users are more likely to be involved with content on a Web site than ritualistic users. Involvement during use is operationalized as mental effort, thinking about content, paying attention to content, and following links in an effort to learn more about a topic.

H5: Instrumental use of the World Wide Web is a positive predictor of involvement during use.

Involvement can also be measured in the inverse, that is, by the amount of distraction a user allows while using media. Since instrumental users are likely to pay attention to media content, they are less likely to allow themselves to be distracted during media use. Distractions can range from losing concentration on the task at hand to walking away to attend to something else. In addition, this study operationalizes distraction as doing homework or other paperwork while using the Web, and eating. Since ritualistic media users are not involved with media content, they are more likely to experience distractions.
H6: Ritualistic Web use is a positive predictor of distracting behavior during exposure.

The following chapter will discuss how these hypotheses were tested by discussing both the method of gathering data and the methods of analyzing that data.
CHAPTER 3

METHODOLOGY

Survey

To test the hypotheses in this study, an online survey was developed. The survey is a useful method for conducting a study of this nature, because, as in most uses and gratifications studies, it focuses on individual users, in an effort to determine what guides their choices of media and content. The survey was conducted online. The sample was drawn from a population of subscribers to a commercial Internet Service Provider. The unit of analysis was the individual Web user.

Survey methodology has already been discussed as a commonly used way to investigate uses and gratifications questions (Palmgreen, 1984). In previous research into audience activity, investigators used surveys to collect data from samples of television viewers (e.g., Perse, 1990a; Rubin & Perse, 1987). Because surveys have yielded a consistent and useful body of knowledge concerning reasons for consumption of media and media content when applied in uses and gratifications research, a survey to investigate audience activity with a new medium appeared to be an acceptable way to test the hypotheses in this dissertation.

In addition, the unit of analysis for this study is the individual Web user. Surveys have the potential to reach much larger numbers of people than other widely employed research techniques. Since surveys on topics that are salient to the respondent have been found to yield greater response rates (Stempel & Westley, 1989) a survey of Web users about Web use was likely to get better response than a survey of the general public about Web use.

Surveys have been criticized as to their validity (Rosenstein & Grant, 1997; Stempel & Westley, 1989). Findings may reflect the researcher’s expectations rather than actual audience behavior. Surveys usually involve lists of questions created by researchers which may or may not relate to the media use experiences of their samples. Furthermore, since they do not reflect observable behavior, they require interpretation of lifestyle and attitude variables (Rosenstein &
Grant, 1997). Interviews require the respondents to be analysts, who may be less than objective about their behavior and attempt to portray themselves in a positive light (Messaris, 1977).

There are alternatives to the survey to answer uses and gratification questions. Massey (1995) makes the case for qualitative analysis of audience activity, taking into account cultural factors which may influence media use and perceptions of the media. Radway’s (1984) often-cited study of readers of romance novels looked at the media audience from the standpoint of a participant-observer, who interacted with her subjects over a period of time. Other observational techniques, such as the field experiment, could actually see how people are using the media while they are using it, rather than rely on their sometimes faulty memories. For even more control, a lab experiment could be arranged, gauging the reactions of media users to a narrowly controlled set of media use options. The artificiality of the lab experiment makes it hard to justify in this instance. The field experiment would seem to offer some definite advantages when studying media use patterns. However, this study is by its nature, exploratory. Therefore, the more participants in the study, the more useful the results. A field experiment with hundreds of subjects would be difficult to conduct, if for no other reason than the time involved. A survey of the users of this new medium provides at least a place to begin studying audience activity on the World Wide Web.

**Online Survey**

The main difference between the survey used for this study and those used in past audience activity studies was its form. The Rubin and Perse studies cited above were pencil-and-paper questionnaires administered to large groups of television viewers. Because this study examines audience activity among users of the World Wide Web, only those people who use the Web took part in this survey. To ensure that the respondents would be Web users, the survey was conducted online. A local Internet Service Provider (ISP) in a medium-sized metropolitan area of the industrial Midwest put an invitation on its home page for people to take an online survey and help the ISP and a university researcher learn more about Web users’ habits. In addition, the ISP sent an e-mail to each of its approximately 2,600 clients announcing the survey and urging people to take it. The URL was included in the e-mail, which allowed people to go
directly to the survey from the e-mail if their software was set up for that kind of link. The e-mail also directed people to the ISP’s home page where they could link to the survey. Therefore, the resulting sample was a volunteer sample of people who had Internet access, used the Web, and were interested enough to take the time to answer the questions in an online survey.

Electronic surveys have been used in the past, and seem to be used with increasing frequency. Niekamp’s (1997) study of interactivity in online news stories was based on an electronic survey e-mailed to the webmasters of 316 television stations with Web sites. Of these, 108, or 34 percent, responded. It was hoped the novelty of an online survey conducted within a local population would also yield good response rates in this study. The previously-cited Georgia Tech Web User Surveys (1994-1998b) have all been conducted online, and have furnished a growing body of information about the Web use habits not only of Americans, but Web users around the world. In the world of commerce, firms doing business on the Web often survey their potential customers online to determine their product preferences and buying habits (Ghose & Dou, 1998).

The ISP used in this study draws its online customers from a two-county area. The two counties have a combined population of nearly 500,000. The economy is based on manufacturing, with the largest General Motors automobile assembly plant in the country, several smaller steel companies as well as producers of aluminum and titanium, and several large automotive parts suppliers. It is also the home of a major state university, with an enrollment of about 13,000.

The online survey, because it was posted on the World Wide Web, had the potential to attract respondents who were not subscribers to the ISP, but who came across the survey as a result of Web surfing. The ISP could not differentiate between respondents who were its subscribers and those who were not. However, the chances of people from outside the ISP’s community finding and taking the survey were probably minimal (though unmeasurable), since few people presumably would have little interest in viewing the home pages of local ISPs who are out of their service area.

The online survey was patterned after the format used by the Georgia Tech User Surveys (1994-1998). Each question was followed by five possible responses, similar to a five-point Likert scale, with most of the possible responses ranging from “strongly agree” to “strongly
disagree.” A button was placed next to each response, and the survey taker could answer the question by positioning his or her computer cursor over the button corresponding to the desired answer. One click of the mouse selected the answer. After the respondent completed the survey, he or she could click a button labeled “submit” to send the set of answers to a server at the ISP’s office.

One important consideration in developing the survey was length. A draft version had 96 questions, and respondent fatigue would probably have resulted in few usable surveys being submitted. The final online survey had a total of 41 questions, with four asking for demographic information. The remaining 37 probed audience activity.

For a trial run of the survey, the ISP put the study online over two weekend days. Of the 61 visitors to the main survey page, 40 submitted surveys. Most of those submitted were usable; however, one respondent answered only four questions. It cannot be determined if the 21 not submitting surveys were put off by its length, by surveys in general, or simply were not interested enough to complete the survey. The survey was taken off line after the weekend trial to allow the ISP to modify its method of tabulating responses.

Results of the trial indicated that users were generally interested in information or entertainment from the Web, with over 47 percent accessing news sites daily. About 58 percent usually spent one to two hours in web use sessions. More than half the respondents were female, a departure from the Georgia Tech surveys which find female users make up about a third of all Web users (Georgia Tech Web User Survey, 1998b). Twelve of the 40 respondents were college graduates. Half the respondents had been using the Web between one and three years. The trial run turned up no apparent problems with any of the questions, so no changes were made in the questions for the final online survey.

**Audience Activity**

**Motives**

The survey was developed after consulting previous research into audience activity (Rubin, 1984, 1981; Rubin & Perse, 1987; Perse, 1990a & b). This dissertation will frequently cite studies done by Alan Rubin and others on the audience activity of television viewers in the
1980s. The citations may seem somewhat dated, but in fact, they represent a body of work that has direct application to the current study. The computer-based medium of the World Wide Web is similar to television in its method of delivery—usually a cathode-ray tube—and in its content—news, weather, sports, entertainment. The television viewer who uses the remote to “channel surf” is behaving much like the Web user who surfs from page to page. And there is some evidence that the motivations of Web users seem to be similar to those of television viewers, falling into instrumental and ritualistic classifications (Hoffman and Novak, 1995; James et al., 1995).

When selecting questions for surveys, researchers must deal with the issue of validity. Uses and gratifications research has tended to rely on content validity to address that issue (Becker, 1980). Becker adds that researchers must critically examine each question to determine if they measure what they set out to measure. One way to do that is to look at reliability. Uses and gratifications studies done on different media have produced similar findings between users of newspapers and television, for example (Elliott et al., 1987; Becker, 1980). Each of these studies used a set of questions similar in wording to each other. The questions used in this study adapted from previous research have also provided consistent results over time.

So, using the same questions to measure aspects of Web usage that were used to measure usage of other media has a tradition in the field, and the questions in this study exhibit face validity. “I use the (television, newspaper, Internet) to have something to talk about,” is one measure of motivation for using a medium, regardless of the medium. “I use (the TV guide, the newspaper index, a Web search engine) to determine what I want to (watch, read, access),” is an equally valid question to measure pre-exposure selectivity.

One set of questions in this survey attempted to identify instrumental and ritualistic Web users. The questions assessed the Web use motives of the respondents, or why they used the Web to begin with. These questions, ten in all, were taken from Rubin’s (1984) study of ritual and instrumental television viewers. Rubin’s study included 14 questions, but because several were television-specific, the number in this section was cut to ten.

Respondents answered from “strongly agree” to “strongly disagree” to ten statements of possible motives for using the Web. The ten questions were:

- I use the Web because it keeps me informed;
• I use the Web because it entertains me;
• I use the Web because it helps me unwind;
• I use the Web where there’s no one else to talk with or be with;
• I use the Web because it gives me something to do to occupy my time;
• I use the Web because it’s a habit, just something I do;
• I use the Web because it’s exciting;
• I use the Web so I can forget about school, work or hassles;
• I use the Web to have something to talk about later;
• I use the Web because it has advertisements.

The intent of the motive questions is to see if there are distinct groups of instrumental and ritualistic Web users. Researchers have been able to identify instrumental and ritualistic television viewers using these kinds of motive questions in several different studies (Perse, 1990a, 1990b; Perse & Ferguson, 1993).

Another set of motive questions attempted to determine the level of Web use of the respondents. Respondents were asked to estimate how many hours a day they normally use the Web (rounded to the nearest hour), and how much of that Web use (in hours) is spent in news sites. As a check, respondents were asked to estimate how many hours they had used the Web the day prior to taking the survey (“yesterday”), and how many hours in that session were spent in news sites. Rubin and Perse (1987) used this method to determine overall television viewing and news viewing habits, and indicated the technique had proven “stable” in prior research (p. 65).

**Selectivity**

Audience activity was measured by a set of questions dealing with the behavior of the respondent before and during a Web use session. Two questions to monitor selectivity before exposure asked whether the respondent often checked search engines prior to using the Web (“Strongly agree”=1, “Strongly disagree”=5) and whether he or she often visited bookmarked Web sites (“Strongly agree”=1, “Strongly disagree”=5). These questions are similar to those in
previous research (Perse, 1990a), which asked television viewers how often they consulted program guides and how often they changed channels while viewing. To measure selectivity during exposure, respondents were asked to respond to statements (“Strongly agree”=1, “Strongly disagree”=5) that they often follow links to other Web sites; that they seldom select hyperlinks to more information within the same site; that they click on links to get more information; and that following hyperlinks within news stories helps them learn more about the story. These measures build upon Perse’s channel-changing question to gather more details about the respondents’ goal-directedness in seeking news information.

Another set of selectivity questions asked about Web site categories respondents might visit. Answer choices were recorded on five-point scales ranging from “never” to “every day.” Rubin (1984) asked similar questions about 14 different television program categories (situation comedies, interview and talk shows, action-adventure shows, games shows, etc.). To determine which topic categories to include in this study, the home pages of three popular search engine directories—Yahoo!, Google, and America Online—were examined. The eight categories selected were held in common by all three: Business and Economy, Computers and Internet, Education, Entertainment, Government, Health, News, and Sports. Three categories the directories had in common—Reference, Regional, and Science—were excluded from this survey, since their subject matter could be found within the remaining eight categories. Reference information, for example, can be found within Business, Education, and Government listings. The Regional category pertains to Government. Science information can be accessed through the News or Education listings. The final version of the online survey substituted “Financial Sites” for Business and Economy, and “Computer Sites” for Computers and Internet.

Involvement

Involvement with media content was measured according to planning Web use before exposure; and involvement during exposure. During exposure, paying attention to content and thinking about the content were measured, as well as distraction, a reverse indicator which can be taken as evidence of less involvement with media content.
Involvement before exposure was measured by asking respondents to indicate their agreement (“Strongly agree”=5, “Strongly disagree”=1) with two statements drawn from previous research (Perse, 1990a; Rubin & Perse, 1987; Levy & Windahl, 1984) which dealt with planning exposure to the Web (“I set aside time to use the Web,”) and looking forward to that exposure (“I look forward to using the Web,”).

Involvement during exposure was measured by asking respondents to indicate their agreement with two statements drawn from previous research that concerned concentration (“I put a lot of mental effort into using the Web”) and attention (“I pay close attention to material on a Web page while using the Web,”) (Perse, 1990a; Rubin & Perse, 1987). In addition, respondents were asked to indicate their agreement with a statement (“Strongly agree”=5, “Strongly disagree”=1) that reflected thinking about media content. (“I think about the information I read on a Web page.”) The question was drawn from previous research (Perse, 1990a) into involvement with television content. To assess distractions during a Web use session, respondents were asked to indicate their agreement with four statements (“Strongly agree”=5, “Strongly disagree”=1) drawn from previous research (Perse, 1990a; Rubin & Perse, 1987; Levy & Windahl, 1984) concerning other kinds of activity they might engage in while using the Web. These activities—eating, walking away from the computer, daydreaming, and doing homework or paperwork—pertain to the types of distractions a computer user might encounter during home use. They are also the kinds of distractions a television viewer might encounter while watching at home. The entire questionnaire is attached in Appendix A.

**Statistical Analysis**

Two statistical procedures were used to analyze the data—factor analysis and multiple regression. A factor analysis was done on the motive, selectivity and involvement questions in the survey to reduce the number of variables used in hypothesis testing. Because this research involves a large number of variables, it will be beneficial to condense them into a smaller number. In such a case, factor analysis will reduce the data to key dimensions, which can then be subjected to further analysis (Hair et al., 1992). Hair et al. (1998) note that factor analysis first
identifies the separate dimensions of the structure and then can determine the extent to which each variable is explained by each dimension. Factor analysis is applied because some groups of variables may be correlated and may represent different concepts. It is an appropriate tool because of the exploratory nature of this study, since factor analysis does not set any constraints on the data, or the number of components to be extracted.

Sample size for factor analysis is adequate. Tabachnik and Fidell (1989) recommend a minimum of five cases for each variable. The survey had 37 variables, which would require a minimum of 185 cases. As there are 288 cases in this study, there are more than enough cases to run a factor analysis.

The primary goal of the factor analysis was to identify ritualistic and instrumental users of the World Wide Web. Because of the exploratory nature of this study, a principal components factor analysis with varimax rotation was employed. Principal component analysis is used when the objective is to predict the minimum number of factors (Hair et al., 1998). Varimax rotation of the factors is orthogonal; it assumes the factors are not correlated with each other. The end result of an orthogonal factor rotation such as varimax is to reduce the information from the original variables into a smaller set of composite groups—factors—which can be used in subsequent statistical analysis.

Orthogonal rotation is not the only means of rotating factors. Oblique rotation of factors does not assume the factors are not correlated. It is a more complex rotational method, because it tends to yield a larger number of factors. In addition, the procedures for performing oblique rotations are still under development and are somewhat controversial (Hair et al., 1998). When the objective of factor analysis is to do additional tests, an orthogonal rotation procedure should always be used (Hair et al., 1992). The composite variables will consist of a much smaller set than the variables in the survey, but will retain the character of the original variables (Hair et al., 1998). The varimax rotation procedure has been successful in obtaining an orthogonal rotation (Hair et al., 1992), and is the default rotation procedure on most computerized statistical programs.

The resulting factors themselves were further refined. By combining factors which share characteristics of either ritualistic or instrumental media users, two composite variables were obtained. One of the composite variables represents the ritualistic user, the other, the
instrumental user. These composite variables are the basis for the statistical testing of the hypotheses.

Hypotheses will be tested through the use of multiple regression. Multiple regression is used to analyze the relationship between a single dependent (criterion) variable and several independent (predictor) variables (Hair et al., 1998). In each case, we will test to see how the change in motive, selectivity or involvement variables predict the dependent variables of instrumental or ritualistic Web user.
CHAPTER 4

RESULTS

Responses

The ISP put the survey online for about six weeks. On the ISP’s home page, a small news item announced the survey. Page viewers were advised that they could take the survey simply by clicking the word “survey,” which was a hyperlink to the survey page. When a user clicked the link, a new browser page opened, with the survey. Each question and series of answer choices had their own page. When a user selected an answer, he or she clicked on a “Next” button to go to the next question. After all the questions were answered, the respondent clicked a “Submit” button to send the survey data to the ISP’s counting server. The counting server tabulated the responses in the form of a spreadsheet, with each respondent identified only by a number.

The ISP sent each of its approximately 2,600 subscribers an e-mail, calling their attention to the survey and urging them to take part. The message contained a hyperlink that sent the subscriber directly from the e-mail to the online survey. The message also told subscribers they could access the survey from the ISP’s home page, so that those not wishing to take the survey immediately could go back to it later.

The ISP took the survey offline after about six weeks, at the researcher’s request, since responses to the survey had stopped. A total of 297 surveys were submitted. Nine contained no data, and were deleted from the spreadsheet, leaving 288 cases for this study, about an 11 percent response rate.

The 288 cases are from 288 different individuals. Technology ensured that there would be no duplication of respondents. The ISP used a software code called a “cookie” to imprint each computer that submitted a survey. If a respondent tried to submit additional surveys, the
ISP’s servers would detect the cookie, and send a message to the respondent that the survey could not be taken more than once. Because some Web users consider cookies to be an intrusion into their private Web use behavior, they may set their browsers to reject cookies. The survey could not be accessed by browsers that did not accept cookies. That may have reduced the number of responses to the survey, but there is no way to know for sure. Individuals who are aware of cookies and how to set their browsers to reject them are probably more experienced Web users than the typical online visitor.

Demographics

The survey asked four demographic questions: the respondent’s gender, age group, education level, and how long the person had been using the World Wide Web. Although more information about the respondents would have been useful, the number of demographic questions was limited to cut down on the number of questions overall, and to enhance the chances for more responses.

Of the 288 cases, 122, or just over 42 percent, were female. Males accounted for 166 responses, or not quite 58 percent of the total.

Age was broken down into groups, roughly according to decade. Although the respondents reported age groups from the teens to over age 60, the bulk of them fell into “middle age.” That corresponds to findings of the Georgia Tech surveys (Georgia Tech Web User Survey, 1998a), which indicate that those over age 40 now make up a substantial portion of the Web user population. Table 4-1 indicates the numbers and percentages for this study according to age group.

<table>
<thead>
<tr>
<th>Table 4-1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age Groups</strong></td>
</tr>
<tr>
<td>Under 12</td>
</tr>
<tr>
<td>Freq.</td>
</tr>
<tr>
<td>Percent</td>
</tr>
</tbody>
</table>
The medium sized Midwest metropolitan area where the survey was conducted lags the country as a whole in the number of college graduates (Census Bureau, 1998). In Midwest metropolitan areas of less than one million, 20.7 percent of the population had bachelor's degrees or more. In this survey, 47 percent of the respondents had a bachelor's degree or more; much higher than the Midwest average. Table 4-2 breaks out the respondents according to how much education they had attained.

**Table 4-2**

**Educational Level**

<table>
<thead>
<tr>
<th></th>
<th>Some h.s.</th>
<th>H.S. grad</th>
<th>Some coll.</th>
<th>College</th>
<th>M.A.</th>
<th>Ph.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq.</td>
<td>8</td>
<td>58</td>
<td>91</td>
<td>78</td>
<td>42</td>
<td>10</td>
</tr>
<tr>
<td>Percent</td>
<td>2%</td>
<td>20%</td>
<td>31%</td>
<td>27%</td>
<td>17%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Respondents' length of time using the Web was broken down into periods from less than six months to more than four years. The respondents in this survey were experienced Web users, with many having more than four years' time on the Web, as illustrated in Table 4-3.

**Table 4-3**

**How Long Using the Web**

<table>
<thead>
<tr>
<th></th>
<th>&lt;6 mo.</th>
<th>6 mo.-1 yr.</th>
<th>1-2 yrs.</th>
<th>2-3 yrs.</th>
<th>3-4 yrs.</th>
<th>&gt;4 yrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq.</td>
<td>20</td>
<td>30</td>
<td>65</td>
<td>57</td>
<td>51</td>
<td>65</td>
</tr>
<tr>
<td>Percent</td>
<td>7%</td>
<td>10%</td>
<td>23%</td>
<td>20%</td>
<td>18%</td>
<td>23%</td>
</tr>
</tbody>
</table>

**Scale Construction**

Because this study is concerned with instrumental and ritualistic use of the World Wide Web, it is necessary to determine what characteristics of Web users contribute to those two constructs. Factor analysis can locate variables with common characteristics, and group them
into factors, or descriptive categories. By doing so, the common variables can be combined into a few composite variables, which can then be used to test the hypotheses. Each of the variables was entered into an SPSS table and Varimax rotation was selected to find the factors. Varimax rotation of the components achieves a simpler, more meaningful factor pattern (Hair et al., 1998). Varimax rotation simplifies the columns of the factor matrix, which contributes to a simple factor solution.

According to Hair et al. (1998), in factor analysis, only factors with loadings of $\pm .30$ and above are interpreted. Loadings of $\pm .40$ are considered more important, and loadings of $\pm .50$ are considered “practically significant” (p.111). Statistical significance is based upon the size of the sample. For a significance level of .05, a factor loading must be .35 to be considered significant with a sample size of 250. The ideal would be to obtain a simple structure solution, in which each variable loads on only one factor (Hair et al., 1998). However, that is rarely the case, and it is up to the researcher to determine which factor loadings are worth considering.

For this factor analysis, the criteria for a factor to be retained were an eigenvalue greater than 1.0, three primary loadings of at least .50, and no loadings above .30 on any secondary factors. The solution yielded 11 factors with eigenvalues of 1.0 or above. The last six were discarded because they did not meet the specified loading criteria. Five factors, explaining 41.9 percent of the total variance, were retained. Results of the factor analysis are shown in Table 4-4. The five factors, along with the labels given to each factor, are listed horizontally across the top of the table. In the “Factor Items” column at the left of the table, the variables which loaded on each factor are shown. Under each of the factor columns, the loadings for each variable are given.
Table 4-4

Factor Analysis—Rotated Component Matrix

<table>
<thead>
<tr>
<th>Factor Items</th>
<th>F1 Pass Time</th>
<th>F2 News Seekers</th>
<th>F3 Exciting Entertainment</th>
<th>F4 Involved</th>
<th>F5 Distracted</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1: Pass Time</td>
<td></td>
<td>.72</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Talk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occ Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Habit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forget</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F2: News Seekers</td>
<td>.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>News Sites</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Click Links</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow Links</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F3: Exciting Entertainment</td>
<td>.60</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exciting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entertainment Sites</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entertained</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F4: Involved</td>
<td>.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental Effort</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pay Attention</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Think About</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F5: Distracted</td>
<td>.61</td>
<td></td>
<td></td>
<td>.65</td>
<td></td>
</tr>
<tr>
<td>Eat</td>
<td></td>
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<td>Daydream</td>
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<td></td>
</tr>
<tr>
<td>Walk Away</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Homework</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cronbach’s alpha</td>
<td>.78</td>
<td>.77</td>
<td>.62</td>
<td>.71</td>
<td>.67</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>5.70</td>
<td>3.77</td>
<td>2.38</td>
<td>1.99</td>
<td>1.66</td>
</tr>
<tr>
<td>Variance explained</td>
<td>15.42</td>
<td>10.20</td>
<td>6.46</td>
<td>5.37</td>
<td>4.49</td>
</tr>
</tbody>
</table>

(Total variance explained=41.93)
An examination of the variables in each factor reveals that those in the first factor—No one to talk with, Occupy time, Habit, and Exciting—correspond with the characteristics of a ritualistic media user. The intent is not to look for information, but to pass the time. Consequently, this factor was named “Pass Time.”

In factor 2, News Sites, Click Links and Follow Links met the criteria. These variables correspond to the characteristics of a goal-directed, or instrumental, user, who seeks information. Factor 2 was named “News Seekers.”

The third factor had loadings on Entertained, Exciting, and Entertainment Sites. These characteristics indicate the user seeks entertainment from Web use. The factor was named “Exciting Entertainment.”

The fourth factor had loadings on Mental Effort, Pay Attention, and Think About. These variables correspond to characteristics of an instrumental user who is involved with media content. Therefore, this factor was named “Involved.”

Factor 5 had acceptable loadings on Eat, Daydream, Walkaway and Homework. These variables correspond to characteristics of a ritualistic media user, who is not involved with content, but is easily distracted. This factor was named “Distracted.”

One other factor had three variables: Sports Sites, Search Engines, and Links to Other Sites, which each showed significant loadings. However, the internal reliability of the variables was well below the .60 minimum considered to be acceptable in exploratory studies (Hair, 1998), and since the variables seemed to have no relation to each other, this factor was determined to have no meaning. It was named “undefined” and excluded from consideration during the hypothesis tests (Hair et al., 1998).

The five retained factors had a cumulative explanation of variance of 41.93 percent. The reliability of the factors was measured using Cronbach’s alpha. The alpha reliabilities of the five factors were: Pass Time, .78; News Seekers, .77; Exciting Entertainment, .62; Involved, .71; and Distracted, .67.

Convergent validity is the extent to which each measure correlates with other measures in the same construct or factor. High correlation among measures within each factor provides
evidence of convergent validity. Table 4-5 shows correlations about the items in the factor “Pass Time.”

**Table 4-5**

**Correlations Among Measures in “Pass Time”**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. No one to talk with</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Occupy time</td>
<td>.639**</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Habit</td>
<td>.497**</td>
<td>.504**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>4. Forget problems</td>
<td>.411**</td>
<td>.444**</td>
<td>.336**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**Significant at the .01 level**

In this case, the item “No one to talk with” correlates with the item “Occupy time” at .639, which is significant at the .01 level (99 percent confidence). Likewise, each of the items correlates with each of the other items at a significant level. Therefore, the items placed in the “Pass Time” factor are valid measures of a Web user’s desire to pass time while online.

Correlations between items in the “News Seekers” factor are in Table 4-6.

**Table 4-6**

**Correlations Among Measures in “News Seekers”**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. News Sites</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Click links</td>
<td>.508**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>3. Follow Links</td>
<td>.441**</td>
<td>.648**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**Significant at the .01 level**

Correlations between items in the factor “Exciting Entertainment” are shown in Table 4-7.
### Table 4-7

**Correlations Among Measures in “Exciting Entertainment”**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Entertained</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Exciting</td>
<td>.511**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>3. Entertainment Sites</td>
<td>.378**</td>
<td>.262**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**Significant at the .01 level

Correlations between items in the “Involved” factor are shown in Table 4-8.

### Table 4-8

**Correlations Among Measures in “Involved”**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mental Effort</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Pay Attention</td>
<td>.485**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>3. Think About</td>
<td>.427**</td>
<td>.495**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**Significant at the .01 level

Correlations between items in the “Distracted” factor are shown in Table 4-9.

### Table 4-9

**Correlations Among Measures in “Distracted”**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Eat</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Daydream</td>
<td>.330**</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Walk Away</td>
<td>.396**</td>
<td>.353**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>4. Homework</td>
<td>.209**</td>
<td>.284**</td>
<td>.438**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**Significant at the .01 level
Tables 4-5 through 4-9 show that the correlations among the variables in each of the five factors were significant at the .01 level. All five factors had high convergent validity.

Discriminant validity measures the extent to which each item in a factor differs from items in other factors (Hair et al., 1998). This is determined by counting the number of times a measure has a higher correlation with a measure from another factor than with measures in its own factor. Table 4-10 shows only three such instances: Occupy Time and Entertained, Entertainment Sites and No Talk, and Entertainment Sites and Forget. The factors, therefore, have high discriminant validity.
### Table 4-10

**Correlations of Factor Items**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>13</th>
<th>14</th>
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<th>17</th>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>2</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>.497**</td>
<td>.504**</td>
<td>1.00</td>
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<td></td>
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<td></td>
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<tr>
<td>4</td>
<td>.411**</td>
<td>.444**</td>
<td>.336**</td>
<td>1.00</td>
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<td></td>
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</tr>
<tr>
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<td>-.051</td>
<td>-.099</td>
<td>-.002</td>
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<td></td>
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<td>-.002</td>
<td>-.053</td>
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<td>1.00</td>
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<td>.024</td>
<td>-.003</td>
<td>1.00</td>
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<td>.237*</td>
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<td>.126*</td>
<td>.130*</td>
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<td>10</td>
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<td>.245*</td>
<td>.211*</td>
<td>.284*</td>
<td>.143*</td>
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<td>.013</td>
<td>.378*</td>
<td>.262*</td>
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<td>.164**</td>
<td>.066</td>
<td>.233*</td>
<td>.036</td>
<td>.485*</td>
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<td>-.047</td>
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<td>.287**</td>
<td>.332**</td>
<td>.035</td>
<td>.150**</td>
<td>.066</td>
<td>.427**</td>
<td>.495**</td>
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<td>-.081</td>
<td>.092</td>
<td>-.067</td>
<td>.115</td>
<td>-.072</td>
<td>-.100</td>
<td>-.086</td>
<td>.330*</td>
<td>1.00</td>
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<td>16</td>
<td>.176*</td>
<td>.185*</td>
<td>.148*</td>
<td>.122*</td>
<td>.037</td>
<td>-.012</td>
<td>.060</td>
<td>.105</td>
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<td>.071</td>
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<td>.039</td>
<td>-.001</td>
<td>.396*</td>
<td>.353*</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>.084</td>
<td>.007</td>
<td>.163**</td>
<td>.070</td>
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<td>-.045</td>
<td>.094</td>
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<td>-.043</td>
<td>-.003</td>
<td>-.009</td>
<td>.097</td>
<td>.073</td>
<td>.209**</td>
<td>.284**</td>
<td>.438**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

---

**Significant at the .01 level**

---

**Significant at the .05 level**

---

1=No one to talk with  
2=Occupied time  
3=Have a habit  
4=Forget problems  
5=News sites  
6=Click links  
7=Follow links  
8=Entertained  
9=Exciting  
10=Entertainment sites  
11=Mental Effort  
12=Pay Attention  
13=Think About  
14=Eat  
15=Daydream  
16=Walk Away  
17=Homework
Composite Variables

The variables in this study have now been pared down to five factors. In order to use these factors in subsequent statistical analyses, Hair et al. (1992) suggest two possible courses of action: the selection of surrogate variables or the creation of composite variables. Surrogate variables are simply the variable with the highest loading on a factor. For example, since “Habit” is the highest loading variable on the “Pass Time” factor, it could be used as a surrogate for Pass Time in any subsequent statistical analysis. Because of the different characteristics of the variables within the different factors, however—Web users who log on out of habit may not necessarily do so to forget their problems—surrogate variables are not a satisfactory option for this study.

Composite variables are created using factor scores which result from the factor analysis (Hair et al., 1992). These scores represent only those variables which load significantly on a factor. In order to create a composite variable, the factor scores of the variables which load on a factor are averaged. That way, we can account for all the variables involved in a factor, while at the same time disregarding those variables that do not load.

Upon examination of the four factors, it is apparent that two of them—Pass Time and Distracted—represent characteristics of a ritualistic media user. Two others—News Seekers and Involved—would seem to represent characteristics of an instrumental media user. The fifth factor, Exciting Entertainment, seems at first blush to represent a ritualistic user. But Rubin (1993,1984) points out that those who seek entertainment content as opposed to informational content also tend to be involved with the media content, and involvement is related to instrumental media use. Someone excited about media content is involved at least on some level with the content. An examination of the correlations in Table 4-10 shows that the highest correlations between Entertained, Exciting, and Entertainment sites with other items is with No one to talk with, Occupy time, and Forget problems. Those three items are in the “Pass Time” factor. Therefore, “Exciting Entertainment” will be considered a ritualistic media orientation for the purposes of this investigation.

Averaging the factor scores for Pass Time, Distracted and Exciting Entertainment results in a single new variable which represents all three. This variable was named RITUAL, for ritualistic Web users, since it roughly corresponds to those characteristics of the ritualistic
television viewer (Perse, 1990b; Rubin & Perse, 1987; Rubin, 1984). In the same manner, the factor scores for News Seekers and Involved were averaged, resulting in a single new variable which was named INSTRUM, for instrumental Web users.

The relationship between the composite variables and their individual variables is shown in Table 4-11.

### Table 4-11

**Correlation of Items to Composite Variables**

<table>
<thead>
<tr>
<th>Item</th>
<th>Instrumental</th>
<th>Ritualistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>No one to talk with</td>
<td>.069</td>
<td>.636*</td>
</tr>
<tr>
<td>Occupy time</td>
<td>.041</td>
<td>.658*</td>
</tr>
<tr>
<td>Habit</td>
<td>-.042</td>
<td>.498*</td>
</tr>
<tr>
<td>Forget problems</td>
<td>.031</td>
<td>.588**</td>
</tr>
<tr>
<td>News sites</td>
<td>.492*</td>
<td>.054</td>
</tr>
<tr>
<td>Click links</td>
<td>.699*</td>
<td>-.028</td>
</tr>
<tr>
<td>Follow links</td>
<td>.651*</td>
<td>.024</td>
</tr>
<tr>
<td>Entertained</td>
<td>.042</td>
<td>.610*</td>
</tr>
<tr>
<td>Exciting</td>
<td>.221*</td>
<td>.343*</td>
</tr>
<tr>
<td>Entertainment sites</td>
<td>-.024</td>
<td>.466**</td>
</tr>
<tr>
<td>Mental effort</td>
<td>.587*</td>
<td>.061</td>
</tr>
<tr>
<td>Pay attention</td>
<td>.641*</td>
<td>.102</td>
</tr>
<tr>
<td>Think about</td>
<td>.640*</td>
<td>.011</td>
</tr>
<tr>
<td>Eat</td>
<td>.014</td>
<td>.317*</td>
</tr>
<tr>
<td>Daydream</td>
<td>-.136*</td>
<td>.544*</td>
</tr>
<tr>
<td>Walk away</td>
<td>.065</td>
<td>.531*</td>
</tr>
<tr>
<td>Homework</td>
<td>.035</td>
<td>.367**</td>
</tr>
</tbody>
</table>

*Significant at the .05 level

**Significant at the .01 level

It is clear the composite variables are an accurate reflection of the factors from which they were created. All the items in the Exciting Entertainment factor (Entertained, Exciting, and Entertainment sites) have a moderate to high correlation on the Ritualistic Users composite variable, while only one of them (Exciting) has a moderate correlation on the Instrumental Users variable.
Hypotheses Tests

Reducing our factors to the composite variables allows for the statistical analysis of the hypotheses. The two composite variables, Instrumental Users and Ritualistic Users, will serve as dependent variables in a multiple regression analysis. The regression tests were run using SPSS (Statistical Package for the Social Sciences). In each case, the resulting table will indicate an F-test result (F), which indicates the significance of the overall model. If the significance of F is less than or equal to .05, the results of the regression are considered statistically significant. At the bottom of each table, B represents beta, or the relative importance of each independent variable in predicting the dependent variable. The significance figure corresponding to each independent variable at the bottom of the table indicates whether that variable is a significant predictor of the dependent variable.

Hypothesis 1 predicted that selective behavior before exposure would positively predict Instrumental users of the Web. The dependent variable Instrumental Users was regressed against the independent variables Search Engines and Bookmarks. The results are in Table 4-12.

Table 4-12

H1: Instrumental Web Users and Pre-exposure Selectivity

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
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<td>2</td>
<td>1.421</td>
<td>2.879</td>
<td>.058</td>
</tr>
<tr>
<td>Residual</td>
<td>140.658</td>
<td>285</td>
<td>.494</td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>B</th>
<th>t</th>
<th>tolerance</th>
<th>Sig.</th>
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<tbody>
<tr>
<td>Search Engines</td>
<td>.033</td>
<td>.554</td>
<td>.996</td>
<td>.580</td>
</tr>
<tr>
<td>Bookmarks</td>
<td>.135</td>
<td>2.298</td>
<td>.996</td>
<td>.022</td>
</tr>
</tbody>
</table>
The multiple regression shows that only the selection of bookmarks before Web use predicts an instrumental user. In this case, the independent variable Search Engines has a beta of .033, while Bookmarks has a beta of .135, which is significant at the <.05 level. Hypothesis 1 is partially supported.

Hypothesis 2a stated that selection of informational content sites is a positive predictor of instrumental use of the Web. Table 4-13 shows the results.

Table 4-13

<table>
<thead>
<tr>
<th>H2a: Instrumental Web Use and Selection of Informational Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
</tr>
<tr>
<td>.537</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>41.377</td>
<td>8</td>
<td>5.172</td>
<td>14.130</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>102.123</td>
<td>279</td>
<td>.366</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>B</th>
<th>t</th>
<th>tolerance</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entertainment Sites</td>
<td>-.073</td>
<td>-1.348</td>
<td>.871</td>
<td>.179</td>
</tr>
<tr>
<td>News Sites</td>
<td>.461</td>
<td>7.918</td>
<td>.751</td>
<td>.000</td>
</tr>
<tr>
<td>Financial Sites</td>
<td>.001</td>
<td>.010</td>
<td>.806</td>
<td>.992</td>
</tr>
<tr>
<td>Sports Sites</td>
<td>.119</td>
<td>2.229</td>
<td>.892</td>
<td>.027</td>
</tr>
<tr>
<td>Education Sites</td>
<td>.061</td>
<td>1.085</td>
<td>.802</td>
<td>.279</td>
</tr>
<tr>
<td>Computer Sites</td>
<td>-.120</td>
<td>-2.233</td>
<td>.881</td>
<td>.026</td>
</tr>
<tr>
<td>Health Sites</td>
<td>-.026</td>
<td>-.455</td>
<td>.806</td>
<td>.649</td>
</tr>
<tr>
<td>Government Sites</td>
<td>.100</td>
<td>1.810</td>
<td>.828</td>
<td>.071</td>
</tr>
</tbody>
</table>

News sites and sports sites are significant at <.05, and the kinds of informational content that instrumental users would be expected to consume are not predictors of instrumental use at all. Sports sites, as operationalized here, are regarded as entertainment sites. Computer sites are also significant predictors, but in the opposite direction (beta=-.120). Hypothesis 2a is therefore not supported.

Hypothesis 2b was that selection of entertainment sites is a positive predictor of ritualistic use of the Web. The results are in Table 4-14.
Table 4-14

H2b: Ritualistic Web Use and Selection of Entertainment Content

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>30.954</td>
<td>8</td>
<td>3.869</td>
<td>16.682</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>64.713</td>
<td>279</td>
<td>.232</td>
<td>1</td>
<td>.874</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>B</th>
<th>t</th>
<th>tolerance</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entertainment Sites</td>
<td>.381</td>
<td>7.223</td>
<td>.871</td>
<td>.000</td>
</tr>
<tr>
<td>News Sites</td>
<td>-.031</td>
<td>-.542</td>
<td>.751</td>
<td>.588</td>
</tr>
<tr>
<td>Financial Sites</td>
<td>.006</td>
<td>.118</td>
<td>.806</td>
<td>.906</td>
</tr>
<tr>
<td>Sports Sites</td>
<td>.083</td>
<td>1.587</td>
<td>.892</td>
<td>.114</td>
</tr>
<tr>
<td>Education Sites</td>
<td>-.017</td>
<td>-.317</td>
<td>.802</td>
<td>.751</td>
</tr>
<tr>
<td>Computer Sites</td>
<td>.294</td>
<td>5.600</td>
<td>.881</td>
<td>.000</td>
</tr>
<tr>
<td>Health Sites</td>
<td>.014</td>
<td>.254</td>
<td>.806</td>
<td>.800</td>
</tr>
<tr>
<td>Government Sites</td>
<td>-.157</td>
<td>-2.907</td>
<td>.828</td>
<td>.004</td>
</tr>
</tbody>
</table>

Entertainment sites, computer sites and government sites are significant predictors of ritualistic Web use, but government sites is a negative predictor, as might be expected. Hypothesis 2b is supported.

Hypothesis 3 posited that selectivity during Web use is a positive predictor of instrumental Web use. The results are in Table 4-15.
Table 4-15

H3: Instrumental Use and Selectivity During Web Use

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>.763</td>
<td>.582</td>
<td>.577</td>
<td>.4596</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>83.504</td>
<td>3</td>
<td>27.835</td>
<td>131.759</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>59.996</td>
<td>284</td>
<td>.211</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>B</th>
<th>t</th>
<th>tolerance</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click links</td>
<td>.641</td>
<td>16.337</td>
<td>.957</td>
<td>.000</td>
</tr>
<tr>
<td>Links other</td>
<td>.140</td>
<td>3.574</td>
<td>.954</td>
<td>.000</td>
</tr>
<tr>
<td>Seldom links</td>
<td>-.249</td>
<td>-6.210</td>
<td>.915</td>
<td>.000</td>
</tr>
</tbody>
</table>

All three variables are significant, and seldom links is a negative predictor, indicating that those who seldom select links within a news site are not instrumental Web users. Hypothesis 3 is supported.

Hypothesis 4 is the first of the hypotheses to deal with involvement. Involvement before Web use is called intentionality, and predicts instrumental use. The results are in Table 4-16.

Table 4-16

H4: Instrumental Use and Intentionality Before Web Use

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>.456</td>
<td>.208</td>
<td>.203</td>
<td>.6314</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>28.876</td>
<td>2</td>
<td>14.938</td>
<td>37.469</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>113.624</td>
<td>285</td>
<td>.399</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>B</th>
<th>t</th>
<th>tolerance</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set aside time</td>
<td>.146</td>
<td>2.434</td>
<td>.769</td>
<td>.016</td>
</tr>
<tr>
<td>Look forward</td>
<td>.368</td>
<td>6.117</td>
<td>.769</td>
<td>.000</td>
</tr>
</tbody>
</table>
Both variables are significant predictors of instrumental Web use, Look forward at the
.01 level and Set aside time at the .05 level. Hypothesis 4 is supported.
Hypothesis 5 indicated that involvement during Web use is a positive predictor of instrumental
use. The results are in Table 4-17.

**Table 4-17**

**H5: Instrumental Use and Involvement During Web Use**

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>.898</td>
<td>.807</td>
<td>.804</td>
<td>.3128</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>115.808</td>
<td>4</td>
<td>28.952</td>
<td>295.877</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>27.692</td>
<td>283</td>
<td>.009</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>B</th>
<th>t</th>
<th>tolerance</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental effort</td>
<td>.241</td>
<td>7.822</td>
<td>.716</td>
<td>.000</td>
</tr>
<tr>
<td>Pay attention</td>
<td>.342</td>
<td>10.655</td>
<td>.664</td>
<td>.000</td>
</tr>
<tr>
<td>Think about</td>
<td>.208</td>
<td>6.470</td>
<td>.657</td>
<td>.000</td>
</tr>
<tr>
<td>Follow links</td>
<td>.481</td>
<td>17.334</td>
<td>.887</td>
<td>.000</td>
</tr>
</tbody>
</table>

All four variables are significant predictors of instrumental Web use. Hypothesis 5 is
strongly supported.

Hypothesis 6 looked at involvement from the other side, that is, distracting behavior.
Users who exhibit distracting behavior are likely to be ritualistic Web users. The results are in
Table 4-18.
Table 4-18

H6: Ritualistic Use and Distraction During Web Use

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>41.745</td>
<td>4</td>
<td>10.436</td>
<td>54.774</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>53.921</td>
<td>283</td>
<td>.191</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>B</th>
<th>t</th>
<th>tolerance</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eat</td>
<td>.036</td>
<td>.714</td>
<td>.802</td>
<td>.476</td>
</tr>
<tr>
<td>Daydream</td>
<td>.384</td>
<td>7.766</td>
<td>.814</td>
<td>.000</td>
</tr>
<tr>
<td>Walk away</td>
<td>.335</td>
<td>6.227</td>
<td>.687</td>
<td>.000</td>
</tr>
<tr>
<td>Homework</td>
<td>.104</td>
<td>2.076</td>
<td>.789</td>
<td>.039</td>
</tr>
</tbody>
</table>

One of the variables, eat, is not a significant predictor. But the remaining three are, with homework significant at the <.05 level. There is partial support for Hypothesis 6.

The result of these statistical tests is that instrumental Web users and ritualistic Web users exhibit Web use behavior similar to that of instrumental and ritualistic users of television. Instrumental users tend to be involved with content, and favor informational content—something they can learn from—over entertainment content. While ritualistic Web users are also selective before exposure to content, they tend to use their Web experiences as ways to pass time, and are subject to distraction, less likely to be involved with content, and more interested in the Web as another source of entertainment.
CHAPTER 5

DISCUSSION

Major Findings

This study was initiated to determine whether audience activity among users of the World Wide Web was similar to audience activity among users of other mass media. The two types of audience activity investigated here were selectivity, which pertains to both medium and content choices, and involvement, referring to the media user’s reactions to content. Uses and gratifications literature shows that the motivation of the user to the medium is an important criterion for understanding activity.

Motivations for using a given mass medium were similar between two different types of media. According to prior uses and gratifications research, motivations have generally been viewed as instrumental, that is, goal-directed, intent on coming away from the use experience with new information or understanding, and ritualistic, or purposeless, where the medium is used to help while away time or provide a means of escape for the user. These motivations have been found to hold for television viewers. The question was, given the advent of a different medium of mass communication—the World Wide Web—would they continue to hold true as well?

This study shows that the motivations do hold for the Web as well as television. This finding confirms the usefulness of the uses and gratifications approach to mass communications research, especially to investigating why people use certain media. Although the Web is a new kind of medium, those who use it approach its use in ways much like television viewers. In terms of motivation for media use, the instrumental-ritualistic dichotomy is present among Web users, as it is for television viewers. But as Rubin (1984) cautioned about television viewers, it is not a strict dichotomy. A lot of overlap exists between instrumental and ritualistic use motives, and both can be present to some degree during the same session of Web use. Online, instrumental Web users can have a goal of obtaining either information or diversion from their Web use experience. Although television viewers can have a diversion goal as well, the
motivation for their search for diversion is viewed as a desire for escape from day-to-day pressures of life (Rubin, 1983, 1981).

The most important finding of this study, however, relates to selectivity. Among television viewers, the ritualistic viewer does not exhibit selective behavior to the extent of the instrumental viewer. The Web is a different story. Ritualistic Web users are also selective of content. They may select content for different purposes than instrumental users, but they are making deliberate selections just the same. In large part, the nature of the Web is forcing this activity. Whether a user is looking for specific information, or is just online to pass time, he must indicate at least an initial destination in order to access the desired content. Ritualistic Web users select content that would be expected, that is, it offers entertainment or escape from the pressures of day to day life, but the Web requires selectivity regardless of the intent of the user.

Once that content is selected, this study shows a difference between ritualistic and instrumental Web users during the Web use session. They stay focused and exert cognitive effort to better understand the content. They make an effort to learn more about the topic at hand by making use of the interactive features of the Web. This finding is in line with expectations of an instrumental user, and demonstrates that the concept of instrumental use applies to the Web audience as well as consumers of other mass media. Each of these results is discussed in more detail later, as each hypothesis is considered.

The factor analysis yielded results consistent with motivational factors previously found in uses and gratifications studies among television viewers (Rubin, 1983 & 1984; Rubin & Perse, 1987; Perse, 1990b). For example, Rubin (1983) developed three factors, which he labeled Pass Time, Companion and Escape— characteristics of ritualistic media users, and Inform and Entertainment— characteristics of instrumental users. In his 1984 study, Rubin did not name the four factors he discovered, but they correspond to Pass Time and Entertainment—ritualistic, and Information and Social Utility—instrumental characteristics. Rubin & Perse (1987) found the factors Exciting Entertainment and Pass Time—ritualistic, and Information— instrumental. Perse (1990b) isolated only two factors for viewing television news, as opposed to television in general: Exciting Entertainment—a ritualistic characteristic, and Social/Personal Utility—an instrumental characteristic. In the present study, the factors News Seekers and Involved are characteristic of instrumental users. The factors Pass Time, Exciting Entertainment, and
Distracted are characteristic of ritualistic users. The factors found in this study indicate that Web users—like television viewers—have instrumental and ritualistic motives for accessing media content. Again, these results show the applicability of uses and gratifications, with results consistent across two different types of media.

Because one of the basic tenets of the uses and gratifications approach to media research is that the audience is an active one, the hypotheses tests focused on audience activity as a way to gauge a Web user’s motivations for using the medium. Of the three dimensions of audience activity cited by Levy and Windahl (1984), this study concentrated on two: selectivity and involvement.

Overall, the results of the hypothesis tests showed that users of the World Wide Web approach their medium in much the same way as television viewers approach theirs. The selective and involving behaviors of television viewers, as characterized by instrumental and ritualistic media use motivations, are also present among Web users. At first glance, these results are surprising. Since use of the Web demands greater involvement by the user, there would seem to be little place for the ritualistic media consumer. However, ritualistic motivations for Web use are evident. In a nutshell, instrumental Web users tend to be both selective and involved before and during their online sessions, while ritualistic users look for online entertainment content and are easily distracted from their attention to the computer screen.

In terms of selectivity, instrumental media users are expected to be selective in their media and content choices. The results of the Hypothesis 1 test showed that instrumental Web users are somewhat selective before their Web use—they tended to make use of bookmarked sites, but not search engines. Uses and gratifications theory maintains that media use is goal-directed—that the needs of the audience lead to expectations of media to gratify those needs. In addition, the choice of media is determined by the user’s needs (Palmgreen et al., 1985). The results of Hypothesis 1 indicate that the notion of goal-directed media use is partially supported. Frequent Web users know of a number of sites which they can expect to give them the information they’re looking for, and visit them often. Using bookmarks amounts to a timesaving procedure. Bookmarked sites can be accessed more quickly than search engines. However, bookmarked sites would return the user to the same sources of information repeatedly. If the user is looking for information not contained in a bookmarked site, use of a search engine is
called for, because a search engine is the easiest way to find a large number of possible Web sites to investigate. Therefore, it is surprising that the results of the hypothesis did not support the idea that instrumental users would make use of search engines. One criticism frequently made of search engines concerns the delivery of irrelevant returns and the low level of users’ satisfaction with the results of online searches (see, for example, Nielsen, 2003). The majority of this sample had been using the Web for at least two years, but since this study did not attempt to gauge Web users’ level of satisfaction with search engines, it cannot be determined if frustration with returns caused users to shy away from them.

Selectivity is also in evidence during Web use—but not as expected. Uses and gratifications theory supposes that instrumental users want to gain information from their use of media. Therefore, Hypothesis 2a stated that instrumental users would be likely to select informational content sites. The assumption was that since instrumental users expect to get something from their media use experience, they would go to those sites that would furnish that something—assuming the something was information. The hypothesis was not supported. Web users can get something other than information from their time online. Those intent on being diverted while online are goal-directed in their own way, and therefore exhibit instrumental characteristics when accessing entertainment.

Furthermore, as was shown in Hypothesis 2b, ritualistic users can also be as selective as instrumental users. They are just as likely to know what they want from their Web use experience—even though the intent may only be to pass time—and to know where to find it. In this study, ritualistic users were found to select entertainment sites. Among television viewers, selectivity is more evident among instrumental viewers than ritualistic viewers. Rubin (1983) found that ritualistic television viewers really didn’t care what they had on the television—just that something was there. The results of this hypothesis indicate a difference between television viewers and users of the World Wide Web in the way media is used.

This hypothesis also highlights the conundrum faced when dealing with the concepts of ritualistic and instrumental use. How is it that instrumental users are not likely to select informational content, but ritualistic users are likely to select entertainment content? Here is where Rubin’s warning against a strict separation of instrumental and ritualistic media use motives become relevant when applying uses and gratifications approaches to the Web. Online,
selectivity is not a trait unique to instrumental users. A person wanting to be entertained by television would make a conscious selection of entertainment shows over other types; likewise a person wanting to be entertained by using the Web would consciously select those sites he knows will be entertaining. Rubin (1984) suggested that a viewer of a television newscast could be instrumental during the news—intent on learning what happened today—but would become a ritualistic viewer during portions of the program he was less interested in, such as sports. It appears that Web users who exhibit ritualistic characteristics during their Web use started their sessions with instrumental motives in order to access content which interested them.

Differences between instrumental and ritualistic users become more apparent during the actual use of the Web. Hypothesis 3 posited that selectivity during Web use is a positive predictor of instrumental Web use. This hypothesis was supported. Instrumental users tended to click on hyperlinks within a Web site, and to click links that would take them to other sites featuring related content. These actions will take them to additional information pertaining to the topic they are viewing at the time. So instrumental Web users do select content that will provide them with more information. These findings indicate that instrumental users keep their focus while on the Web, and actively seek information wherever the hyperlinks take them.

Among ritualistic users, on the other hand, selectivity during Web use is not in evidence. The significant findings for Seldom Links (seldom click links during a Web use session) show a negative beta. That is, the findings are significant in the opposite direction, toward ritualistic users. What that means, simply, is that when provided with the opportunity to obtain more information about a topic, the ritualistic user chooses not to take advantage of the opportunity. Such a finding is consistent with Reagan’s (1996) linkage of selectivity to interest in subject matter. Ritualistic users are not interested enough in the content viewed to seek further information. As we have seen, the orientation of ritualistic users is not toward information gain anyway, but in other kinds of gratifications, such as entertainment or a means to pass time. In any case, ritualistic users tend not to be selective while online.

Hypotheses 4, 5, and 6 all deal with the notion of involvement, and here is where important differences between instrumental and ritualistic users emerge. Hypothesis 4, which predicts that instrumental users will be involved with the medium before use—in other words, they exhibit strong intentionality—was supported. Specifically, uses and gratifications theory
maintains that instrumental users expect to get something from their Web use, so they anticipate a positive outcome of their time on the Web. The findings of Hypothesis 4 show that they tend to set aside time for their Web use. They know they will be using the Web to get particular information, and that is their purpose for logging onto the Web. Such an action contrasts with one who does not set aside time for Web use, but logs on without a plan, as the opportunity becomes available. Not only do instrumental users set aside time, the findings show they look forward to going online. Because they have a reason for their Web use, and they expect a positive outcome, it makes sense that they would regard their time online as a positive experience. As discussed above, however, most Web users start out as instrumental users, with the intent of accessing certain content. Regardless of whether the content is informational or entertainment oriented, the Web user expects to get something out of the time spent online. It is only once the content is viewed that the distinctions between instrumental and ritualistic users become evident.

Hypothesis 5, which predicts that instrumental users will exhibit involvement with content during use, was supported. Involvement includes paying attention to content, and trying to derive meaning from content (Levy & Windahl, 1984). As discussed in Chapter 2, the notion of involvement with content can be extended in online media like the World Wide Web to interacting with content—for example, clicking on hyperlinks. Since the instrumental user is seeking information, it makes sense that he would interact with Web-based content and maintain his focus during Web use—rather than submitting to distractions. Because the Web is a medium that requires more effort on the part of the user than television, a preconception about the nature and motivations of Web users could be that all users are instrumental to an extent. The whole process of logging on and site selection would suppose that any Web user exhibits those traits of intentionality and selectivity that are characteristic of the instrumental user. It is when content is actually accessed that the difference becomes evident. The results of Hypothesis 5 show that the instrumental user is involved with the content. He pays attention to it and exerts more mental effort while dealing with it. He tends to think about what he sees, and engages with the content interactively by following hyperlinks to related information. Given the nature of the Web as a medium that requires some effort on the part of any user, it is somewhat surprising to find that once online, some users exhibit little interest in the content they find on Web pages. Beyond
accessing certain sites, this type of user does not spend much time thinking about the material encountered on those sites, or expending much mental effort regarding the content. The ritualistic user is using the Web as a means to kill time or to escape other concerns.

Hypothesis 6 looked at involvement from the opposite side: distraction. According to uses and gratifications theory, a media user likely to be distracted from media content is not involved with that content, and is likely to be a ritualistic user. Of the four variables in the factor Distracted, only the results for Eat were not significant. For the other three, Daydream, Walk away from the computer, and Homework or other paperwork while using the Web, the results were significant. A person who is not involved with content is more likely to be distracted by other, perhaps trivial, considerations. These findings further support the contention that the differences in audience activity during Web use rests in the involvement component of activity.

Aside from theoretical implications of this study, practical applications may be considered as well. If the ritualistic user is selective of content on the Web, designers of browser software may be able to create an environment that better responds to the expectations of the ritualistic Web user. Software filters or agents can weed out unwanted Web sites according to the user’s individual preferences, and deliver only those sites that are likely to appeal to the user. E-mail programs are already showing something of this filtering feature, becoming increasingly effective at eliminating junk mail from the in boxes of e-mail users. The program can “learn” which e-mail content is considered junk and which is considered important, and make its own decisions about what to keep in the in box and what to send to the trash. Further familiarity with the habits of the user leads to a further refinement of the filtering feature.

Web browsers might develop the same capacity. The bookmark can be taken to the next step, by automatically providing the user with a menu of Web site options based on the content of sites the user has frequented in the past. The menu would be continually rebuilding itself, as the user accessing different content. If the user became unhappy with the browser’s automatic selections, he could put the browser in a “training” mode, so it could better understand his preferences. Such a feature would be a time saver for the user who is not particularly interested in digging out information from a Web site, but instead might want simply to get to diversionary content. Obviously, such a feature would also benefit the instrumental user, by making it easier to find useful Web sites, and suggest new sites that the user may not be aware of.
To sum up, the results in most instances were consistent with expectations based on uses and gratifications theory, except for greater selectivity of Web content among ritualistic users.

**Limitations of Study**

As with all survey-based research, the sample size and composition is a concern because of reliability and validity issues. A post hoc power analysis using GPower software (Buchner, et al., 1997) showed that the sample size of 288 cases was adequate to test hypotheses, with a power value of .98 at an effect size of .25, considered a medium-sized effect (Buchner, et al., 1997). Power is the probability of finding what we are looking for, given the size of the sample. Sufficient power is usually considered to be .80 (Miles, 2003). However, to detect a small effect size, .10, the power value was .39. That means there was only a 39-in-100 chance of finding a small effect in the study. The unsupported hypotheses may have shown no significant differences because the difference was too small to detect, given the sample size. The sample size did provide enough power to detect a smaller than medium-sized effect—.17—at a power level of .82. Since the goal of a research study is to balance sample size, effect size, alpha level, and power to give a maximum level of power to detect an effect if one exists (Trochim, 2000), the sample of 288 is adequate.

In this case, the sample was purposive, targeting only those who used the World Wide Web, and volunteer, because once Web users were made aware of the survey, they had to volunteer to participate. A purposive sample was called for here, because it was the intent of the study to look only at the behavior of Web users. Therefore, selecting a random sample of everyone in the metro area would not have been an efficient method. However, purposive samples introduce problems with external validity. While the results might represent a larger population, there is no way to be sure (Trochim, 2000), because some sub-groups in the population might be overweighted. That the survey was made up of volunteers, rather than randomly-drawn participants, further increases the likelihood that the sample is not representative.

This sample, made up of users of the same Internet Service Provider, may not be representative of the population of Web users. In fact, since the ISP in this study offered only
dial-up access at the time of the study, Web users with a high speed Internet connection could not take part in the survey. In terms of demographics, when compared to the most recent Georgia Tech survey of online users at the time (1998a), there was one obvious difference: the age of respondents in this survey skewed older than the Georgia Tech sample. In the Georgia Tech sample (which included more than 5,000 Web users), about 36 percent were over the age of 40; in this survey, 63 percent were over 40. In other aspects, the two samples resembled each other more closely. Females made up 42 percent of this survey, and 39 percent of the Georgia Tech survey. Holders of a college degree made up 47 percent of this survey, and 50 percent of the Georgia Tech survey. Experience online was also similar: 43 percent of this sample had been online between one and three years, as opposed to 45 percent in the Georgia Tech survey. While not generalizable to a larger population, this study would still be of interest to Web site designers and Internet Service Providers because of its findings regarding the activity of consumers while online.

The design of the survey itself may have inhibited some potential respondents from completing the survey. With each question displayed on a separate Web page, respondents had to wait for the new page to load before answering the question and going on to the next question. For users with a dial-up Internet connection, the wait may have resulted in impatience on the part of some respondents, causing them to give up before finishing and submitting the survey. It is possible that that factor may have caused a lower response rate than might have been possible if another survey method had been used.

It should be noted, however, that the online survey might have had a role in skewing the responses. If an instrumental user, by definition, is using media to gain something of value—usually information—would he be likely to take time to participate in a survey that would not yield information? Since the survey required some effort to complete, the instrumental user may have been tempted to pass it up, and continue looking for content that satisfied informational needs. Meanwhile, the ritualistic user might have considered an online survey a form of diversion, and more ritualistic users might have passed some time answering questions. Three of the five factors apply to ritualistic users, which might support the idea that the purposive sample was to a degree self-selective, and skewed toward the ritualistic user.
The categories of Web sites provided in the survey may have confused some respondents. The categories were selected based upon the most common categories in the major Web directories. Still, some respondents may have wondered what exactly some categories referred to, and whether they were answering the questions accordingly. In particular, the difference between Information Sites and Entertainment Sites may be too vague. CNN’s Web site can be classified as an Information Site without argument, but within the site is a wealth of news pertaining to Entertainment. The melding of information and entertainment on a site such as Salon.com is even more evident. Therefore, some respondents might not have regarded the categories of sites as mutually exclusive. Other categories of Web sites left off the survey may have more closely matched the Web interests of other respondents.

Because this study was intended to find out if previous uses and gratifications findings concerning media use motives, specifically television use motives, could be applied to World Wide Web users, it borrowed questions from earlier studies of television viewers. Past research has found these questions to be consistent and accurate reflections of media use (Rubin, 1994). Because television and the Web are two different media, it is possible the questions were relevant for one and not necessarily the other. However, the major findings of this study indicate otherwise, since users of both media have instrumental and ritualistic motivations for using them, and because audience activity types—selectivity and involvement—are found among both Web users and television viewers.

The factor analysis bears some attention, in that the retained factors account for a low explanation of Web use motives. Although the factors themselves are consistent with factors developed in previous uses and gratifications studies of media use (Rubin, 1983 & 1984; Rubin & Perse, 1987; Perse, 1990a & b), they do not seem to account for enough different use experiences in this case. One cause of this result may lie in the number of questions used in the survey.

Because of the online nature of the survey, and recognizing that dial-up Internet access could potentially limit the number of responses, efforts were made to keep the survey reasonably brief, while still yielding adequate results for statistical examination. More questions would have resulted in more variables for the study, and would have allowed for more closely related variables. These could have given a greater insight into Web use motivations than this study provides. More questions would certainly have given respondents a better chance at finding
choices that would have matched their experiences more closely. They may also have contributed to a higher explanation of the variance.

This factor analysis showed a low explanation of variance. Less than 50 percent of the variance is explained by the retained factors, which means that more than half the variance is explained by factors that did not show up in the study. However, these results may point to the difficulty in trying to identify motivations for media use in general. The low explanation of variance is not inconsistent with prior attempts to explain motivations for media use. An examination of several studies already cited shows that explanation of variance tends to be low. Rubin (1983) had an explanation of variance of 54.9 percent. Rubin (1984) explained 42.3 percent; Levy & Windahl (1984), 55 percent; Rubin & Perse (1987), 39.5 percent; Perse (1990a), 36.4 percent; and Perse (1990b), 48.3 percent. All of these studies factored motivations for television use. Most accounted for less than half the variance. These results are indicative of some previous criticisms of the uses and gratifications approach to the study of mass communication—it often fails to account for individual differences, and different reasons for using mass media at different times.

Another explanation may lie in a critique of the principal components method of factor analysis. A comparison of principal components against other methods of factor analysis found that principal components yielded smaller explained variance scores (Soe, 1996). The principal components method was chosen for this study because it is the most commonly used in factor analyses, and because most statistics computer programs default to that method. The principal components method expects the researcher to limit the number of factors to those with an eigenvalue of at least 1. As indicated in Chapter 4, the factor analysis produced 11 different factors, with eigenvalues of 1 or higher. Six were eliminated because they did not meet the other selection criteria. Statistical significance is based upon the size of the sample. For a significance level of .05, a factor loading must be .35 to be considered significant with a sample size of 250. In this study, variables must have a loading of .50, and cannot load higher than .30 on any other factors. The criteria are rigorous, but contribute to the simple structure solution Hair (1998) finds desirable. If different criteria had been selected—for example, using the .35 level considered significant—the factor analysis would have explained more of the variance. It would also have included more variables. Some traits, which the literature indicates should be
figured into instrumental or ritualistic user profiles, had to be discarded, because they did not meet the criteria for retention in the factors. For example, the only specific category of Web sites to be retained as a variable in one of the factors was Entertainment Sites. None of the other categories loaded significantly, or if they did, the factor on which they loaded had to be discarded. Hours per day on the Web and Hours Yesterday on the Web loaded significantly on a factor that had to be discarded. It would be interesting to see whether the amount of time spent on the Web relates more to instrumental or ritualistic users. But using a less rigorous set of criteria for factor retention might also have resulted in some variables loading on more than one factor, confounding the results.

**Future Research**

Despite the Web’s development and growth, relatively few studies have been done on people’s motivations for using this particular mass medium. Although this study confirms that instrumental and ritualistic use motives do work when applied to users of the World Wide Web, future studies could refine the methodology used here and provide further differentiation between the two motivations. Web use is already more extensive than at the time of the survey, and with computer users of all ages and abilities going online for information and entertainment, any novelty factor that might have still been around at the time of this study would be eliminated. Rubin’s studies of television viewing in the 1980s were done at a time when television’s novelty had worn off, and the newness of the medium was not a factor in the use motives of television viewers.

Because Web users are increasingly sophisticated, further studies should give rigorous attention to the classification of online content. Examples of each type of content being investigated should be included in the survey instrument, to avoid confusion on the part of the respondents. Differences in the level of audience activity in each specific content type could lead to a further refinement of the notion of instrumental and ritualistic Web use behavior.

Since the results here indicate that seekers of entertainment content may be just as instrumental in their motivation to use the Web, future research could look more closely at the specific types of content accessed. The blurry distinction between information and entertainment
may be indicative of attitudes of Web users that do not draw precise boundaries between the two content types. Such research would build upon Katz’s (1959) admonition to explore not what media does to people, but what people do with media. Providers of online content would benefit from knowing what types of content their potential consumers are most likely to access.

The selectivity dimension of audience activity could be examined further with the aim of determining whether pre-exposure selectivity or selectivity during exposure is a greater factor in determining what types of content Web users access. For example, consumers of online news could be studied to determine whether they maintain a repertoire of different news sites, or if they stick with a favored one or two. Web site design and navigability—what Nielsen (1995) calls “usability” —would also have to be considered. Are certain sites favored because they are more usable than others?

What appears to be selectivity before Web use may actually be habitual behavior. If an instrumental user tends to revisit bookmarked Web sites, presumably a relatively limited repertoire of sites, he or she would be exhibiting behavior associated with ritualistic users. Reagan (1996) pointed out that selectivity is tied to interest in a topic. The greater the interest, the greater the selectivity. A person less interested in a topic would tend to limit media use to a comparatively small number of sources. But since the use of bookmarks was evident among instrumental users, that could be regarded as a form of habit—the tendency to revisit familiar sites. Since “habit” has been considered a trait of ritualistic media users, an investigation of the extent of habitual behavior among instrumental Web users could lead to a modification of uses and gratifications theory as it applies to online media consumers.

The uses and gratifications approach, whatever its shortcomings, offers a number of different ways to study the reasons behind media use. Audience activity, the focus of this study, could be expanded to include the third dimension suggested by Windahl and Levy (1984)—utility. Not only would the motivations for Web use be refined, but a gauge of Web users’ satisfaction with the medium as a result of gratifications obtained would be realized.

Tapping into other theoretical bases besides uses and gratifications could yield more refined views of Web users. Expectancy value theory—closely related to uses and gratifications—could measure what users’ expected gratifications are, and where they were received or not. Van Leuven (1981), Galloway and Meek (1981) and Palmgreen and Rayburn
(1982) all maintain that expectancy-value theory better addresses some issues raised by uses and gratifications, such as how message content satisfies users’ needs, and just what is meant by “expectations.” Such studies would better quantify what Web users expect from their online experiences. From there, researchers could determine whether certain age groups exhibit either instrumental or ritualistic motivations for Web use, or whether educational level or experience with the Web might be better predictors.

Summary

This study used an online survey to examine audience activity among users of the World Wide Web. Using the uses and gratifications approach, the study demonstrated that the level of audience activity is determined by the motivation of the user to access content. Those who intend to acquire something from their time online exhibit more of a key dimension of audience activity—involvement—than those who are content to while away time while viewing Web-based material. However, another dimension of audience activity—selectivity—is not differentiated in a meaningful way between the two types of users. Instrumental use motives can be ascribed to those who seek entertainment content as well as to those who seek informational content.


Appendix

THE ONLINE SURVEY

1. I use the Web because it keeps me informed.
   - Strongly agree = 1
   - Somewhat agree = 2
   - Neither agree nor disagree = 3
   - Somewhat disagree = 4
   - Strongly disagree = 5

2. I use the Web because it entertains me.
   - Strongly agree = 1
   - Somewhat agree = 2
   - Neither agree nor disagree = 3
   - Somewhat disagree = 4
   - Strongly disagree = 5

3. I use the Web because it helps me unwind.
   - Strongly agree = 1
   - Somewhat agree = 2
   - Neither agree nor disagree = 3
   - Somewhat disagree = 4
   - Strongly disagree = 5

4. I use the Web when there’s no one else to talk to or be with.
   - Strongly agree = 1
   - Somewhat agree = 2
   - Neither agree nor disagree = 3
   - Somewhat disagree = 4
   - Strongly disagree = 5

5. I use the Web because it gives me something to do to occupy my time.
   - Strongly agree = 1
   - Somewhat agree = 2
   - Neither agree nor disagree = 3
   - Somewhat disagree = 4
   - Strongly disagree = 5

6. I use the Web because it’s a habit, just something I do.
   - Strongly agree = 1
   - Somewhat agree = 2
   - Neither agree nor disagree = 3
   - Somewhat disagree = 4
   - Strongly disagree = 5
7. I use the Web because it’s exciting.

8. I use the Web so I can forget about school, work or hassles.

9. I use the Web to have something to talk about later.

10. I use the Web because it has advertisements.

11. How often would you say you access Entertainment Web sites?

12. How often would you say you access News Web sites?

13. How often would you say you access Financial (Stocks, personal finance, business) Web sites?
14. How often would you say you access Sports Web sites?
- Daily = 1
- Weekly = 2
- Monthly = 3
- Less than once a month = 4
- Never = 5

15. How often would you say you access Education Web sites?
- Daily = 1
- Weekly = 2
- Monthly = 3
- Less than once a month = 4
- Never = 5

16. How often would you say you access Computers and software Web sites?
- Daily = 1
- Weekly = 2
- Monthly = 3
- Less than once a month = 4
- Never = 5

17. How often would you say you access Health Web sites?
- Daily = 1
- Weekly = 2
- Monthly = 3
- Less than once a month = 4
- Never = 5

18. How often would you say you access Government Web sites?
- Daily = 1
- Weekly = 2
- Monthly = 3
- Less than once a month = 4
- Never = 5

19. How many hours a day do you normally use the Web? (Round off to the nearest hour)
- Zero = 1
- One (1) = 2
- Two (2) = 3
- Three (3) = 4
- More = 5

20. How much of that Web use is spent in news sites?
- Zero = 1
- One (1) = 2
- Two (2) = 3
- Three (3) = 4
- More = 5
21. How many hours yesterday did you use the Web?
   Zero = 1
   One (1) = 2
   Two (2) = 3
   Three (3) = 4
   More = 5

22. How many hours yesterday did you spend in news sites?
   Zero = 1
   One (1) = 2
   Two (2) = 3
   Three (3) = 4
   More = 5

23. Before choosing a Web site, I often check search engines.
   Strongly agree = 1
   Somewhat agree = 2
   Neither agree nor disagree = 3
   Somewhat disagree = 4
   Strongly disagree = 5

24. While using the Web, I often select sites I have bookmarked or marked “favorites”.
   Strongly agree = 1
   Somewhat agree = 2
   Neither agree nor disagree = 3
   Somewhat disagree = 4
   Strongly disagree = 5

25. While using the Web, I often follow links to other sites.
   Strongly agree = 1
   Somewhat agree = 2
   Neither agree nor disagree = 3
   Somewhat disagree = 4
   Strongly disagree = 5

26. I usually set aside some time to use the Web.
   Strongly agree = 1
   Somewhat agree = 2
   Neither agree nor disagree = 3
   Somewhat disagree = 4
   Strongly disagree = 5

27. I look forward to viewing my favorite Web sites.
   Strongly agree = 1
   Somewhat agree = 2
   Neither agree nor disagree = 3
   Somewhat disagree = 4
   Strongly disagree = 5
28. I put a lot of mental effort into using the Web.  
   Strongly agree = 1  
   Somewhat agree = 2  
   Neither agree nor disagree = 3  
   Somewhat disagree = 4  
   Strongly disagree = 5  

29. I pay close attention to material on a Web page while using the Web.  
   Strongly agree = 1  
   Somewhat agree = 2  
   Neither agree nor disagree = 3  
   Somewhat disagree = 4  
   Strongly disagree = 5  

30. I think about the information I read on a Web page.  
   Strongly agree = 1  
   Somewhat agree = 2  
   Neither agree nor disagree = 3  
   Somewhat disagree = 4  
   Strongly disagree = 5  

31. I seldom select hyperlinks within a news site.  
   Strongly agree = 1  
   Somewhat agree = 2  
   Neither agree nor disagree = 3  
   Somewhat disagree = 4  
   Strongly disagree = 5  

32. I click on links within news stories to get more information.  
   Strongly agree = 1  
   Somewhat agree = 2  
   Neither agree nor disagree = 3  
   Somewhat disagree = 4  
   Strongly disagree = 5  

33. Following hyperlinks within news stories helps me learn more about the story.  
   Strongly agree = 1  
   Somewhat agree = 2  
   Neither agree nor disagree = 3  
   Somewhat disagree = 4  
   Strongly disagree = 5  

34. I often eat during Web use sessions.  
   Strongly agree = 1  
   Somewhat agree = 2  
   Neither agree nor disagree = 3  
   Somewhat disagree = 4  
   Strongly disagree = 5
35. I often daydream during Web use sessions.
   - Strongly agree = 1
   - Somewhat agree = 2
   - Neither agree nor disagree = 3
   - Somewhat disagree = 4
   - Strongly disagree = 5

36. I often walk away from the computer to get something or attend to other business during Web use sessions.
   - Strongly agree = 1
   - Somewhat agree = 2
   - Neither agree nor disagree = 3
   - Somewhat disagree = 4
   - Strongly disagree = 5

37. I often do homework or paperwork during Web use sessions.
   - Strongly agree = 1
   - Somewhat agree = 2
   - Neither agree nor disagree = 3
   - Somewhat disagree = 4
   - Strongly disagree = 5

38. Gender:
   - Female = 1
   - Male = 2

39. Age group:
   - Under 12 = 1
   - 12-18 = 2
   - 19-29 = 3
   - 30-39 = 4
   - 40-49 = 5
   - 50-59 = 6
   - 60 and up = 7

40. Educational level:
   - No high school = 1
   - Some high school = 2
   - High School graduate = 3
   - Some college = 4
   - Bachelor’s degree = 5
   - Master’s degree = 6
   - Ph.D. = 7
41. How long have you been using the Web?

- More than four years = 1
- 3-4 years = 2
- 2-3 years = 3
- 1-2 years = 4
- 6 months to a year = 5
- Less than 6 months = 6
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