

# Introduction

## The Internet in Everyday Life

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*The increasing presence of the Internet in our everyday life raises important questions about what it means for access to resources, social interaction, and commitment to local community. This special issue of the American Behavioral Scientist brings together seven U.S., one U.K., one Canadian, and one North American study that examine the way in which the Internet competes with and complements everyday life. These studies show the Internet as a complex landscape of applications, purposes, and users. This introduction summarizes results from studies in this issue and other extant recent surveys, providing an overview of the Internet population and its activities, statistics that help define and articulate the nature of the digital divide. The authors move from there to consideration of the social consequences of adding Internet activity to our daily lives, exploring how use of the Internet affects traditional social and communal behaviors such as communication with local family and commitment to geographical communities. They conclude with a look at how these studies reveal the integration of the Internet into our everyday lives.*

**The Internet**—that brave new cyberworld—is it drawing us away from everyday life or adding layers of connectivity and opportunity? Is it supporting new forms of human relationships or reproducing existing patterns of behavior? These questions challenge us to build a picture of Internet use that separates the impact of the Internet from our existing behaviors yet integrates its use with these behaviors. Much existing research on computer-mediated communication (CMC) and online behavior has laid out differences between CMC and face-to-face communication and provided in-depth reports on online communities. Whereas important research has been done from this perspective, its concentration on CMC versus face-to-face, online versus offline, and virtual versus real has perpetuated a dichotomized view of human behavior. These dichotomies pit one form of CMC against another, for example, synchronous chat versus asynchronous communication (e.g., e-mail) and text versus graphics, as well as one category of human endeavor against another, such as computer use at work versus home, online content for adults versus children, and computer and Internet users and nonusers. A growing body of research—including the articles in this special issue—is now examining more integrative views of CMC, looking at

how online time and use fits with and complements other aspects of an individual's everyday life.<sup>1</sup>

A few large and important trends are making it difficult to continue to interpret the impact of the Internet in isolation from people's everyday lives. First, we have a rapid increase in the number of users gaining access to and using the Internet: For example, Katz, Rice, and Aspden (2001 [this issue]) found 8% of their sample using the Internet in 1995 (sample of 2,500 adults in the United States) and 65% in 2000 (1,305 adults). Second, those who are using the Internet are showing an increasing exposure and commitment to Internet-based activity. They spend more time online and do more types of things the more years that they continue to use it (Nie & Erbring, 2000). Estimates put the average American using the Internet more than 9 hours a week (UCLA Center for Communication Policy [CCP], 2000). Although a large proportion of that use can be attributed to work (UCLA CCP, 2000), a third trend shows increasing the domestication of the Internet, that is, the presence of the Internet in the home (Kraut, Kiesler, Mukhopadhyay, Scherlis, & Patterson, 1998).

These three trends combine with other societal pressures to blur the boundaries between domains of activity. Such pressures include longer work hours (14% to 16% of those using the Internet more than 1 hour a week report they are working longer hours) (Nie & Erbring, 2000)<sup>2</sup>; use of the Internet in conjunction with school work by adult learners, university students, and households with children (with the presence of children in the household cited as a key reason many adults will invest in computers and Internet access) (Kraut, Kiesler, et al., 1998; Statistics Canada, 2000)<sup>3</sup>; and a need to keep up, reported by nonusers as the number one reason for becoming an Internet user (Katz & Aspden, 1997).

This special issue of the *American Behavioral Scientist* brings together seven U.S., one U.K., one Canadian, and one North American study of the Internet in everyday life.<sup>4</sup> The overall term *the Internet* must be used with caution; one can often observe a kind of garbage can model being used as the Internet becomes a receptacle for fame and infamy relating to any electronic activity or societal change. Although the term is still used, the authors in this issue take an integrative approach to assessing this social phenomenon using empirical data on Internet use. They show that the Internet is a complex landscape of applications and purposes as well as users and should be studied that way. They have in common the acceptance of the wholeness of human experience and the idea that the Internet cannot be separated from ongoing activity.

The work to be done is to build a picture that situates Internet use in the rest of individuals' lives, including the people with whom they interact, the technologies they have around them, their life stage and lifestyle (Anderson & Tracey, 2001 [this issue]), and their offline community (Hampton & Wellman, 2001 [this issue]; Kavanaugh & Patterson, 2001 [this issue]; Matei & Ball-Rokeach, 2001 [this issue]). Similarly, we cannot situate individuals' Internet usage without considering their non-Internet attributes and behavior. We cannot ignore the way statistics on Internet use and reach may be predicated on the behaviors and

affordances that already accrue to those in the Internet user demographic, that is, those with higher incomes and higher education levels (Nie, 2001 [this issue]) or that already distinguish behavior offline, for example, in how women and men communicate (Boneva, Kraut, & Frohlich, 2001 [this issue]). We need to consider the multiplicity of interactions and responsibilities online and offline that compose our activities, relationships, and community, looking for patterns of successful integration (e.g., Howard, Rainie, & Jones, 2001 [this issue]; Kazmer & Haythornthwaite, 2001 [this issue]) as we caution against unsuccessful ones (e.g., Kraut, Patterson, et al., 1998). However, our picture and our task are not complete without also considering those who do not have access to the Internet, who use it little, or who have lost access to it (e.g., Katz et al., 2001). It is important to examine how the increasing presence and importance of the Internet in the everyday lives of those with access separates others from the ongoing social, economic, and commercial activity the Internet supports and creates or perpetuates an existing social divide.

The articles in this special issue join other researchers in examining the larger picture of the Internet in everyday life. Several major studies and projects provide the basis for the work discussed in this introduction and in the articles in this issue. These include

- The Pew Internet and American Life Project—various reports available at <http://www.pewinternet.org/> (Howard et al., 2001)
- The HomeNet Project—publications and reports available at <http://homenet.hcii.cs.cmu.edu/progress/index.html> (Boneva et al., 2001)
- Blacksburg Electronic Village (<http://www.bev.net/>)—research reports available at <http://www.bev.net/project/research/> (Kavanaugh & Patterson, 2001)
- UCLA Center for Communication Policy Internet study, Jeffrey Cole (director)—UCLA Internet Report available at <http://ccp.ucla.edu/pages/internet-report.asp>
- Stanford Institute for the Quantitative Study of Society (SIQSS), Internet and Society study—preliminary report by Norman Nie and Lutz Erbring available at <http://www.stanford.edu/group/siqss/> (Nie, 2001)
- The Syntopia Project<sup>5</sup> (Katz & Aspden, 1997; Katz et al., 2001)
- National Geographic Survey 2000—<http://www.nationalgeographic.com> (Wellman, Quan Haase, Witte, & Hampton, 2001 [this issue])
- Netville Wired Suburb Project (Canada)—<http://web.mit.edu/knh/www> (Hampton & Wellman, 2001)
- Digital Living (U.K.) project by researchers in BTexact (British Telecommunication's research and technology business) and the Institute for Social and Economic Research at the University of Essex (Anderson & Tracey, 2001)
- The LEEP distance education program—<http://www.lis.uiuc.edu/gslis/degrees/leep.html> (Kazmer & Haythornthwaite, 2001)

The following sections summarize results from studies in this issue and other recent surveys to provide an overview of the Internet population and its activities. We begin with a look at who is online, which also shows who is coming online and who has not yet come online, and what these studies tell us they are doing online. Access and use statistics help define and articulate the nature of the

digital divide. We move from there to consideration of the social consequences of adding Internet activity to our daily lives, exploring how use of the Internet affects traditional social and communal behaviors, such as communication with local family and commitment to geographical communities. We conclude with a look at how these studies also reveal the integration of the Internet into our everyday lives.

### CONCERNS ABOUT THE DIGITAL DIVIDE

Whatever its consequences, all would agree that the Internet is here to stay and spreading rapidly, creating a pressing need to understand and prepare for its impact. The statistics available about the Internet, and those presented in many of the studies in this volume, document the rapid growth in use of the Internet. Here are a few of those numbers: 94 million U.S. adults with Internet access, with 55% of these online on a typical day (Howard et al., 2001), and 55,000 new users each day (UCLA CCP, 2000); 65% of U.S. households with a computer, 43% with access to the Internet, and 55% of Americans with access to the Internet from home or elsewhere (Nie & Erbring, 2000); 20.5 million U.K. adults with home access in 2000, 80% of whom had accessed the Internet in the past month (National Statistics Omnibus, 2000), three times the number of households connected in 1998; and 4.9 million Canadian households with an individual who used the Internet from any location (42% of all households in 1999, compared with 29% in 1997) and 3.4 million households (29%) with use at home (compared with 16% in 1997; Statistics Canada, 2000).

Great though these numbers are, they indicate a large proportion of people who are not connected to the Internet, do not know about it, have no interest in using it, have no affordable access to it, or have poor infrastructural support for it. The large social phenomenon of the Internet is passing some by, and for better or worse, that sector is failing to gain access to the resources available to those with access to the Internet. In the United States, differences in access show rural and poor populations to be underrepresented in Internet access and use.<sup>6</sup> This difference between the haves and the have nots in Internet access has become known as the *digital divide* (see National Telecommunications and Information Administration [NTIA], 2000).<sup>7</sup> This phenomenon has received the most attention in the United States, where differences in access show rural and poor populations to be underrepresented in Internet access and use.<sup>7</sup> The term has also been applied more globally to consider differences between the have and have not nations, although we do not pursue that issue here (see Hargittai & Centeno, 2001). In this issue we look mainly at U.S. Internet use, with one study presenting results from a recent U.K. study (Anderson & Tracey, 2001), one from a Canadian community (Hampton & Wellman, 2001), and one from North America (Wellman et al., 2001). Although there is evidence that the digital divide is shrinking, Katz et al. (2001) find that differences in access still persist across

gender, age, household income, education, and race; and Nie and Erbring (2000) find such differences to be particularly pronounced across education and age.

#### WHO IS ONLINE?

Of those who have access to the Internet, U.S. users are almost evenly split between men and women, but with higher numbers of younger users; Whites; and those with higher incomes, higher education levels, and more years of access (Howard et al., 2001; Kavanaugh & Patterson, 2001; Nie & Erbring, 2000; UCLA CCP, 2000).<sup>8</sup> Currently in the United Kingdom (National Statistics Omnibus, 2000) and previously in the United States, more men than women were likely to have used the Internet. The greatest change in Internet access over time is observed in the previously underrepresented groups: Katz et al. (2001), comparing across cohorts of users in the United States based on the year they began to use the Internet (from 1992 to 2000), found that proportions of women, users older than 40, lower income earners, and non-college graduates have increased most during these years. Similarly, Statistics Canada (2000) reported the highest growth rate in Internet use and home connections for 1999 occurred in older age groups: households headed by seniors 65 years and older, followed by households headed by individuals aged 55 to 64 years. However, their numbers still show fewer regular users in these households compared with younger households (one tenth of households headed by adults older than 65 years had a regular Internet user, one third for the 55- to 64-year-olds, and one half for younger households). Similarly, Nie and Erbring (2000) found much lower access among those older than 65 years compared with those younger than 65 years.

As statistics on access show a shrinking digital divide, usage differences become more important for understanding overall Internet activity. Howard et al. (2001) show that on any particular day, of those who have access, more of the men, Whites, higher income earners, higher educated, and more experienced users are likely to be online. For example, 57% of men with access will be online compared with 52% of the women with access, and 56% of Whites compared with 36% of African Americans and 49% of Hispanics with access. Thus, focusing on access alone masks continuing digital divide differences. Similarly, although access as a single measure suggests greater numbers of younger people online, older users are online for more hours. Although this may be because of use associated with work (UCLA CCP, 2000) and the way work hours have crept into home hours (Nie & Erbring, 2000), Anderson and Tracey (2001) find some U.K. users of retirement age to be heavy users, and Nie and Erbring (2000) also found that retired users spend nearly 2 hours more a week using the Internet than nonretired users.

Across all studies, the largest and most significant differences in access and use are related to years of experience. Those who have been online longer spend more time online each day and are more likely to be online on any particular day. These “netizens” (Howard et al., 2001) represent the most active and

accomplished users and are the ones who engage in the most kinds of online activities (see also Nie & Erbring, 2000). For specifics on activity differences across demographic characteristics, see the studies in this issue as well as Nie and Erbring (2000) and UCLA CCP (2000).

As several authors point out, because all users are getting more experience online, these advanced users potentially show the direction in which Internet use is evolving. Thus, they are an important group to watch. However, it is important to note that at this time in Internet history these users still represent early adopters. Many studies have shown that behaviors and characteristics of such users differ from those of the later majority of adopters: They are more cosmopolitan, more socially active, and have higher incomes and education (Rogers, 1995), characteristics also being found in longtime Internet users. Indeed, several authors point out that the positive social impact of the Internet may reflect attributes of the users rather than any true impact of the Internet itself (see Howard et al., 2001 [this issue]; Nie, 2001 [this issue]). Thus, although an important leading group to watch, experienced users' patterns of use may not wholly predict use by later adopters.

Katz et al. (2001) show two other levels at which the digital divide still operates, both of which are consistent with consideration of stages in the adoption of innovations and of adopter characteristics (Rogers, 1995). In this issue they describe how the digital divide operates at the level of awareness of the Internet. Awareness is the initial stage in individual adoption of an innovation and thus a prerequisite for adoption. Those Americans more likely to be aware of the Internet are younger, male, higher income earners, and White. Once awareness is achieved, Katz et al. found no divide based on gender or race (in results for 2000). Similarly, Nie and Erbring (2000) also found that once on the Internet, use looks more homogeneous across all users.

The other level at which the digital divide still operates is in discontinuance (Rogers, 1995), that is, in demographics of Internet dropouts. Katz et al. (2001; see also Katz & Aspden, 1997) found that 8% to 11% of users drop out each year—usually younger, less affluent, and less well-educated users (but not proportionally more female or non-White users), for reasons such as lost access, insufficient interest, cost, and/or time. Early discontinuance of an innovation is a characteristic of late adopters, as are lower social connectivity, income, and education levels. These statistics show that considering access as a one-time event will fail to capture the churn in Internet access and use and the behaviors of only partially committed Internet users.

#### **WHAT ARE THEY USING THE INTERNET FOR?**

Across all studies, e-mail and searching for information take high priority in Internet time (see Tables 1 and 2 for data on activities by U.S. Internet users [Nie & Erbring, 2000; UCLA CCP, 2000] and Table 3 for U.K. users [National Statistics Omnibus, 2000]; see also Katz & Aspden, 1997; Katz et al., 2001; and

**TABLE 1: The Top 10 Most Popular Internet Activities**

<i>Activity</i>	<i>Percentage of Internet Users</i>
1. Web surfing or browsing	81.7
2. E-mail	81.6
3. Finding hobby information	57.2
4. Reading news	56.6
5. Finding entertainment information	54.3
6. Buying online	50.7
7. Finding travel information	45.8
8. Using instant messaging	39.6
9. Finding medical information	36.6
10. Playing games	33.0

SOURCE: UCLA Center for Communication Policy (2000).

**TABLE 2: What Users Do on the Internet**

<i>Activity</i>	<i>Percentage of Internet Users</i>
E-mail	90
General information	77
Surfing	69
Reading	67
Hobbies	63
Product information	62
Travel information	54
Work/business	46
Entertainment/games	36
Buying	36
Stock quotes	27
Job search	26
Chat rooms	24
Homework	21
Auctions	13
Banking	12
Trading stocks	7

SOURCE: Nie and Erbring (2000).

Wellman et al., 2001 for data on North American visitors to the National Geographic Web site). The high use of e-mail—80% to 90% of users—affirms Michael Strangelove’s statement that “the Internet is not about technology, it is not about information, it is about communication—people talking to each other, people exchanging e-mail . . . the Internet is a community of chronic communicators” (quoted in Putnam, 2000, p. 171). More than 80% of users use the Internet for e-mail, with an estimated 4 trillion e-mail messages exchanged in the United States in 1998, and 42% of Americans checking their e-mail daily (UCLA CCP, 2000). Users rank e-mail as the number one reason for being online (Katz & Aspden, 1997).

**TABLE 3: Adults Who Have Accessed the Internet by Purpose of Internet Use (personal use only; in percentages)**

<i>Activities</i>	<i>July 2000</i>	<i>October 2000</i>
Finding information about goods/services	70	66
Using e-mail	69	73
General browsing or surfing	64	64
Finding information related to education	34	34
Buying or ordering tickets/goods/services	28	33
Personal banking/financial/investment activities	21	22
Looking for work	18	20
Playing or downloading games <sup>a</sup>	17	21
Using chat rooms or sites	17	18
Playing or downloading music	16	17
Using or accessing government/official services	15	18
Other things	11	5

SOURCE: National Statistics Omnibus (2000).

a. In October 2000, downloading software including games.

The Internet's other main use is for seeking information, for example, hobby, medical, travel, or product information (Katz et al., 2001; Nie & Erbring, 2000; Statistics Canada, 2000; UCLA CCP, 2000). Longtime users, new users, nonusers, and former users all rank this activity as number one or two as a reason for being online (Katz & Aspden, 1997). The UCLA report (UCLA CCP, 2000) found that two thirds of users consider the Internet an important or extremely important source of information, with 80% using the Internet for Web surfing and browsing, and with adults spending more than one quarter of their time online looking for information.

Smaller but still large proportions of Internet users are engaging in e-commerce by buying products online: from 36% (SIQSS study) to 50.7% (UCLA study) in the United States and 33% in the United Kingdom (National Statistics Omnibus, 2000). In Canada, 19% of households with access had bought goods or services on the Internet in 1999, up from 9% two years earlier (Statistics Canada, 2000).

Whereas some studies find little difference in what people do online once they have access (Katz et al., 2001; Nie & Erbring, 2000), others find differences by gender, age, and race. Some gender differences are observed (although not uniformly) across studies. The Pew studies (Howard et al., 2001) find that men are more likely than women to be using the Internet to seek news, product, financial, or hobby information, or to do work-related research; the UCLA studies concur that men spend more time on commerce activities such as purchasing, banking, or auctions, but find women spend slightly more time on work-related activities (UCLA CCP, 2000). The HomeNet studies suggest that women carry offline communication behaviors online and are more likely to use e-mail for expressive rather than instrumental communication, that is, to exchange small talk and engage in relationship building communications (Boneva et al., 2001). Women also continue the offline characteristic of being the ones responsible for



maintaining ties with kin (Boneva et al., 2001; see also Kazmer & Haythornthwaite, 2001). Howard et al. (2001) did not find major differences between men and women in use of e-mail, but did find 49% of Whites send and read e-mail on a typical day compared with 27% of African Americans in their sample. Nie and Erbring (2000) noted that use of anonymous chat rooms is an activity for the young, with usage substantially lower for those older than age 25.

#### **HOW MUCH TIME DO THEY SPEND ONLINE?**

All researchers agree that using the Internet takes time—9.4 hours a week on average in one U.S. estimate, including work (UCLA CCP, 2000). Work-age U.S. users spend the most time online, with those from 19 to 55 years averaging more than 9 hours a week, peaking at 11 hours a week among those 25 to 35 years of age. Younger and older users spend less time online, with 12- to 15-year-olds using the Internet the least at just less than 6 hours a week<sup>9</sup> and those older than 65 years using it for just less than 7 hours a week. In the United Kingdom, time online appears to be much lower, at 1 to 3 hours a week across all age groups (Anderson & Tracey, 2001).

The number of hours online per week increases sharply with number of years using the Internet, from 6 hours a week for those with less than 1 year of experience to more than 16 hours a week for those with more than 4 years of experience (UCLA CCP, 2000). Activities and reasons for being online also change with experience. Users progress from being online for fun and playing games to being online for a specific reason and using it to accomplish personal or professional work (Howard et al., 2001).

Adding Internet-based activities to our daily lives requires a redistribution of our limited personal resources of time and effort. Nie and Erbring (2000) found that significant changes in individuals' lives appear when use exceeds 5 hours a week, and this includes approximately 36% of Internet users in their sample. To accommodate these hours, other activities are displaced. Time may be stolen from local face-to-face exchanges and given to distant friends, stolen from the phone and given to e-mail, and stolen from now with promise of return later. This change is not without controversy. If we spend time communicating via e-mail with distant friends and relatives, we have taken time from local activity. The controversy is not whether we do take time, but whether taking this time has positive or negative consequences. If we expend our social resources on maintaining ties with distant others or with strangers we may never meet face-to-face, this may compromise our local social relationships, which in turn may compromise our individual well-being (Kraut, Patterson, et al., 1998). However, another possibility is that the Internet may help us make connections to others: gaining another source of companionship, emotional support, help with jobs, and so forth, and may fill a void for those who currently operate in an alienating face-to-face environment. Yet another possibility is that the Internet does not embody any dramatic change in behavior but instead exaggerates what we do

already: for example, increasing circles of friends for the outgoing and successful among us, and decreasing the circle for the rest. Sorting out the actual impact of Internet use on social interaction is the second major area addressed in the studies in this issue.

### CONCERNS ABOUT SOCIAL INTERACTION

We cannot expect to add 16 or more hours a week of Internet time to our daily lives (as do users with more than 4 years of experience) (UCLA CCP, 2000) without changing some patterns of our behavior. As Nie (2001) questions and as Kazmer and Haythornthwaite (2001) examine in detail, when Internet hours are added to already full schedules, what gets dropped?

One place Internet hours come from is time previously used to watch television: Internet users spend 28% less time watching television than nonusers, approximately 4.6 hours a week (UCLA CCP, 2000).<sup>10</sup> Looking in more detail, Anderson and Tracey (2001) reported a long list of activities that are potentially displaced, but found impacts were marginal at best, including television; gardening; shopping; going to the pub; doing nothing; writing letters; sleeping; playing computer games; and typing on a typewriter. Whereas UCLA CCP (2000) found that their users reported spending the same amount of time reading books and newspapers and talking on the phone, Nie and Erbring (2000) found heavy Internet users cut back on use of all traditional media (television, newspapers, phone to friends and family) as well as shopping in stores and commuting in traffic. Kazmer and Haythornthwaite (2001) found that as time becomes constrained, online learners drop some activities first while preserving others—first to go are more individual activities such as television, reading for pleasure, needlework, and gardening; next to go are leisure activities with friends and work for volunteer groups; and then work, sleep, and eating are compromised. Kept to the end are time with family (particularly children) and work for the educational program itself.

Although all studies report decreased time watching television, Internet users in general are more media connected than nonusers—ahead in all categories except in the percentage using the television (tied at 97% of users and nonusers): Books are used by 12% more Internet users than nonusers; video games, 15%; recorded music, 22%; newspapers, 6% (note also that 57% of Internet users report reading news online as a key activity, so this figure may underrepresent overall use of newspapers); radio, 9%; and phone, 3% (UCLA CCP, 2000). This may be a reflection of the higher education and income of Internet users, and it may also again indicate characteristics of the earlier adopters. Their preexisting inclination to use media of all types, combined with familiarity and ease with these media, may have made it easier and less complex for them to adopt computing and the Internet (see Rogers, 1995). It may also have exposed them to

information about the Internet earlier than others, positively enhancing their awareness of the Internet and precipitating earlier adoption.

One concern regarding all this time spent online is that the solitary activity engendered by the Internet may displace time formerly spent on local social relations and have an adverse effect on individual well-being (Kraut, Patterson, et al., 1998; Nie, 2001). At another level of analysis, there is concern for the well-being of local geographically defined communities when individuals spend their time on individual activities or on interactions with people outside the area (Wellman, 1999). This concern has been cast in terms of the social capital that accrues to different communities according to the contributions from people who belong to the community, and is now best known through Robert Putnam's *Bowling Alone* (2000). Communities with high social capital, demonstrated and built through vibrant, face-to-face interaction in voluntary associations, provide a higher quality of life for their members (Kavanaugh & Patterson, 2001).

Thus, there are questions about whether the Internet has a positive or negative effect on individual well-being, relations with others, and social capital building within communities. At present, the statistics do not provide a clear position on this issue and can often be interpreted to support or refute the claim that the Internet is a solitary activity, harmful to social relations with others. To understand this issue, it is necessary to find out about many aspects of individuals' behavior in regard to the Internet, including answers to questions such as

- Does being on the Internet mean being alone? Does time online actually interfere with time with others, or does it replace time spent in otherwise solitary or low-interaction activities? Do users' perceptions of the impact of their time on the Internet on interpersonal relations concur with those of their friends and family members?
- What is the impact on friendships? Are local friendships traded for distant ones, or are distant ones added? Are strong, face-to-face interpersonal ties traded for weak, computer-mediated ones (Hampton & Wellman, 2001; Kraut, Patterson, et al., 1998; Wellman et al. 2001)?
- Do the dynamics of social interactions on the Internet add to or detract from individual well-being (Kraut, Patterson, et al., 1998)? Do they add to or detract from commitment to and participation in local community activities (Hampton & Wellman, 2000; Kavanaugh & Patterson, 2001; Putnam, 2000)? Do they increase, decrease, or supplement social capital (Wellman et al., 2001)?
- Does the Internet perpetuate and/or exaggerate existing offline behaviors, for example, increasing connectedness only for those with initially larger networks and better resources (Nie, 2001) or increasing communication only among natural communicators (Boneva et al., 2001)?
- Can and should Internet behaviors be considered separately from other aspects of individuals' lives?

Some brief and initial answers to these questions follow, largely drawn from the studies in this issue.

**DOES USING THE INTERNET MEAN BEING ALONE?**

Being alone may mean sitting at a computer on your own and/or pursuing individual pursuits on the Internet. We have already seen above that using the Internet means communicating with others, largely through e-mail, so a good proportion of the time online may be considered social. The UCLA study suggested that Internet use may not always mean being alone at the computer: 47% of users report spending “at least some time each week using the Internet with other household members” (UCLA CCP, 2000).

Being alone may also mean abandoning ties with those physically nearby. Individuals may feel this loss, as may the individuals with whom they no longer spend time. Internet users, in the main, do not feel they are reducing time with others. Katz et al. (2001) reported that 88% of users consider the Internet to have had little impact on time with friends and family. Howard et al. (2001) found that more than half the users say they now have more communication with family (59%) and with their primary friend (60%), as well as nearly one third now having communication with a family member they did not previously contact often (31%). In the UCLA study, most (92%) users connected to the Internet at home say they spend the same amount or more time together with household members.

Being alone can also mean not having others to turn to in times of need. Yet the Internet is also used to enhance social relations, both near and far. A number of studies point to increased contact with distant friends and relatives (Boneva et al., 2001; Kavanaugh & Patterson, 2001; Kazmer & Haythornthwaite, 2001; Kraut, Lundmark et al., 1998), and how this contact provides buffering from stress (LaRose, Eastin & Gregg, 2001). Hampton and Wellman (2001) show that people use the Internet to gain social support. After moving to a new suburban home, those on high-speed networks gained much more companionship and social support from members of their social network than did those without high-speed access; being online allowed them to retain their connections. But, even for those online, physical space had some constraint on Internet connectivity. Although social contact came for people at all distances, social support was more apt to be given by people living less than 300 miles (500 kilometers) away.

However, other results suggest decreases in sociability. Nie and Erbring (2000) found greater percentages of individuals reporting decreased time spent with family and friends with increasing time spent on the Internet, from 4% with 1 hour of Internet use per week to 15% with more than 10 hours use. Similarly, the percentage of individuals reporting decreased time talking on the phone with friends and family increases with time on the Internet, from 9% with 1 hour of use to 27% with more than 10 hours of use (no statistics are available on whether this is a switch from phone to e-mail or a loss of contact altogether). Also, in answer to another question in the UCLA study, Internet users report socializing less with household members than do nonusers by close to 4 hours a week

(UCLA CCP, 2000; see also Nie, 2001). Perhaps Internet users in the UCLA study are already low socializers, and adding Internet use may interfere less with their socializing than it might for others, explaining how 92% can say they spend the same amount of time with household members. Perhaps the impact is only felt when people use the Internet a lot, for example, above the 5 hours a week level at which Nie and Erbring (2000) found that behavior changes markedly. Other results suggest this may be the case: like Nie and Erbring, Kraut, Patterson, et al. (1998) also found that greater use of the Internet was associated with declines in family communication.

Being alone may also be a judgment made by those who are abandoned while the Internet user spends time online. How do others view Internet user's time with them? The UCLA study found that 75% say that they do not feel ignored by other household members spending too much time online (18% sometimes feel ignored and 6% often feel ignored). This appears to be less isolating than television, for which 63% report not feeling ignored by others' television habits (28% sometimes feel ignored and 9% often feel ignored). However, we may take with a grain of salt a seemingly positive statement about one potentially isolating medium when it is compared with another medium that is also often considered to be isolating. After all, nearly one quarter of those asked do feel ignored by their Internet-using household members. Also, if we compare the numbers above to those here, we find a disparity between users' perceptions of time spent with others and others' perceptions of being ignored: 92% of the users say they are not ignoring others, whereas only 75% of others do not feel ignored. Research has yet to explore fully what these sorts of numbers mean in people's lives.

#### **WHAT IS THE IMPACT ON CONTACT WITH OTHERS, FRIENDSHIPS, AND CIVIC ENGAGEMENT?**

Being alone may mean not communicating with anyone or not having friends and strong interpersonal relationships (Kraut, Patterson, et al., 1998). Users in UCLA's study reported moderately increased contact with family and friends (see also Howard et al., 2001) and professional colleagues, a small positive impact on contact with people who share their hobby or recreational activity, and negative impacts for contact with people who share their religion or political beliefs (UCLA CCP, 2000). Wellman et al. (2001) noted that distance still matters, with more contact occurring with those close to home than far away. They find that Internet contact neither increases nor decreases contact with people in person or on the telephone. It adds on to it, so that the more people use the Internet, the more overall contact increases with friends and relatives. Kavanaugh and Patterson (2001) saw local benefits, with users reporting increased communication with members of formal social groups and with local friends; and Hampton and Wellman (2001) saw benefits in a wired community,

with individuals knowing many more neighbors when using the local network (knowing the names of 25 neighbors compared to 8 for the nonwired, and with 50% more visiting) (see also Hampton, 2001).

Being alone locally may be countered by new and enhanced social relations with others expressed via the Internet, and carried from the Internet to offline, face-to-face relationships. Many reported increased contact with distant friends and relatives because of the Internet (Boneva et al., 2001; Hampton & Wellman, 2001; Kavanaugh & Patterson, 2001; Kazmer & Haythornthwaite, 2001; Kraut, Patterson, et al., 1998; Wellman et al., 2001). In the UCLA study, 26% of users said that they have online friends they have not met in person, and 12% have met in person someone they first met online (UCLA CCP, 2000). In 1995, Katz et al. (2001) found 12% of users had established friendships via the Internet, and 17% had met face-to-face at least once with someone they first met online; in 2000, 14% reported online friendships, and 10% had met someone offline.

However, it is also evident that connectivity seems to go to the connected, that is, greater social benefit from the Internet accrues to those already well situated socially. As Nie (2001) pointed out, connectivity already goes to those with higher levels of income and education, and the greater connectivity seen in comparisons of Internet users to nonusers may result from preexisting high connectivity levels of such individuals. Other studies also suggested that adding a new medium to one's communication repertoire is more likely when one has a stronger tie to others (Haythornthwaite, 2000; Haythornthwaite & Wellman, 1998; Koku, Nazer, & Wellman, 2001); frequent contact via the Internet is also associated with frequent contact via other means (Wellman et al., 2001). These studies show that more media are used by communicating pairs the closer the work and/or friendship association between them. Thus, individuals who are highly socially connected, and likely within that set of connections to maintain higher numbers of stronger ties, are also more likely to be the ones adopting and using the Internet for communication and connectivity.<sup>11</sup>

Existing connectivity levels may also have an impact on the success of more community-wide Internet initiatives. Kavanaugh and Patterson (2001) found that high levels of community involvement are associated with more use of the Internet for interpersonal and group communication activities. In summarizing their results, they concur with an observation by Putnam that the success of their community network, the Blacksburg Electronic Village, may have been because it was established in a richly socially connected environment, and that social capital may be a prerequisite rather than a consequence of effective computer-mediated communication (Kavanaugh & Patterson, 2001, citing Putnam, 2000).

Local connectivity also seems to matter in who becomes more connected online, as do gender and experience. The chances of making a friend online increase substantially with increased belonging to a neighborhood and with knowing a neighbor well enough to talk about a personal matter (Matei & Ball-Rokeach, 2001); women, who traditionally maintain family ties, are found to be more likely to maintain e-mail connections with distant friends and

relatives and to maintain larger networks of distant contacts than men (Boneva et al., 2001). Experience also makes a difference. Those more familiar with Internet technologies are also more likely to make social connections. Thus, we see that using the Internet to communicate with others increases with years of use of the Internet (Kavanaugh & Patterson, 2001; Wellman et al., 2001) and increased confidence with the technologies (Kazmer & Haythornthwaite, 2001). Connecting with others may even include giving technical help to get distant relatives online so that contact can happen via e-mail (Kazmer & Haythornthwaite, 2001). Wellman et al. (2001) provide a note of caution. They report that heavy Internet users have a lower sense of online community. They speculate that this may be because the Internet has become a routinized, unremarkable part of their lives, or because heavy Internet use increases the prospects for receiving distasteful communications online.

Key to concerns about individuals' solitary and social behaviors is the well-supported finding that social contact, and its attendant access to emotional and material support resources, engenders personal well-being (see Hampton & Wellman, 2001; Kavanaugh & Patterson, 2001; Kraut, Patterson, et al., 1998). Does use of the Internet decrease personal well-being? The Kraut, Patterson, et al. (1998) study sounded an alarm about this problem. The authors found a negative association between higher Internet use and increases in depression. These authors cautioned that it must be interpreted in the light of the age of participants (teenagers being higher Internet users in their study) and with attention to the direction of causation. (Were more depressed individuals using the Internet more because they were depressed, or did the greater use make them depressed?) However, their results clearly indicate that concern for individual well-being and Internet use has a real foundation, and whether causal or correlational needs to be investigated further.<sup>12</sup>

Just such an investigation has been done recently by LaRose, Eastin, and Gregg (2001). Results from a sample of college students, a mobile population less likely to have local social support, showed that Internet use was positively associated with receiving e-mail from known others, which in turn was associated with greater social support. This support then had a mitigating effect on general stress and depression. They also found a significant difference in Internet self-efficacy, the belief in one's ability to use the Internet successfully, between new and experienced users (less than 2 years of experience and more than 2 years). Those with greater self-efficacy experienced less Internet stress (e.g., stress associated with technical aspects of Internet use), a contributing factor in depression. Hampton and Wellman (2001) reported that another mobile population, new home owners, fared better in maintaining social contacts when connected to the Internet at home than when not: Those who were connected reported almost no change in social contact compared with a year before their move, whereas the nonconnected experienced a drop in contact. Again, it can be expected that such social contact will generate social support, easing the transition to a new neighborhood. Both these studies show how the Internet may help



reduce depression for specific kinds of population and stress again the need for exploring Internet use in conjunction with a user's lifestage, not separate from it.

### BRINGING IT ALL TOGETHER

Much of the discussion of Internet use tends to consider it as separate from people's lives, an add-on that interferes with real-life activity. How separate are Internet activities from other aspects of individuals' lives? Is it a stand-alone activity, or does it become no more separate than picking up the phone is separate from talking to family? In considering the integration of the Internet into our daily lives, we also need to remember that, as many point out, the Internet is a new social phenomenon that has been in place for fewer than 11 years. We already see that experience and time online changes behavior; we are watching an emerging phenomenon, not a mature one. At present we see that types of use, time spent online, and connectivity to others all increase with the amount of time people have had access to and used Internet applications. We also find more synergies between different spheres of activity with increased years of experience. Kavanaugh and Patterson (2001) noted an increase in "social capital building activities" with more years of access, including communication with close and distant friends, relatives, coworkers, and volunteer groups. Howard et al. (2001) distinguished the more experienced netizens from others in the way they incorporate the Internet into both home and work life, their comfort level in spending and managing their money online, and using e-mail to enhance social relationships. Wellman et al. (2001) show that the more time people spend online, the more they are involved with organizations and politics, offline as well as online. And Kazmer and Haythornthwaite (2001; see also Haythornthwaite, Kazmer, Robins, & Shoemaker, 2000) described how synergy between individuals' work, home, and school worlds develops with experience in an online environment and how more experienced users seek ways to integrate Internet applications such as e-mail into their personal, work, and volunteer environments.

Access to the Internet also dovetails with daily life: For better or worse, work creeps into home hours as computers and the Internet reach the home (Kraut, Patterson, et al., 1998; Nie & Erbring, 2000), and education also enters this over-filled home as adult students engage in Internet-based courses in the midst of home and work responsibilities (Kazmer & Haythornthwaite, 2001). These crossovers also precipitate greater access. For example, the UCLA study found that women's access to the Internet (but not men's) is markedly higher when there are children in the household (70% vs. 57%). Computing and the Internet also enter local communities through community network initiatives, as in Blacksburg, Virginia (Kavanaugh & Patterson, 2001), and the wired suburb near Toronto, Ontario (Hampton & Wellman, 2001). Thus, influences from outside



the home—work, school, and networking initiatives—precipitate access and use in the home. Yet this then precipitates use from home to elsewhere, as netizens connect from their homes to the homes of others and bring voluntary groups online.

Explaining Internet behaviors entails understanding that the Internet is not a separate entity but instead a (potential) complement to ongoing activity. Its seemingly contradictory trends cannot be fully understood without considering a more integrative view of people's lives. Similarly, it cannot be explained without considering the specifics of individuals' lives, including lifestage and lifestyle (Anderson & Tracey, 2001), needs in a mobile world (Putnam, 2000), multiple world obligations (Kazmer & Haythornthwaite, 2001), strong and weak ties (Haythornthwaite, 2001; Kraut, Patterson, et al., 1998; Wellman, in press), and user and nonuser demographics (Nie, 2001). Studies in this issue begin the task of unbundling the Internet and individual characteristics and environments. There is more to be done, but here we join others in beginning the large task of understanding the major social phenomenon that is the Internet.

## NOTES

1. For reviews of trends in research on computer-mediated communication (CMC) and recent reviews and collections, see DiMaggio, Hargittai, Neuman, and Robinson (2001); Jones (1995, 1998); Kiesler (1997); Lievrouw et al. (2001); Smith and Kollock (1999); Wellman (2001); and Wellman et al. (1996).

2. Of those using the Internet 1 hour a week, 2% report more time working at home and at the office and 3% report more time at home and the same amount at the office; for 1 to 5 hours of Internet use the numbers are 3% and 14%; 5 to 20 hours, 7% and 15%; and more than 10 hours, 12% and 16% (Nie & Erbring, 2000).

3. Statistics Canada (2000) reported a much higher rate of interest in and connection to the Internet among households with unmarried children younger than 18 years: 59% of Canadian single-family households with unmarried children younger than 18 years were connected to the Internet in 1999, compared with 39% for other single-family households. In 1999, 40% of households with children were connected from home, nearly twice the proportion in 1997. For Statistics Canada reports in English or French, see <http://www.statcan.ca>.

4. Several of the articles in this issue were first presented at the Association of Internet Researchers conference, September 2000, Lawrence, Kansas (see <http://www.aoir.org>).

5. *Syntopia* is derived from the Greek, meaning literally "together place." For a further explanation of this project and its name, see Katz, Aspden, and Rice (2001 [this issue]).

6. For a recent article giving a Canadian perspective on the digital divide, see Birdsall (2000).

7. See also Sawhney (2000) for a special issue of *The Information Society* on universal service, and a forthcoming special issue in the same journal by Strover on the digital divide.

8. None of these studies report on differences between rural to urban populations; see the National Telecommunications and Information Administration (2000) reports for data on rural and urban Internet access.

9. However, Kraut, Patterson, et al. (1998) found that teenagers in their sample of households used the Internet more than other household members. Their sample consisted of households in their first 1 to 2 years of Internet use that had not had Internet access before. For the same sample, Kiesler,

Lundmark, Zdaniuk, and Kraut (2000) found teens playing a major role in help seeking and help giving relating to the technical features of the Internet and acting as the technological gurus for the household.

10. See also Kraut, Patterson, et al. (1998) for a discussion of the television and social involvement and Putnam (2000).

11. For more on Internet use and social network ties, see Wellman (1997, 2001), Wellman and Gulia (1999), and Wellman et al. (1996). See also Kraut, Patterson, et al. (1998) for a discussion of the potential effect of the Internet on an individual's personal network of strong and weak ties, and Haythornthwaite (2001) for a discussion of the nonlinear impact of new medium on weak and strong ties.

12. For a recent follow-up study, see Kraut et al., (in press).

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