For a complete list of titles in LEA's Communication Series, please contact Lawrence Erlbaum Associates, Publishers, at www.erlbaum.com

Online News and the Public

Edited by

MICHAEL B. SALWEN
BRUCE GARRISON
PAUL D. DRISCOLL

McMillan, S. (2000). The microscope and the moving target: The challenge of applying content analysis to the World Wide Web. *Journalism & Mass Communication Quarterly, 77*, 80–98.

Media advisory: Media march to war. (2001, September 17). Fairness and Accuracy in Reporting (FAIR). Retrieved June 20, 2002, from http://www.fair.org/press-releases/wtc-war-punditry.html

Miller, J., & Gergen, K. (1998). Life on the line: The therapeutic potentials of computer-mediated conversation [Electronic version]. *Journal of Marital & Family Therapy, 24*, 189–202.

NUA. (2003). *How many online?* Retrieved November 2, 2003, from http://www.nua.com/surveys/how_many_online/index.html.

Pat Robertson Official Web site. (2002). Retrieved November 1, 2002, from www.patrobertson.com

Perlman, J. (1999, May 6). Print sites still wary of chatting it up. *Online Journalism Review.* Retrieved March 30, 2002, from http://ojr.usc.edu/sections/features/99_stories/stories_discussion_050699.htm

Racial backlash flares at colleges. (2001, September 21). Retrieved June 22, 2002, from http://www.cnn.com/2001/fyi/teachers.ednews/09/21/ec.campus.backlash/index.html

Rafaeli, S., & LaRose, R. (1993). Electronic bulletin boards and "public goods" explanations of collaborative mass media. *Communication Research, 20*, 277–297.

Rossant, J. (2002). Gates eyes the Middle East. *Forbes.* Retrieved May 29, 2002, from http://www.forbes.com/global/2002/0401/027.html

Rosson, M. (1999). I get by with a little help from my cyber-friends: Sharing stories of good and bad times on the Web. *Journal of Computer-Mediated Communication, 4*(4). Retrieved February 9, 2000, from http://www.ascusc.org/jcmc/vol4/issue4/rosson.html.

Sabra–Shatila. (2002). Retrieved April 2, 2002, from http://www.sabra-shatila.be/english/

Said, E. (1997). *Covering Islam: How the media and the experts determine how we see the rest of the world* (rev. ed.). New York: Vintage Books.

Said, E. (2001, September 16). Islam and the West are inadequate banners. *The Observer.* Retrieved June 22, 2002, from http://sf.indymedia.org/news/2001/09/104480.php

Stempel, G. H., III, & Stewart, R. (2000). The Internet provides both opportunities and challenges for mass communication researchers. *Journalism & Mass Communication Quarterly, 77*, 541–548.

Tanner, E. (2001). Chilean conversations: Internet forum participants debate Augusto Pinochet's detention. *Journal of Communication, 51*, 383–403.

What happened. (2002). Retrieved April 2, 2002, from http://www.leb.net/qana/webdoc0.htm

Wittekind, D. (1995, November 5). The Rabin assassination: Cyberspace opinions fly after killing [Electronic version]. *The Atlanta Journal and Constitution*, p. 14A.

Zogby, J. (2002). *What Arabs think.* Retrieved November 14, 2002, from http://www.zogby.com

CHAPTER THIRTEEN

Why They Chat: Predicting Adoption and Use of Chat Rooms

David J. Atkin
Leo W. Jeffres
Kimberly Neuendorf
Ryan Lange
Paul Skalski

Emerging online channels are transforming the American media landscape. The Federal Communications Commission (FCC) even cited the rise of online modalities, and the competition they provide, as a justification for jettisoning restrictions on local TV–newspaper cross-ownership (e.g., Labaton, 2003). Are the glory days of traditional news media numbered? Will emerging online news delivery and discussion modalities replace the Big 3 networks and other "prestige" media outlets?

As other chapters in this volume detail, the Internet is transforming broadcast and print news operations. Major news organizations are moving to integrate Internet services into their operations (e.g., network Web sites). However those less sanguine about FCC deregulation are quick to point out that, although the Web is a distributed network, the most popular competing online services are those operated by traditional media outlets (e.g., Atkin & Lau, 2003).

Given the controversy about whether online news services represent a meaningful alternative to traditional media and the implications of that debate for our larger democracy, we explore the relative appeal and uses of emerging online channels. In particular, we profile the users of newsgroup and related chat room services, focusing on social locators, media use behaviors, and communication needs associated with these online applications.

The growing popularity of the Internet stems, to a large degree, from its ability to provide a mixture of interpersonal and mass media applications. In the realm of online news, an Internet database of people interested in a particular topic—or newsgroup—can allow messages to be stored on the local sites of subscribers. This mass media function can then be supplemented through real-time interpersonal exchanges facilitated via online chat rooms (e.g., Albright, Purohit, & Walsh, 2002; Ibanez, 2002).

Nearly 60% of Americans use the Internet on a daily basis, and they tend to be younger and better educated than the general population, although African Americans and Hispanics are underrepresented in the online universe (Pew, 2001). The average America Online (AOL) household user more than doubled his or her time spent online from the mid- to late 1990s (Dizard, 2000), and the 72.3% of Americans who went online in 2001 lingered about 9.8 hr per week in 2001 (UCLA Center for Communication Policy, 2001). The UCLA survey also found that nearly half (47.9%) of users read news online. More strikingly, a market survey (Veronis, Suhler, & Associates, 2000) identified news reading as the most popular online activity, selected by 87.8% of the audience. Dizard (2000) concluded that "(t)he significance of this figure for the old-line media organizations is that it represents time spent *not* looking at TV, reading a newspaper or going to the movies" (p. 8).

Yet, even as online applications subsume a growing portion of our media diet, relatively little is known about audience uses and interests in Web applications addressing the news. Internet service providers such as AOL are emerging as formidable competitors to traditional media. Of particular interest in the present context, the UCLA Center for Communication Policy (2001) study revealed that only 6.5% of new users and 1.6% of very experienced users (5 years or more) used chat rooms. Some 3.4% of new users and 6.1% of very experienced users indicated visiting newsgroups. Most studies addressing chat rooms lump that application together with such others as Web surfing and e-mail use, which we review in the context of general Web use here.

COMMUNICATION NEEDS

In their review of the research on new media adoption, Jeffres and Atkin (1996) noted that Internet adopters could be distinguished from those of other media by characteristic attitudinal variables. These extend beyond the communication needs linked to traditional media (e.g., escapism)—focused on audience roles as message receivers—to include the need to send messages. This need to communicate with others is a key predictor of interest in using online media.

More recently, Charney and Greenberg (2002) crafted a peer identity motivation, which incorporates the practice of going online to gain peer acceptance of one's ideas. In the context of newsgroups, users can access a Web page, post a

message—which may generate feedback from others—and even contact story authors. In that regard, the practice of formulating one's personal identity online involves a social dimension (Lin, 2001). Similarly, Walther and Boyd (2002) maintained that social support provided online by weak-tie networks may, over a wide range of psychological issues, provide emotional support and personal validation.

Focusing on audience Web sites, Eighmay (1997) found that their entertainment value—in tandem with audience perception about their use experience—was involving and relevant. Other work has addressed potential abuses associated with Internet use, including Web addictions that can intrude on work or home and change personal, family, and business relationships (e.g., Ebersole, 2000; Parks & Floyd, 1996).

Newsgroups represent another, related Internet service, one that is perhaps better known under the rubric of bulletin board services (BBSs; e.g., Ogan, 1993). Scholars (e.g., Atkin, Jeffres, & Neuendorf, 1998; Lin, 1999; Morris & Ogan, 1996; Papachrissi & Rubin, 2000) advocate the application of uses and gratifications theory to explore audience adoption of Internet applications, given the similarity of general audience needs and motivations for media content across the television and online media (see Lin, Salwen, & Abdulla, Chapter 9, this volume). James, Wotring, and Forrest's (1995) study of electronic bulletin board use identified informational learning and socialization as the two primary use motives. Industry research (e.g., T. E. Miller, 1996) underscores the importance of such user motives as entertainment, surveillance, escape, entertainment, and, of particular importance for chat rooms, social interaction. To the extent that BBSs can be regarded as an audiovisual extension of existing Web service features, a user's perceived needs (or gratifications) concerning his or her adoption may also be parallel to those of regular Web content uses. Figure 13.1 represents the relative location of newsgroup and chat services on a continuum underscoring the hybrid nature of these emerging "intermass" (Lin, 2002) services.

As Figure 13.1 outlines, the Web offers media programmers as well as audiences distinctive new avenues for news programming. In merging mass as well as interpersonal functions, emerging online technologies blur the neat theoretical domains that scholars had built around those traditionally disparate domains. The question remains, though, as to whether online channels—with their advan-

	Interpersonal	Mass
Computer Mediated	Chat rooms	Newsgroups
Nonmediated	Conversation	Public Address

FIG. 13.1.   A typology of interpersonal and mediated communication applications.

tages in immediacy, capacity, and interactivity—displace or encourage attendance to conventional news media.

MEDIA SUBSTITUTION VERSUS COMPLEMENTARITY

Although media substitution theory posits that new media like the Internet will compete with established media for audience leisure time, scholars have found few displacement effects attributable to the Internet (e.g., Lin, 2002). Merging this perspective with uses and gratifications theory, the dimension of media uses deemed most important here is that involving functional equivalence, which states that media modalities may be functionally equivalent in fulfilling audience needs (e.g., Ferguson & Perse, 2000; LaRose & Atkin, 1991; Reagan, Pinkleton, Aaronson, & Chen, 1995). Researchers (Kang & Atkin, 1999; Lin, 1999; Reagan et al., 1995) suggest that the audience makes distinct selections across a multitude of media channels and content choices. Stempel, Hargrove, and Bernt (2000), for instance, found a positive relationship between Internet news use and traditional news consumption. Because audiences seek to maximize viewing choices in the multichannel environment, including news channels (Heeter & Greenberg, 1985; Lin, 1994a; Neuendorf, Atkin, & Jeffres, 2001), we posit that news junkies would make greater use of similarly focused online as well as mass media channels (i.e., newspapers and news magazines). More formally:

H1:   Newsgroup use frequency will be positively related to use of other news media.

Relationships between media could also be negative or orthogonal, as has been the case with traditional interpersonal and mass media (e.g., Neuendorf, Atkin, & Jeffres, 2002). Focusing on such interpersonal communication channels as the telephone (Dimmick, Patterson, & Sikand, 1996), research suggests that instrumental (information-oriented) gratifications are the strongest predictors of telecommunication media uses. Here, as with computer use, gratifications associated with media adoption are not clustered along gratifications connected with traditional mass media use (Atkin et al., 1998; Lin, 1999, 2001; Perse & Dunn, 1998). Based on that work, we posit that chat room use would be related to use of interpersonal channels (e.g., e-mail). More formally:

H2:   Chat room use will be positively related to use of interpersonal communication channels.

Other studies of new media adoption (e.g., Flanagin & Metzger, 2001; LaRose & Atkin, 1991) find that adoption of emerging entertainment media modalities is linked with negative attitudes toward competing modalities. Johnson and Kaye

(2000) found that those with in interest in political affairs make greater use of the Internet, rather than television, for such information. Lin (1994b) discovered that the level of media use activity—including magazines, newspapers, radio, compact discs, television, VCRs, and video cameras—appeared to be largely irrelevant to the potential adoption of pioneer online services. Others (Jeffres & Atkin, 1996; Perse & Dunn, 1998) also failed to discover any consistent relationship between interest in using Internet services and use of most other traditional mass media. Owing to countervailing findings in the literature on media displacement effects when media contents or functions differ, we posit the following research question:

RQ1:   How is use of chat rooms related to use of other media?

INNOVATIVE ATTRIBUTES

Pioneer studies of computer bulletin board use suggest that adopters approximate the demographic profile of general "innovators," whose personal attributes included younger age and more education (Dutton, Rogers, & Jun, 1987; Garramone, Harris, & Anderson, 1986). More recent work confirms this upscale adopter profile (e.g., Atkin et al., 1998). Such findings are consistent with diffusion theory (Rogers, 1995, 2002), which posits that adoption of innovations is resource driven. Scholars (Atkin et al., 1998; Lin, 1998) have also noted that Internet adoption is spurred by such personality traits as novelty seeking and innovativeness needs. Based on these various findings, it is hypothesized that demographics will be related to Internet use; in particular:

H3:   Social locators will be related to newsgroup use frequency.
H3a: Respondent age will be inversely related to newsgroup use frequency.
H3b: Respondent education level will be positively related to newsgroup frequency.
H3c: Respondent income level will be positively related to newsgroup use frequency.
H4:   Social locators will be related to chat room use frequency.
H4a: Respondent age will be inversely related to chat room use frequency.
H4b: Respondent education level will be positively related to chat room use frequency.
H4c: Respondent income level will be positively related to chat room use frequency.

Innovators and early adopters thus play a decisive role in shaping the critical mass of users for a technology such as BBSs. This represents a critical ele-

ment in the diffusion process that can help draw additional adopters to expand the diffusion rate to eventually encompass a majority of the potential user population (Markus, 1987). As that process unfolds, we examine the extent to which attitudes supplement demographics as predictors of online technology adoption.

ATTITUDINAL VARIABLES

As Lin (1999) noted, the diffusion of the Internet and the popularity of the World Wide Web quickly turned them into a place where the audience can expect to seek information, entertainment, companionship (e.g., via chat rooms) and personal identity (e.g., via joining newsgroups). Her work suggests that audience online use activities seem to resemble those activities in which the audience regularly engages via the traditional mass media.

Working from a diffusion of innovations perspective, we might expect that those most active in visiting chat rooms or other services would be the more technically capable users. Past work on general Internet adoption (e.g., Atkin et al., 1998) suggests that these individuals would likely fit the innovator profile and are most likely early adopters of interactive Web technologies generally. Such Web enthusiasts would also be more prone to derive gratifications from using the Web (e.g., Charney & Greenberg, 2002). To wit, the enhanced audience control and choice afforded by the new media encourage a relatively active as opposed to passive audience, in general (Lin, 1994a; Papachrissi & Rubin, 2000).

Jeffres and Atkin (1996) found that attitudinal variables, particularly those addressing the needs for communication (e.g., home shopping) served by computer technology, were predictive of Internet adoption intentions. This is consistent with other work on home shopping (Donthu, 1996; Grant et al., 1991). These findings parallel those of an industry study, which established that Internet enthusiasts sought escape, entertainment, interaction, and surveillance gratifications when they went online (T. E. Miller, 1996).

Past studies of Internet adoption (e.g., Lin, 2001) found that gratifications-expectation items (e.g., social interaction) are powerful predictors of online behaviors. Lin used the term *quasisocial interaction* to describe the social interaction activity taking place in these online chat groups (i.e., a two-way communication under an artificial and pseudo-social setting). Thus, where parasocial interaction could satisfy TV viewers' quest to make friends with media characters and thrust themselves into the imaginary social world on screen, "quasisocial interaction could help gratify on-line users' need to establish a relationship with their on-line counterparts and vicariously experience a pseudo-social atmosphere" (Lin, 2001, p. 14). Based on that work, we would anticipate that chat room use would be related to a need to communicate with a diverse set of online others. In the context of this study, then, it is hypothesized that:

H5: Communication needs and interests will be positively related to newsgroup use frequency.

H6: Communication needs and interests will be positively related to chat room use frequency.

Focusing on innovative attributes, Atkin et al. (1998) found that audiences with more technology use experience—technology junkies—expressed higher levels of interest in adopting newer, different media technology applications. Easton and LaRose (2002) found that online interaction has a positive impact on overall levels of social support by allowing users to increase their social networks via online discussion groups. Given the interrelationships between Internet use applications, we assume that more experienced Web users will be more avid consumers of the applications and utilities offered on the Internet. Our model thus posits that frequency of newsgroup and chat use will be predicted by years spent online. More formally:

H7: Level of online use will be positively related to newsgroup use frequency.

H8: Level of online use will be positively related to chat room use frequency.

The research reviewed previously shows support for relationships among media use, interpersonal communication (networks, relationships, and topics), community ties and attachments, and involvement in communities and organizations (e.g., Jeffres, Neuendorf, Atkin, & Lin, 2002).

Taken together, past work suggests that the influence of Internet utilities on audience behaviors has been measured, rather than revolutionary. Observers (Margolis & Resnick, 2000) thus suggest that we are experiencing a "normalization" of the medium, whereby audiences are using the Web to do old things in slightly different ways (as opposed to wholesale reallocations of communication and leisure patterns). For emerging Internet services, it remains to be seen whether audiences are fundamentally altering their communication behaviors or normalizing the Internet to do old things in new ways.

Given these various adopter attributes and Internet user profiles, we pose the following queries:

RQ2: What is the relative influence of social locators, technology adoption, media use, and user interest variables related to newsgroup use?

RQ3: What is the relative influence of social locators, technology adoption, media use, and user interest variables related to chat room use?

METHODS

Research data were collected from two telephone surveys using a computer-aided telephone interview system; the first ($n = 351$) was conducted from June 20 to July 8, 2001 and the second ($n = 484$) was conducted from October 20 to Novem-

ber 11, 2001. Both samples were generated through random-digit dialing proce-
dures. The geographic region covered by the telephone surveys was an ethnically
diverse metropolitan area of the Midwestern United States, with a population
base close to 2 million. The surveys were presented as a general poll with an em-
phasis on values and what people think is important in life. The response rates
ranged from 45% to 50%. Variables used in this study were operationalized as
follows.

Study 1

Social Networks and Values

Respondents were asked to rate the importance of "being involved in the com-
munity" and "having good neighbors" using a scale ranging from 0 to 10. The
two values are correlated at .37 ($p < .001$). The values on which we focus were em-
bedded in a large list of values rated in terms of their importance, and included
the variables that follow.

Civic Culture and Social Values.   Respondents were asked to rate the impor-
tance of "participating in the political system," using a scale ranging from 0 to 10.
They were also asked to rate the importance of "tolerance of other people," using a
scale ranging from 0 to 10.

Community Variables

Several measures were constructed for community attachment, community
activities, organizational ties, and community assessment. The operationaliza-
tions were based on items used in other studies (see Jeffres et al., 2002) and can be
summarized as follows.

Community Activities.   Respondents were asked to use a scale ranging from 0
to 10 to tell how often they did each of several things, including going to sporting
events, going to cultural events such as plays or the orchestra, going to local muse-
ums, and attending concerts of current musical groups or artists. Responses to
each item were standardized and the scores summed up for a scale ($\alpha = .68$).

Community Ties.   For this measure, respondents were asked, "Do you belong
to any neighborhood or community organization, including block clubs, social
groups, religious groups, business groups, or ethnic clubs?" If they said "yes," they
were asked, "What are they?" The number cited was coded. This item as been used
in various studies cited earlier (e.g., Jeffres et al., 2002).

Media Use

Media use and diversity of sources was measured using the standard set of
items as well as several measures for the new technologies; constituent measures
include the following.

TV Viewing.   Respondents were asked for the number of hours of television
they watched yesterday. The scale ranged from 0 for none to 11 for more than 10
hr.

TV News Viewing.   Respondents were asked how often they usually watch the
news on television: several times a day, about once a day, 5 or 6 days a week, 3 or 4
days a week, 1 or 2 days a week, or less often than that.

Radio Listening.   Respondents were asked how many hours they listened to
the radio yesterday. Coding was done using the same scale used for television.

Newspaper Reading.   Respondents were asked how many days last week they
read a newspaper and responses were coded from 0 to 7.

Magazine Reading.   Respondents were asked how many different magazines
they read regularly. Responses were coded into nine categories: 0, 1, 2, 3, 4, 5, 6 to
10, 11 to 20, and 21 or more.

Book Reading.   Respondents were asked how many books they read in the
past 6 months. Responses were coded into the same nine categories used for mag-
azines.

Video Viewing.   Respondents were asked how many borrowed or rented vid-
eos they watched in the past month. Responses were coded into the same nine cat-
egories used for magazines.

Film Viewing.   Respondents were asked how many times they went out to see
a movie in a theater in the past month. Responses were coded into the same nine
categories used for magazines.

Media Use Index.   Responses to the use of traditional media were standard-
ized and the scores summed up to create an index.

Computer Access.   Respondents were asked if they had a personal or laptop
computer in their household and responses were coded yes or no.

Internet Access.   Respondents were asked if they had access to the Internet at home, at work, or both. Access was coded two ways, as a dummy variable where access anywhere = 1 and no access = 0; and as a continuum where access at both home and work = 2, access at either alone = 1, and no access = 0.

Internet Use.   Respondents were asked if they had ever gone on the Internet. Those who said "yes" were asked how often they go on the Internet at work, using a scale ranging from 7 (*several times a day*) to 0 (*almost never*). They also were asked how often they go on the Internet at home using the same scale. Several variables were constructed: (a) a simple usage measure where 1 = has gone on the Internet before, 0 = has never gone on the Internet; (b) Internet access (access = 1); (c) frequency use Internet at work (those without access = −1); (d) frequency use Internet at home (those without access = −1); (e) overall Internet use, combining the scores for usage at home and work. A separate measure gauged the number of years spent on the Internet (see Jeffres et al., 2002).

Media Web Site Use.   Respondents were asked how often they visited media Web sites such as one of the TV networks, a newspaper, or radio site, using a 7-point scale ranging from 1 (*almost never*) to 7 (*several times a day*). Those not using the Internet were assigned a value of 0.

E-Mail Use.   Respondents were asked "How often do you send or receive messages by e-mail? They responded on a 5-point scale from 1 (*several times each day*) to 5 (*never*).

Chat Room Use.   For the dependent variable, respondents were asked if they had ever visited a chat room on the Internet to talk with people about something. Those who said "yes" were asked how often, using the following categories: every day (6), a couple times a week, about once a week, a couple times a month, or less often than that (2). Those who had never visited a chat room before were assigned a 1 and those who had never gone on the Internet were assigned a 0.

Social Categories

The standard social categories were measured, including marital status, the number of people in one's household, age, level of formal education completed, ethnic or racial background, household income, and gender. Dummy variables were constructed for being married, being White, being Black, and being other race or ethnicity (see Jeffres et al., 2002).

Interpersonal Communication Relationships

Two measures of interpersonal communication relationships were used. Respondents were asked how much they agreed with each of the following state-

ments, using a scale ranging from 0 (*strongly disagree*) to 5 (*neutral*) to 10 (*strongly agree*). "Talking about current events with friends or coworkers" and "I prefer talking with people who have the same background as me."

Study 2

A follow-up study conducted the following quarter utilized many of the measures of social locators and media use employed in the first survey. In addition, Study 2 operationalized a key dependent measure, newsgroup use, with the following item: "How often do you visit Web sites in other languages (1 = *almost never* through 7 = *several times a day*).

Because newsgroups revolve around informational channels, we employed an expanded set of content interest/knowledge measures that include the following, arrayed across an 11-point scale ranging from 0 (*strongly disagree*) to 10 (*strongly agree*):

- **Interest in other cultures.** Respondents were asked about the extent to which "I enjoy learning about different cultures."
- **International news.** Respondents were asked "How much attention do you pay to the international news in the newspaper?"
- **Awareness of world events.** This measure was tapped with the item "I'm more aware of what's going on around the world than most of my friends."
- **Tolerance of differences.** Respondent agreement was assessed for an item stating "I tend to value similarities over differences when I meet someone."
- **Communicate with culturally diverse others.** Respondents were asked about their agreement with the statement "In any given month, I communicate with people from a wide variety of backgrounds and cultures."

As in Study 1, we created a series of indexes reflecting respondent knowledge about current events and popular culture (see procedures outlined in the previous section). Data were then subjected to correlational analysis. Selected background variables were then entered into multiple regression analysis. Variance inflation factor inspections revealed no significant multicollinearity problems. Hair, Anderson, Tatham, and Black (1992) defined the variance inflation matrix as "(A)n indicator of the effects the other predictor variables have on the variance of a regression coefficient" (p. 24), noting that it is directly related to the tolerance values. A stepwise regression model was tested in which significant correlates of the dependent variable were submitted simultaneously.

FINDINGS

We first analyzed relationships between Internet use measure and social locators, media use, and content interest dimensions. Overall, nearly a quarter (24.2%) of respondents indicated using newsgroups, and 35.3% had used chat rooms. Correlational analyses of newsgroup use are outlined in Table 13.1.

There was a dearth of relationships between use of newsgroups and social locators, media and content interest, or knowledge variables. Newsgroup use was inversely related to agreement with the sentiment that one "values similarities among people over their differences" ($r = -.123$). Aside from that, the relationship involving marital status approached ($p < .06$) significance, as married individuals made greater use of the new medium ($r = .09$). On balance, though, the number of relationships between newsgroup use and our independent variables is no greater than that which we would expect to see from chance alone. This leaves Hypotheses 1, 3, 5, and 7 without support. Regarding our Research Question 3 on the relative influence of background variables on newsgroups, the re-

TABLE 13.1
Correlations Between Newsgroup and Communication
Technology, Attitudinal Measures

Variable	Newsgroup Visits
Media use	
Hours spent on Web sites	.052
Hours spent shopping online	−.008
Time with radio	.006
Newspaper readership	.023
International news reading	.049
Magazine readership	−.048
Book readership	.002
DVD rentals	−.052
Movie attendance	−.002
Social locators	
Age	−.004
Non-White	.043
Married	.085 ($p \leq .067$)
Female gender	.029
Interests and values	
Communicate with culturally diverse others	.021
Interest in other cultures	.030
Feel aware of world events	−.019
Value similarities among people over differences	−.123*
Interest in other cultures	.030
Interest in new civic ideas	.039
Knowledge of popular culture	.045
Current events knowledge	.049

*$p < .01$.

---

lationships were not sufficiently robust to warrant any further multivariate analysis.

Correlational analyses of chat room use are outlined in Table 13.2. Per Research Question 1, the data reveal a pattern of relationships to other media that are generally weak and positive in nature. In particular, chat room use is positively related to our media use index ($r = .15$), computer ownership ($r = .25$), Internet use frequency ($r = .38$) and Internet access ($r = .27$). Separate measures indicate that the more important access is from the home ($r = .41$), because Internet access at work is not significantly related to chat room use ($r = .13$). Other Internet use dimensions related to chat use include frequency of Web site use ($r = .42$), and a combined measure of World Wide Web use at home and at work ($r = .45$). Use of another interpersonal channel, e-mail, is also related to chat room use ($r = .26$); this provides modest support for Hypothesis 2. These Internet-based correlates of chat use, combined with that involving years on the

TABLE 13.2
Correlations Between Chat Room Use and Communication
Technology, Attitudinal Measures

Variable	Chat Room Visits
Media use variables	
Years on Internet	.24**
Computer ownership	.25**
Internet access (home or work)	.27**
Internet use frequency	.38**
Internet use frequency (work)	.13
Internet use frequency (home)	.41**
E-mail use	.26**
Media Web site use	.42**
World Wide Web use	.45**
Mass media use index	.15*
Communication diversity	.43**
Social locators	
Age	.32**
Education	.16*
Male gender	.11*
Interests and values	
Interest in U.S. current events	.37**
Interest in arts	.40**
Knowledge of global cultures	.27**
Knowledge of international news	.23**
Knowledge of popular culture	.24**
Tolerant of others	−.06
Have good neighbors	−.12*
Participating in political system	.07
Community ties index	−.07
Community involvement	.26**

*$p < .05$. **$p < .01$.

Internet ($r = .24$), underscore and support the role of Internet experience posited in Hypothesis 8.

Social locators are generally unrelated to chat room use. We do, however, see a weak positive relationship with chat use and education ($r = .16$), consistent with Hypothesis 4b. Contrary to Hypothesis 4a, however, we see a positive relationship between age and chat room use ($r = .31$). The only other social locator related to chat room use is gender, as males are more likely to make use of the technology ($r = .11$). Further marginal breakouts suggest that about half (49.6%) of men use chat groups, compared to only 39% of women (sig. $\chi^2 = .05$). On balance, this provides only modest support for the youthful, high-socioeconomic-status adopter profile posited by Hypothesis 4.

Chat room use is positively related to our indexes of popular culture knowledge ($r = .24$) and community involvement ($r = .26$). Visiting chat rooms is also correlated with knowledge of international news ($r = .23$) and with an index capturing knowledge of different regions and cultures ($r = .27$). Although our measures of tolerance of others and community ties are not related to chat room use, "having good neighbors" is inversely related ($r = -.12$) to chat room visits. On balance, these findings provide only modest support for the needs-driven adoption conception outlined in Hypothesis 6.

Table 13.3 outlines the hierarchical regression model, which explained 18% of the variance in chat room use frequency. Exploring the possible media substitution dynamics posed in Research Question 1, traditional media use is unrelated to chat room use. As for the relative influence of various predictor blocks (Research Question 3), the only social locator significantly related to chat room use was age ($\beta = -.253$), which explained nearly 4% of the variance observed. Interestingly, the positive bivariate relationship between age and chat room use was reversed under the controlling influence of other variables in the multivariate analysis; this partially rehabilitates Hypothesis 3's prediction of a youthful adopter profile.

Consistent with the information-seeker profile posited in Hypothesis 6, interest in current events ($\beta = .222$) and communication diversity ($\beta = .144$) were predictors of chat room use. Support for this hypothesis is mixed, however, as interest in the arts bears an inverse relationship ($\beta = -.198$) to chat room usage. Years

TABLE 13.3
Stepwise Multiple Regression Model Predicting Chat Room Usage

Variable	R	Final β	R^2 Change	F Change	Sig. F Change
Years on the Internet	.244	.254	.059	11.941	.001
Age	.317	−.253	.041	8.579	.004
Interest in current events	.367	.222	.034	7.380	.007
Interest in arts	.402	−.198	.027	6.053	.015
Communication diversity	.426	.440	.019	4.401	.037

Note. Total model: $R^2 = .181$; Adj $R^2 = .159$; $F(5, 185) = 8.198$; $p < .001$.

on the Internet ($\beta = .254$) emerged as the most powerful positive predictor, explaining nearly 4% of the variance in chat room use. This result provides further support for Hypothesis 8.

In sum, regression results provide mixed expectations for our proposed framework. Chat room use is positively related to years on the Internet and an interest in current events as well as community activities. Age—the only social locator to emerge in our model—was inversely related to chat room use, as was interest in arts activities.

DISCUSSION

This study identified variables related to use of newsgroups and chat rooms in terms of social locators, communication needs, media use habits, and technology adoption. Findings generally fail to confirm the upscale, heavy-media-use, technology adopter profile posited by diffusion theory. The failure of diffusion variables to explain use of these services may reflect the fact that its Internet platform has now reached the "flat" part of its diffusion curve. Thus, as newsgroups and chat rooms surpass their critical mass, differences between users and nonusers have leveled over time. Similar patterns have been observed for cable since the 1980s (Atkin & LaRose, 1994; Dutton et al., 1987; Sparkes & Kang, 1986). In that regard, our sample of urban respondents provides a profile of a service in its mature stages of diffusion.

To the extent the Internet is becoming "normalized," Jeffres et al. (2002) found that the Internet audience is beginning to look much like the consumer audience in general, but behavioral patterns often are linked to social categories. In this case, the failure of income to discriminate between heavy and light users may suggest that these services, particularly newsgroups, have reached a saturation point within an otherwise upscale Internet universe. Yet such Internet applications are not likely to be regarded as "household necessities," in the tradition of the telephone, available to 94% of American homes. Because only a bare majority of Americans own the necessary gateway for Internet services—a powerful 100+ Mhz computer processor and a $20 monthly subscription to an Internet service provider—it remains to be seen whether chat or newsgroups emerge as a "rich man's" substitute for less expensive telephone service plans.

The dearth of relationships involving newsgroups, in particular, provides little support for the notion that this medium represents an electronic forum spurring a more robust democracy. Rather than bring sweeping democratic changes, Web technology is likely to further such recent media trends as audience fragmentation and the attendant hype needed to break through the clutter of multiple media offerings. Relationships between the Web and use of other media uncovered here suggest that emerging online environments are not displacement mecha-

nisms, but will instead make it easier for news junkies to immerse themselves in media content.

In this regard, our findings on newsgroups confirm Levin's (2002) analysis of the Web's influence on politics. He found that, in the world of journalism, the Internet may not be the sweeping force for democracy and diversity that many had envisaged. However, this multiplicity of similarity does not bear content identical to that of TV and print media. For instance, blogs (or Web logs) take advantage of the large capacity of the Internet to provide "micro" perspectives on news events that may fall outside of the existing media-cultural complex's monopoly on powerful communication media. Further work should investigate the relative appeal of these and other emerging online sources.

With chat, the strong explanatory role played by community variables suggests that the medium may, unlike the telephone, help us to reconnect around various community activities. In this regard, the Internet may help offset social trends toward tribalization introduced by earlier interpersonal telecommunication channels like the telephone:

Where cities had once been created to facilitate the process of human communication, the telephone (aided and abetted by the automobile) made physical proximity optional. The city of local neighborhoods—where social, work and commercial needs were all within walking distance—became the city of segregated districts (financial, industrial, commercial, residential). The telephone promoted the population shift out of the inner cities while helping to expand business operations within cities. (Bates, Albright, & Washington, 2002, p. 94)

Hopefully the linkages among chat room use, current events, and community interests bode well for a future Internet role in helping to detribalize, and perhaps reverse the process of segregation initiated by telecommunication media during the previous century. Of course, the inverse relationship between having good neighbors and use of chat services suggests that the medium can also provide further avenues for those who feel disconnected in their neighborhoods.

The predominance of traditional media among Web sites suggests that differences in Web transmission may now have more to do with style than substance. The selective patterns of online media use uncovered here, to the extent that they relate to public affairs knowledge, suggest that Web modalities are distinguished mainly in terms of their distinctive facility for exchanging and accessing information.

As mentioned at the onset, emerging intermass channels like the Internet pose questions about the degree to which audiences shift away from conventional media to a wider range of emerging technologies. However, rather than displace traditional channels, per media substitution conceptualizations, our findings suggest that Internet use remains orthogonal to such pursuits. This is particularly true of newsgroups.

By contrast, regression results suggest that chat room devotees typically have more experience with the Internet, are younger, are interested in current events, are not interested in the arts, and have a greater interest in diverse community events. These results thus confirm a raft of findings (e.g., Dutton et al., 1987) that suggest that attitudinal variables are more explanatory of technology adoption than conventional media use and social locator variables. We find little evidence here, then, that online media content access is perceived as a "functional supplement" to traditional media use. One explanation for this nonfinding may be that, although functionally similar to a certain degree, traditional media remain better suited to deliver more attractive content in an accessible and affordable fashion, relative to an online service. Moreover, the online media content has yet to achieve the visual quality of print media, or the audiovisual quality of traditional mass media (Lin, 2001).

Another reason for the lack of any relationships with news or any other media may be, as Lin (2001) suggested, that "traditional media remain better suited to deliver more attractive content in an accessible and affordable fashion, relative to an on-line service" (p. 14). She observed that emerging online channels like newsgroups have yet to achieve the visual quality of print media, or the audiovisual quality of television and film and are thus not yet a functional substitute for them. Perhaps, as video and voice functions are merged with the text dimensions now characteristic of newsgroups and chat rooms, displacement mechanisms with telecommunication or other media channels will emerge.

In sum, this study was only able to statistically discriminate adopters and nonadopters for chat users, and such use is chiefly dependent on five factors: how long someone has been using the Internet, the age of the user, the user's interest in the arts, the user's interest in current events in the United States, and interest in diverse community activities. In that regard, these findings are encouraging in that they suggest that audiences will be able to "program" their own content through forums such as the chat room. Because this Internet-facilitated "quasisocial interaction" is absent any social pressures (Kiesler, 1997; Parks & Floyd, 1996), it may eventually help reduce stress and provide the kind of enjoyment associated with mass media. In this way, the Web can perhaps offset the ongoing consolidation of ownership characterizing offline mass media. However, these results suggest that wholesale media substitution of new media channels for community activities and community attachments is not yet a concern. Later work should explore more closely the motivations determining the selection of various online modalities for interpersonal as well as news and other mass media applications. Working from the uses and gratifications perspective, for instance, scholars (Lin, 2001; Papachrissi & Rubin, 2000) found that the Internet attracts an active audience that intently seeks out and consumes media content to gratify such needs as entertainment (for mental stimulation), identity (for social integration), diversion (for temporary escape), and surveillance (for information gathering). These cognitive and affective need expectations may be expanded

from the study of uses and gratifications, originated with the study of traditional media, and can help shed conceptual light on the Internet as a two-way interactive medium. Further work in this area should explore the social, economic, and political meanings of these emerging intermass technologies.

REFERENCES

Albright, J., Purohit, K., & Walsh, C. (2002). Louise Rosenblatt seeks QtZznBoi@aol.com for LTR: Using chat rooms in interdisciplinary middle school classrooms. *Journal of Adolescent and Adult Literacy, 45,* 692–706.

Andrews, F. M. (Ed.). (1986). *Research on the quality of life.* Ann Arbor: University of Michigan, Institute for Social Research.

Atkin, D., Jeffres, L., & Neuendorf, K. (1998). Understanding Internet adoption as telecommunications behavior. *Journal of Broadcasting & Electronic Media, 42,* 475–490.

Atkin, D., & LaRose, R. (1994). A meta analysis of the information services adoption literature. In J. Hanson (Ed.), *Advances in telematics* (Vol. 2, pp. 91–110). Norwood, NJ: Ablex.

Atkin, D., & Lau, T. Y. (2003, May). *Still on hold: Competitive implications of the Telecommunication Act of 1996.* Paper presented at the annual meeting of the International Communication Association, San Diego, CA.

Bates, B., Albright, K., & Washington, K. (2002). Not your plain old telephone: New services and new impacts. In C. A. Lin & D. Atkin (Eds.), *Communication technology and society* (pp. 91–124). Cresskill, NJ: Hampton.

Charney, T., & Greenberg, B. S. (2002). Uses and gratifications of the Internet. In C. A. Lin & D. Atkin (Eds.), *Communication technology and society: Audience adoption and uses* (pp. 379–407). Cresskill, NJ: Hampton.

Dimmick, J. W., Patterson, S., & Sikand, S. J. (1996). Personal telephone networks: A typology and two empirical studies. *Journal of Broadcasting & Electronic Media, 40,* 45–59.

Dizard, W. (2000). *Old media, new media.* New York: Longman.

Donthu, N. (1996). Observations A: The infomercial shopping. *Journal of Advertising Research, 36*(2), 69–76.

Dutton, W., Rogers, E., & Jun, S. H. (1987). The diffusion and impacts of information technology in households. In P. I. Zorkoczy (Ed.), *Oxford surveys in information technology* (Vol. 4, pp. 133–193). New York: Oxford University Press.

Easton, M., & LaRose, R. (2002, August). *Modeling social support in online discussion groups.* Paper presented to the Association for Education in Journalism & Mass Communication, Miami Beach, FL.

Ebersole, S. E. (2000). Uses and gratifications of Web among students. *Journal of Computer Mediated Communication, 6*(1). Retrieved November 11, 2001, from http://www.ascusc.org/jcmc/vol16/issue1/ebersole.html

Eighmay, J. (1997). Profiling user responses to commercial web sites. *Journal of Advertising Research, 37,* 59–66.

Ferguson, D. A., & Perse, E. M. (2000). The World Wide Web as a functional alternative to television. *Journal of Broadcasting & Electronic Media, 44,* 155–174.

Flanagin, A. J., & Metzger, M. J. (2001). Internet use in the contemporary media environment. *Human Communication Research, 27,* 153–181.

Garramone, G., Harris, A., & Anderson, R. (1986). Uses of political bulletin boards. *Journal of Broadcasting & Electronic Media, 30,* 325–339.

Grant, A., Guthrie, K. K., & Ball-Rokeach, S. (1991). Television shopping. *Communication Research, 18*(6), 773–798.

Hair, J., Anderson, R., Tatham, R., & Black, W. (1992). *Multivariate analysis.* New York: Macmillan.

Heeter, C., & Greenberg, B. A. (1985). *Cableviewing.* Norwood, NJ: Ablex.

Ibanez, I. (2002). Online chat rooms: Virtual spaces of interaction for social oriented people. *CyberPsychology and Behavior, 5*(1), 43–52.

James, M. L., Wotring, C. E., & Forrest, E. (1995). An exploratory study of the perceived benefits of electronic bulletin board use and their impact on other communication activities. *Journal of Broadcasting & Electronic Media, 39,* 30–50.

Jeffres, L. W., & Atkin, D. (1996). Predicting use of technologies for communication and consumer needs. *Journal of Broadcasting & Electronic Media, 40,* 318–330.

Jeffres, L., Neuendorf, K., Atkin, D., & Lin, C. A. (2002, July). *The wired nation.* Paper presented at the meeting of the International Communication Association, Seoul, Korea.

Johnson, T., & Kaye, B. T. (2000). Using is believing: The influence of reliance on the credibility of online political information among politically interested internet users. *Journalism & Mass Communication Quarterly, 77,* 865–879.

Kang, M. E., & Atkin, D. (1999). Exploring the role of audience uses and gratifications in the adoption of multimedia cable. *Telematics & Informatics, 16,* 59–74.

Kiesler, S. (1997). *Culture of the Internet.* Mahwah, NJ: Lawrence Erlbaum Associates.

Labaton, S. (2003, May 13). Plan to loosen network rules goes to FCC. *The New York Times,* pp. 1, C10.

LaRose, R., & Atkin, D. (1991). Movie distribution modalities and consumer choice. *Journal of Media Economics, 4,* 3–17.

Levin, Y. (2002). Politics after the Internet. *The Public Interest, 149*(Fall), 80–94.

Lin, C. A. (1994a). Audience fragmentation in a competitive video marketplace. *Journal of Advertising Research, 34*(6), 1–17.

Lin, C. A. (1994b). Exploring potential factors for home videotext adoption. *Advances in Telematics, 2,* 111–121.

Lin, C. A. (1998). Exploring personal computer adoption dynamics. *Journal of Broadcasting & Electronic Media, 42,* 95–112.

Lin, C. A. (1999). Online service adoption likelihood. *Journal of Advertising Research, 39*(2), 79–89.

Lin, C. A. (2001). Perceived gratifications of online media service use among potential users. *Telematics & Informatics, 19,* 3–19.

Lin, C. A. (2002). Paradigm for communication and information technology adoption research. In C. A. Lin & D. Atkin (Eds.), *Communication technology and society: Audience adoption and uses* (pp. 447–476). Cresskill, NJ: Hampton.

Markus, L. (1987). Toward a "critical mass" theory of interactive media: Universal access, interdependence and diffusion. *Communication Research, 14,* 491–511.

Margolis, M., & Resnick, D. (2000). *Politics as usual: The cyberspace "revolution."* Thousand Oaks, CA: Sage.

Miller, T. E. (1996, July). Segmenting the Internet. *American Demographics, 48.*

Morris, M., & Ogan, C. (1996). The Internet as mass medium. *Journal of Communication, 46*(1), 39–50.

Neuendorf, K., Atkin, D., & Jeffres, L. (2001). Reconceptualizing channel repertoire in the urban cable environment. *Journal of Broadcasting & Electronic Media, 45,* 464–482.

Neuendorf, K., Atkin, D., & Jeffres, L. (2002). Adoption of audio information services in the United States: A bridge innovation. In C. A. Lin & D. Atkin (Eds.), *Communication technology and society: Audience adoption and uses* (pp. 125–152). Cresskill, NJ: Hampton.

Ogan, C. (1993). Listserve communication during the Gulf war: What kind of medium is the electronic bulletin board? *Journal of Broadcasting & Electronic Media, 37,* 177–196.

Papachrissi, Z., & Rubin, A. (2000). Predictors of Internet use. *Journal of Broadcasting & Electronic Media, 44,* 175–196.

Parks, M., & Floyd, K. (1996). Making friends in cyberspace. *Journal of Communication, 46*(1), 80–97.

Perse, E., & Dunn, D. (1998). The utility of home computers and media use: Implications of multi-
    media and connectivity. *Journal of Broadcasting & Electronic Media, 42,* 435–456.
Pew Research Center. (2001). More online, doing more. *The Pew Internet & American Life Project.*
    http://www.pewinternet.org
Reagan, J., Pinkleton, B., Aaronson, D., & Chen, C. F. (1995). How do technologies relate to the rep-
    ertoire of information sources? *Telematics and Informatics, 12,* 21–27.
Rogers, E. (1995). *Diffusion of innovations* (4th ed.). New York: The Free Press.
Rogers, E. M. (2002). Information society in the next millennium: Captain's log 2001. In C. A. Lin &
    D. Atkin (Eds.), *Communication technology and society: Audience adoption and uses of the new me-
    dia* (pp. 23–42). Cresskill, NJ: Hampton.
Sparkes, N., & Kang, N. (1986). Public reactions to cable television: Time in the diffusion process.
    Journal of Broadcasting & Electronic Media, 30, 213–229.
Stempel, G. H., Hargrove, T., & Bernt, J. P. (2000). Relation of growth of use of the Internet to
    changes in media use from 1995–1999. *Journalism & Mass Communication Quarterly, 77,* 71–79.
UCLA Center for Communication Policy. (2001, November). *The UCLA Internet report 2001: Sur-
    veying the digital future.* Los Angeles: UCLA Regents.
Veronis, Suhler, & Associates. (2000). *The Internet opportunity.* New York: Author.
Walther, J., & Boyd, S. (2002). Attraction to computer-mediated social support. In C. A. Lin & D.
    Atkin (Eds.), *Communication technology and social change: Audience adoption and uses* (pp.
    153–188). Cresskill, NJ: Hampton.

APPENDIX

National Telephone Survey Questionnaires, 2001–2002

UNIVERSITY OF Miami

SCHOOL OF COMMUNICATION

BASELINE WEB PROJECT 1
February 25–28, 2002

Hello. My name is **(use your first name).** I am a student calling from the Univer-
sity of Miami in Coral Gables, Florida. We are conducting a national opinion sur-
vey to find out what people think of the news media. This study is for educational
purposes and we are not selling anything. **[NO PAUSE]**

→STATEMENTS YOU MAY USE IF NEEDED←

NOTE: IF PERSON ASKS WHAT THIS SURVEY IS FOR: "This study will be used
as a research project for students. The statistical findings will be presented at aca-
demic conferences to learn more about what the public thinks of the news me-
dia."

NOTE: IF PERSON ASKS "HOW LONG?" THIS WILL TAKE: "It depends on
how you answer some questions and how quickly we move through this. It may
be as short as two minutes and as long as 6 or 7 minutes. I'll try to move through
it quickly."

NOTE: IF PERSON ASKS HOW HIS/HER PHONE NUMBER WAS OBTAINED:
"Your phone number was randomly generated by a computer, so your identity is
anonymous and only the statistical results will be used for educational purposes"