THE IMMANENT INTERNET

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The Descent of the Internet

The Transcendent Internet

The Internet has descended from an awesome part of the ethereal firmament to become immanent in everyday life. As it descended, the Internet developed, mutated, and proliferated, providing a multitude of computer-mediated options for people to communicate. The stand-alone capital-I "Internet" became the more widespread and complex small-i "internet".

Although the technological nature of the immanent internet does not determine social behavior, it provides both opportunities and constraints for social relationships. The internet has become intertwined with a larger paradigm shift in how people are connected: from relatively homogenous, broadly-embracing, densely-knit, and tightly-bounded groups to more heterogeneous, specialized, sparsely-knit, and loosely-bounded social networks. Although the transformation began in the pre-internet 1960s, the proliferation of the internet both reflects and further facilitates this shift in social organization to networked individualism.

Utopian Dreams and Dystopian Fears: The internet was originally viewed as a dazzling light shining above everyday concerns. In the 1990s, when the internet moved from the arcane scholarly world to homes and offices, it was heralded as the gateway to a new illuminating Enlightenment. The very term "Internet" became used for any snazzy new electronic activity. Early adopters congratulated themselves on being progressive elites, and techno-nerds rejoiced in newfound respect and fame. Bespectacled, nerdy Microsoft founder Bill Gates was as much a superstar as rock singers and professional athletes. Special newspaper internet sections were created in the boom to capture dot.com ads and reader interest. All things seemed possible. The internet had astounded and mesmerized the world. The cover of the millennial December 1999 issue of *Wired* magazine (the *Vogue* of the internet world) graphically represents the optimism of the times. It shows an Icarian cyberangel leaping from a cliff to reach for the ethereal sun. The angel's graceful posture points upward, placing boundless faith in an unfettered cyber-

future (Figure 1).

> Figure 1: Cyber-angel from Wired, 12/99 <

In the euphoria, much early writing of the impact of the internet was unsullied by data and informed only by conjecture and anecdotal evidence. Travelers' tales from *internet incognita* abounded. The analyses were often Utopian: extolling the internet as egalitarian and globe-spanning and ignoring how differences in power and status might affect interactions on and offline. The internet was seen as an ethereal manifestation of Teilhard de Chardin's noosphere (1964), providing the technological means for the collective consciousness of the world. Philosopher Eric Raymond makes this transcendent connection clear in his *Homesteading in the Noosphere* (2000), showing how open source hackers stake their claims on the frontier of programming ideas and approach their projects as a simultaneous combination of property and gift.

Communication was the internet's main use during these early years. The predominant use was asynchronous, person-to-person email, but there was some use of asynchronous discussion lists and synchronous chat groups, multi-user simulations (MUDs, MOOs), and after 1997 instant messaging[1]. Some seers felt that it would not be long before all would be connected to all, transcending the boundaries of time and space. As John Perry Barlow, a leader of the Electric Frontier Foundation (and songwriter for the Grateful Dead), wrote in 1995:

> With the development of the Internet, and with the increasing pervasiveness of communication between networked computers, we are in the middle of the most transforming technological event since the capture of fire. I used to think that it was just the biggest thing since Gutenberg, but now I think you have to go back farther (p. 36)… In order to feel the greatest sense of communication, to realize the most experience, . . . I want to be able to completely interact with the consciousness that's trying to communicate with mine. Rapidly. . . We are now creating a space in which the people of the planet can have that kind of communication relationship (p. 40)

Some cyber theorists started to consider the body as essentially a host for the superhighway cruising mind. Early writers of cyberpunk set the terms through with characters who "jacked-in" to a separate and more engaging reality. The novels *Neuromancer* (Gibson 1984) and *Snow Crash* (Stephenson 1992) played a substantial part in shaping this cultural fantasy, with Gibson's "cyberspace" term becoming a metaphor for life on the internet. Sherry Turkle's non-fiction *Life on The Screen* (1995) portrayed the internet as fracturing a person's unified sense of identity. As one of her respondents says "RL [Real-Life] is just one more window...and it's not usually my best one" (p. 13).

Yet Turkle's close observations led some pundits to mistake the leaves for the trees and forests. Extrapolations from her tiny sample of early adopters to the population at large

[1] Search engines to find information had not reached their Netscapian ease of use and producing web content still required the knowledge of computer code. Most businesses did not think that a web presence was crucial until the late 1990s.

popularized the perception of a transcendental life-consuming internet[2]. Rather than seeing denizens of virtual communities as a special minority, pundits often pointed to them as precursors of the future, linked in a Borgian meta-mind (Berman and Pillar 1995) as "connected intelligence" (DeKerckhove 1997) and "collective intelligence" (Levy 1997).

Many people lost their perspective in their euphoria and became parochial and presentist. In their *presentism*, they forgot that long distance ties had been flourishing for generations, using automobiles, telephones, airplanes, and even postal (snail) mail. Others had no perspective to begin with, and just jumped on the internet bandwagon to find fame and fortune. Like Barlow, they thought that the world had started anew with the internet (see the review in Wellman and Gulia 1999).

Parochially, many pundits and computer scientists assumed that only online phenomena are relevant to understanding the internet. They realized that computer mediated communication – in the guise of the internet – fostered widespread connectivity, but they insisted on looking at online phenomena in isolation. They committed the fallacy of *particularism*, thinking of the internet as a lived experience distinct from the rest of life. This approach often shaded into *elitism*, as only the small percentage of the technologically adept had the equipment, knowledge, time and desire to plunge so fully into cyberspace.

To be sure, there was scholarly research, much of it good, but it was mainly laboratory experiments, well summarized in Sproull and Kiesler's *Connections* (1991) or ethnographic accounts such as Turkle's. The media were permeated with traveler's tales of journeys to the exotic internet, much like early travelers to 16th-century America wrote. For example, the tagline on the cover of Mary Dery's cultural study of the internet suggests the book is "an unforgettable journey into the dark heart of the information age" (1995, Book cover). Enthusiastic computer scientists filled meetings of "CSCW" (computer supported cooperative work) and "CHI" (computer-human interaction) conferences with reports of their amazing new applications. All of these accounts provided rich detail and a sense of process, but their particularity created the danger of inaccurate generalization. While it was true that some people were immersed online, most were not.

The dystopians had their say too. They similarly assumed the future would find humanity engulfed by the internet but found the proposition distressing. They worried that ephemeral online identities would trump their offline counterparts. Anecdotes of gender deception were told and retold (Van Gelder 1985; Turkle 1995; Dery 1997; selections from Bell and Kennedy 2000) They continue, with a 2004 *New Yorker* cartoon portraying a little old lady sitting at her PC and typing "Oh baby … oh baby … oh baby …" (Duffy 2004).

A mini-industry developed to deal with internet pathologies. Several psychologists claimed to treat people with "Internet addiction" (e.g., Young 1998).

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[2]Howard Rheingold's *The Virtual Community* (1993) is a classic statement, although he markedly tempers his outlook in the second edition (2000). For other recent and more balanced ethnographies see Kendall (2002) and Chayko (2002).

One psychologist's diagnostic tool was adapted from a gambling addiction questionnaire, with "Internet" substituted for gambling (Greenfield 1999). Such approaches ignore the positive benefits of being involved with the internet: Compare a statement such as "I am gambling too much" with one such as "I am communicating too much". Such concerns continue. In February 2004, a Toronto reporter asked one author (Wellman) to comment on the deaths of four "cyber-addicts" who spent much time online in virtual reality milieus. When Wellman pointed out that other causes might be involved and that "addicts" were probably a low percentage of users, the reporter lost interest. Nor are such pathologies necessarily the result of internet use. As one disheveled man points out to a bar mate in another *New Yorker* cartoon, "I was addicted to porn before there was an internet" (Vey 2004).

A more pervasive concern has been that the internet would suck time out of in-person connectivity, fostering alienation and real-world disconnection. Thus, Texas broadcaster Jim Hightower worried that

> while all this razzle-dazzle connects us electronically, it disconnects us from each other, having us "interfacing" more with computers and TV screens than looking in the face of our fellow human beings. [quoted in Fox, 1995, p. 12].

Fueling this fear, one scholarly report showed that heavy adolescent users were more alienated than other teens from their households (Kraut, et al. 1998). This was trumpeted in newspaper headlines that neglected to report that the differences were only a few percentage points and occurred only among a small minority of internet users. Despite its limitations, at least this research was a pioneer of field-based systematic research with a representative sample. It was a marked improvement on the 1990s attempts of pundits and computer scientists alike to get a handle on what was happening without taking account of social science knowledge.

Frustrated with the prevalence of presentism and parochialism, one of the authors wrote an article arguing that the internet was not the coming of the new millennium (Wellman and Gulia 1999). Rather, it was a new computer mediated technology following the path of other promoters of transportation and communication connectivity, such as the telegraph, railroad, telephone, automobile, and airplane. The article showed how community dynamics continued to operate on the internet. There was no disconnection between the "virtual world" and the "real world". Rather, online communications have become – and probably always were – immanent parts of the real world of flesh and computers.

The dot.com stock market bust of 2000 curbed media enthusiasm and tempered the polarized rhetoric of utopian hope and dystopian fear. Special newspaper sections shrank in the wake of instantly vanishing dot.com vanity ads. The pages of *Wired* magazine, the internet's greatest cultural champion, shrank 25 percent from 240 pages in September 1996 to 180 pages in September 2001, and another 22 percent to 140 pages in September 2003. Revenue and subscription rates followed suit (Figure 2),

with *Wired* editors noting ruefully that their magazine "used to be as thick as a phone book" (*Wired* 2004, p. 23).

> Figure 2: *Wired* magazine circulation <

The dot.com bust brought expectations down to earth just as the internet achieved its most important sociological milestone – indifference. The internet has become so widely used in developed countries that its use is becoming routinized. Familiarity breeds cognitive neglect. Many pundits have shifted their gaze from the internet to the other technologies amenable to their utopian rhetoric, such as nanotechnology. Like the telephone and the automobile before it, exotic stories diminished just as the widespread diffusion of the internet increased its true social importance (see the discussions in Wellman & Haythornthwaite 2002; Jankowski, et al. 2004).

The Immanent Internet: Despite the dot.com meltdown, both the number of internet users and their frequency of use have increased. The internet's growth meant it no longer stood apart from the rest of life, if it ever had. The internet has become embedded in everyday life, a routine appliance for communicating, and being informed. Indeed, reports emailed to the discussion list of the Association of Internet Researchers in late 2003 suggest that many people do not even think they are on the internet when they are instant messaging or chatting. It is just something they do, and not a privileged form of communication to get excited about. As Susan Herring puts it, the internet is now "slouching toward the ordinary" (2004, p. 26).

The story after the death of internet hype continues to be interesting, if less fashionable. The internet plugs into existing social structures: it reproduces class, race and gender inequalities; brings some new cultural forms into the foray; and maps onto everyday life in both novel and conventional ways. Attention now focuses on the broader questions of the "internet in society" rather than on "Internet societies". Where the first age of the internet was a period of exploration, hope and uncertainty, the second age of the internet has been one of routinization, diffusion and development.

This is reminiscent of the transformation in the use of the telephone. Where our great-grandparents used to shout at the telephone receiver during a local call and our grandparents were reluctant to make expensive long distance calls, almost all residents of the developed world use the telephone routinely, without any consciousness of the technological marvels that sustain it. Moreover, young people apparent feel undressed without their mobile phones – so much so that it can become their "third skin" after biological skin and clothing (Fortunati, Katz and Riccini 2003). In cafés in Europe, automobiles in North America and railroads in Japan, mobile phones come out as soon as people sit down. The use of mobile phones is so habitual that people often talk into them without any apparent awareness that their conversations impinge on the comfort of nearby listeners (Ling 2004).

The ethereal internet light that previously dazzled has now dimmed to a soft glow permeating everyday concerns. We have moved from a world of internet wizards to a world of ordinary people routinely using the internet. The internet has become an

important part of people's lives, but not a special part. It is has become the utility of the masses rather than the plaything of computer scientists. It has become the infrastructure for a variety of computer-supported communications media, and not just the specialized conveyor of e-mail.

In retrospect, its easy to see how early diffusion patterns had fostered the emergence of the ideology of internet as transcendent force. When the internet connected few members of society it was likely that disproportionate time online would be spent connecting with people living far away. Something as prosaic as a neighborhood message board is unthinkable when only three people on the street are online. As the network effect of this technology took hold, people adopted it because others they already knew were online. Communication was not primarily with far-flung mysterious others in virtual worlds, but with the people whom users already cared about most: family, friends and workmates (Quan-Hasse, et al. 2002; Boneva and Kraut 2002).

As the internet has become immanent in everyday life, its uses have kept multiplying and democratizing. The initial killer application of email is now routinely accompanied by interactions via chat rooms, instant messaging, and webphones. Pictures, streaming video, music, and data files of all sorts now accompany text. The World Wide Web is now comprehensive, usable and often aesthetically pleasing. Search engines, such as *Alta Vista* and later *Google,* have developed clever algorithms to shift web surfing from a cognoscenti's game of memorizing arcane URLs and IP addresses to successful surfing through a few well-suggested words. Blogs have moved web creation beyond institutional designers' expertise to everyperson's soapbox (Nolan 2003). Desktop computers have been joined by much smaller laptops (which now represent about 40 percent of the personal computer market in North America and probably more in East Asia) and PDAs (personal digital assistants such as the *Palm).* Smart phones are converging with PDAs as the quest for a universal, portable personal appliance continues.

Although a majority of people in developed countries have access to the internet, the digital divide persists. For one thing, access does not necessarily mean use, as people have real or imagined reasons and fears about why they do not use the internet. They are more apt to use mobile phones. In most countries it is the economically privileged or educated (typically men) who are the early adopters. Racial minorities, the economically disadvantaged, and those who do not read English use the internet less than others. This has serious social consequences as companies and government agencies place more services exclusively online (Chen and Wellman 2004).

Once the issue of access is resolved, the issue of cultural barriers emerge as the dominant concern. The quality of the Internet experience is a key concern for reducing social inequality (Servon 2003). First, the ability to perform a complex and efficient search is not a skill learned by osmosis, but through experience and openness to the potential of the technology (Hargittai 2003). Second, bloated software that inundates users with ambiguous options and icons can intimidate novices (Baecker, et al. 2000). Third, there are time lags in informed use between experienced early adopters, late adopters and newbies. These populations can have significantly different expectations about what to do

online, and how to do it. Fourth, many sites are only available in English, a language not read by most of the world. Fifth, there are network effects: if one's network members are not online, there is less need to use the internet (see Rogers 1995).

The digital divide is narrowing in most developed countries, so that old as well as young, rich as well as poor, are frequently online. As time wears on, both women and the less privileged typically turn on, often for the perceived benefit of their children. The gender gap is disappearing in developed countries, with women coming to use the internet as much as men, with the notable exception of Italy. However, the socioeconomic gap persists in most countries even with increasing use, because poorer folks are not increasing their rate of use as much as wealthier, better-educated ones. And the global digital divide is getting even wider, as internet use in developed countries increases much faster than in developing countries (Chen and Wellman 2004).

Although the demographic trends show that internet use is converging within countries, the character of internet use can differ widely between countries. For example, Catalans mostly use the internet for acquiring information and shopping – train schedules, theatre tickets – and less for communicating by email. Catalonia is a local society in a salubrious climate where people gather in cafés to chat face-to-face (Castells, et al. 2003). To take another example, teens in developed countries communicate more by mobile phone and instant messages than by email (Ling 2004). In Japan, the proliferation of web-enabled phones means that two hitherto separate communication media are becoming linked: Japanese teens and young adults frequently exchange emails on their mobile phones, or use their PCs to send short text messages to mobile friends (Miyata, et al. 2004; Ito 2004). The extent to which such media as email or instant messaging are used depends on the complex interplay of people's tastes, financial resources, culture, geographic location, location in the social structure, and national infrastructure.

Pundits have often claimed that the internet is yet another way in which the world is being recast as a "global village" (McLuhan 1962, p. 31). The metaphor implies that the role of place is deprecated due to the speed of electronic communication. Yet, the internet is a social phenomenon, and for many reasons, one's social network remains at least partially rooted in locality. In Catalonia, when email is used, it is usually to contact someone nearby. In the wired Toronto suburb of "Netville," those residents with always-on, super-fast internet access knew the names of three times as many neighbors as their unwired counterparts, spoke with twice as many, and visited in the homes of 1.5 times as many (Hampton and Wellman 2003). A Toronto and a Chicago study each found that coworkers were more likely to use the internet when they worked in the same building, in part because they had more tasks and concerns in common (Koku, Nazer and Wellman 2001; Quan-Haase and Wellman 2004). People often use the internet to communicate quickly with nearby others without the disturbance of a phone call or in-person visit. Even many long-distance ties have a local component, as when former neighbors or officemates use the internet to remain in touch, or distant ties arrange a get-together in "meatspace".

Nevertheless, the globe-spanning properties of the internet are real, as in the electronic diasporas that connect émigrés to their homeland. The internet enables

diasporas to aggregate and transmit reliable, informal news back to often-censored countries (Miller and Slater 2000; Mitra 2003). With physical co-presence also continuing to be important, the internet supports *glocalization* – both long-distance and local connectivity (Wellman and Hampton 1999) -- rather than the imagined "global village". In the community and at work, the internet facilitates physically-close local ties as well as physically-distant ties.

Interestingly, glocalization has not led to a reduction in levels of communication for the internet actively supports all forms of contact: interpersonally, within organizations, and between organizations. Far from pulling people apart, the internet often brings them closer together. Internet users are more likely that non-users to read newspapers, discuss important matters with their spouses and close friends, form neighborhood associations, vote and participate in sociable offline activities, controlling for demographic factors. The more they meet in-person or by telephone, the more they use the internet to communicate. This "media multiplexity" suggests that the more people communicate by one medium, the more they communicate overall. For example, people might phone to arrange a social or work meeting, alter arrangements over the internet, and then get together in person. Rather than only connecting online, in-person or by telephone, many relationships are complex dances of serendipitous face-to-face encounters, scheduled meetings, telephone chats, email exchanges with one person or several others, and broader online discussions among those sharing interests.

However, the extensive use of the internet as communications media is not fully pervasive. Gregarious, extroverted people seize on all media available to communicate. They embrace the ways in which the internet gives them an extra and efficient means of community. By contrast, introverts can feel overloaded and alienated (Kraut, et al. 2002).

In addition to the workgroup and Netville studies mentioned above, our NetLab research group has observed the presence of media multiplexity in two separate worldwide studies of the internet. The National Geographic Survey 2000 found that overall contact with far away friends is 255 percent more frequent[3] for heavy email users than those who never use email, and 149 percent more frequent for far away kin (see Figure 3; Chen, Boase and Wellman 2002; Quan-Haase, et al. 2002). The later National Geographic Survey 2001 showed that email users had 43 percent more days in the run of a month where they would discuss important matters with their spouse via telephone and 7 percent more days discussing important matters in person[4] (Table 1; see also Hogan 2003). One curious fact emerging from these studies is that people are being more selective of whom they communicate with. Despite the fact that internet users communicate more often with their close friends and spouses, they communicate in person less with those kin who do not communicate online.

[Figure 3: long-distance kinship]

[insert table 1 here]

[3]Measured in terms of days per year with contact via any medium.
[4]Measured in terms of days per month.

Neither the utopian hopes of Barlow nor the dystopian fears of Hightower have been borne out. Despite Barlow's hopes, the internet has not brought a utopia of widespread global communication and democracy. Despite Hightower's fears, high levels of internet use have not lured people away from in-person contact. To the contrary, the more people use the internet, the more they see each other in person (distance permitting) and talk on the telephone (Wellman and Haythornthwaite 2002). This may be because the internet helps arrange in-person meetings and helps maintain relationships in between meetings (Haythornthwaite and Wellman 1998). Mobile phones have become a key to arranging get togethers among people who frequently move between social roles and physical sites. Although it is too early to provide a definitive interpretation of such findings, they suggest that internet users are supplementing contact with people with whom they share characteristics (kinship, same ethnic group, same neighborhood) with increased contact with people with whom they share common interests.

The Social Affordances of the Internet

Social scientists have repeatedly shown that technological changes do not determine social behavior (e.g., Oudshoorn and Pinch 2004). For example, communication scientists mistakenly thought in the 1980s and early 1990s that the lower "media richness" of the internet would preclude emotional and social conversations. It would be good only for narrow, instrumental matters, such as exchanging information or making arrangements (see the review in Haythornthwaite and Wellman 1998). Yet we daresay that every reader of this chapter has used the internet to exchange emotional support and experience sheer sociability.

Although technology creates certain opportunities and constraints for interaction, "social affordances" (Norman 1990; Bradner and Kellogg 1999), the actual use of technology is affected by both social structures and social conventions. Technological constraints, be they bandwidth or software capability, prevent people from engaging the internet in a particular way. For example, people cannot stream webcam video on a modem that transmits 28 bits per second, and no amount of textual virtual community will eliminate this constraint. And the switch from the textual DOS interface to the graphical Windows (or Mac) interface afforded the spatial organization of files and programs. Yet this shift constrained blind people who preferred the sequentially organized command prompt over a mouse-driven interace.

The use of technology is socially malleable. Different cultures use the internet in a wide variety of ways that map on to their existing social patterns. For example, Catalans have a convivial culture that is not amenable to online interaction (Castells, et al. 2003). As such, they use it for most often for coordination and information retrieval. The Japanese send many more short text messages by mobile phones than do Americans, but they use PCs less (Miyata, et al. 2004).

Globalized ubiquitous connectivity is another affordance. Inexpensive, rapid internet communication helps immigrants with many long distance ties to maintain their connections back home. On the other hand, the digital divide between and within countries

means that only the technologically well-connected can be socially well-connected to loved ones abroad.

Personalization is an emerging affordance. Users can have their own settings, email accounts and desktop aesthetics. Accounts, such as email, are for the person rather than for the household. Coupled with ubiquitous computing, personalization could soon mean that whenever people log on to communications devices, the device will soon know who they are, where they are, and what settings they prefer. Such personalization, even at its early stages, is fostering societal shifts from place-to-place connectivity -- a particular telephone or computer wired in place -- to person-to-person connectivity -- a particular user's mobile phone or internet account, wherever located (Wellman 2001a, 2001b)

Although some affordances, such as increased bandwidth, are the result of recent technological developments, others are the result of software innovation (asynchronous email, downloading music). Some affordances combine hardware and software innovation with ideological and cultural shifts to promote personalization and ubiquitous connectivity. Communication tools such as email, instant messaging and chat rooms are now widely taken for granted in the developed world. If people are not on the internet itself, their family, workmates or friends are.

Rather than a special world, the internet has extended real-world communication. Consider how discourse has shifted in the past fifteen years:

1. "Have you heard about the Internet?"
2. "Do you have an email address?"
3. "What is your email address?"
4. "Which of your email addresses shall I use?" (Reflecting multiple roles.)
5. "Send me an IM [instant message: North American]. Text me a message on your mobile phone [Japan, Europe]"
6. "I've attached [to this email] pictures of my baby/boudoir/trip."
7. "Do you have a website?"
8. "What is your web address?"
9. "Do you have a blog?"
10. "I've missed seeing you. Let's get webcams."
11. "Let's get internet phones and talk to each other all night."
12. And soon we are going to have buildings, objects and people talking to our personal digital assistants as location becomes salient again for communication and information: "My PDA says you're in the area. Let's go for a coffee."

Towards Networked Individualism

A funny thing happened on the way to the embedding of the internet in everyday life. The nature of everyday life changed for many people, from group-centric to network-centric. Much social organization no longer fits the group model. Work, community and domesticity have moved from hierarchically arranged, densely knit, bounded groups to social networks. In networked societies boundaries are more permeable, interactions are with diverse others, linkages switch between multiple networks, and hierarchies are flatter

and more recursive.

The shift to a ubiquitous, personalized, wireless world fosters personal social networks that supply sociability, support, and information, and a sense of belonging. Individuals are each becoming a switchboard between their unique sets of ties and networks. Rather than membership in a few broadly supportive groups, people separately operating their specialized ties to obtain resources. Although people remain connected and supportive, individuals in unique networks have supplanted the traditional organizing units of the household, neighborhood, kin group, and work group.

The technological development of computer networks and the societal flourishing of social networks are affording the rise of networked individualism in a positive feedback loop. Just as the flexibility of less-bounded and spatially dispersed social networks creates demand for collaborative communication and information sharing, the rapid development of computer-communications networks nourishes societal transitions from group-oriented societies to a society of networks.

Rather than fitting into the same group as those around him or her, each person has her own personal network. Household members keep separate schedules, with family get-togethers – even common meals – on the decline in North America (Putnam 2000). Instead of belonging to two stable kinship groups, people are just as likely to have complex household relations, with stepchildren, ex-marital partners (and their progeny), and multiple sets of in-laws. Communities – both in the flesh and the ether – are far-flung, loosely-bounded, sparsely-knit and fragmentary. Most people operate in multiple, partial communities as they deal with shifting, amorphous networks of kin, neighbors, friends, workmates, and organizational ties. Their activities and relationships are informal rather than organizationally structured. Only a minority of network members are directly connected with each another. Most friends and relatives live in different neighborhoods; many live in different metropolitan areas. At work, people often work *with* distant others and not those sitting near them (Wellman 1999).

The internet has been fostering this transformation by affording people the possibility of communicating and obtaining information when they want, with whom, wherever, whenever, and have their experiences personalized. This is the societal turn away from groups and toward networked individualism: people connected to each other as individuals rather than as members of households, communities, kinship groups, workgroups and organizations. Yet the internet did not start or predetermine the shift to a network-centric society: the transformation began earlier. Even before the advent of telephones and airplanes, some ties with friends and relatives stretched long distances. In the developed world, the flourishing of person-to-person connectivity has been fostered since at least the 1960s by social changes such as dual-career (and dual-schedule families) and liberalized divorce laws reducing household size, and by technological changes that have increased personal mobility and communication. Low-cost airplane and expressway trips have enabled in-person get-togethers at distances. Low-cost local and long-distance telephone -- and now internet -- communication enable rapid connectivity, constrained more by time zone differences than by space (Wellman 1999).

As a result, people probably maintain more long-distance ties with friends, kin, and workmates than ever before. It is easy for internet users to search for and be actively involved in far-fling communities of shared interests that are thinly represented on the ground. Groups may have declined (Putnam 2000), but connectivity has not (Wellman 2001b).

Networked individualism is having profound effects on *social cohesion*. Rather than people being a part of a hierarchy of encompassing groups like nesting Russian dolls, they belong to multiple, partial communities. It is not a matter of moving from place to place, but from person to person. People are not so much concerned to gain the support of the group, but to please each network member, one-by-one.

Even as social networks have become less dense, *social linkages* have increased. Internet connectivity adds on to in-person and telephone contact; almost all people had stopped writing letters long before (Wellman and Haythornthwaite 2002). As email can be stored until accessed, it increases contact with long-distance relationships. Moreover, the velocity of internet contact approaches the speed of light, meaning that the only significant delay in email interaction is the time lag set by the user's attention. Additionally, email is seen as less intrusive than telephone calls or in-person meetings. It is often the medium of choice for practical, socially considerate reasons. In short, there is probably more interpersonal contact among more people than ever before.

Although increasing *specialization* of tastes and combination of roles is not a product of the internet, the culturally rooted design of the internet in a specific brand of individualism considers the person regardless of place and regardless of a socially imposed structure such as a kinship network. Consider how email messages and mobile phone calls arrive sequentially, without inherent regard to the place of reception or to their relationship to the preceding or the following messages. Work messages are followed by postings from interest group lists and communication among family members.

Even as more people go online, the uneven distribution of the internet in the individualized networked society creates situations of *social exclusion*. Not only are fewer poor people, less-educated, rural people and non-English-speaking people online, their disconnection increasing excludes them from the opportunities that the internet provides: information, social connection, and access to instrumental resources. This disparity is growing between countries as much or more than within countries.

The nature of *citizenship* is changing as part of the turn towards networked individualism. The change began before the coming of the internet, but the immanent internet has accelerated this change and helped shape its nature. Connectivity is up; cohesion is down. Journalists often ask us: "Is this a good thing or a bad thing?" Our answer is, "It is just a thing." It will have good and bad outcomes. However, while the internet is immanent, its effects are not technologically predetermined nor sociologically predestined. They are evolving and their use can be shaped by human decisions.

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Table 1: Mean Days Of Contact Per Month By Type Of Relationship

	Total	Online =Never	Online >1/month	% Difference
		Spouse		
Online	4.4	0.0	11.5	n/a
Telephone	15.1	15.0	21.4	44
In Person	37.1	36.0	38.7	7
		Family in House		
Online	2.8	0.0	8.0	n/a
Telephone	8.0	4.9	13.8	184
In Person	26.9	28.6	24.3	-15
		Family Away		
Online	5.0	0.0	7.4	n/a
Telephone	10.0	8.1	10.9	34
In Person	5.6	6.1	5.3	-13
		Close Friends		
Online	10.9	0.0	14.3	n/a
Telephone	10.6	7.8	11.5	48
In Person	14.8	11.9	15.6	32

The question matrix was:
“In the past 30 days, how often did you discuss important matters with [relationship type] by [internet, telephone or in person]?”

n/a = not applicable

Figure 1: “Cyber-Angel”
Wired magazine cover
December 1999

Figure 2: The *Wired* Magazine Trajectory

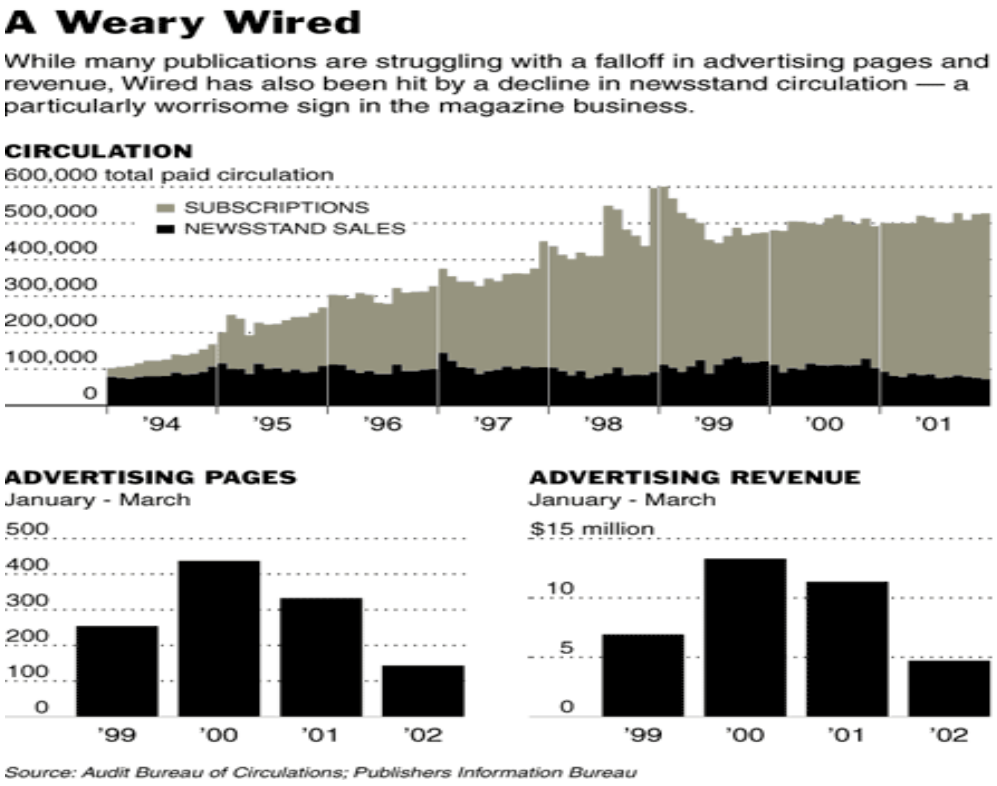
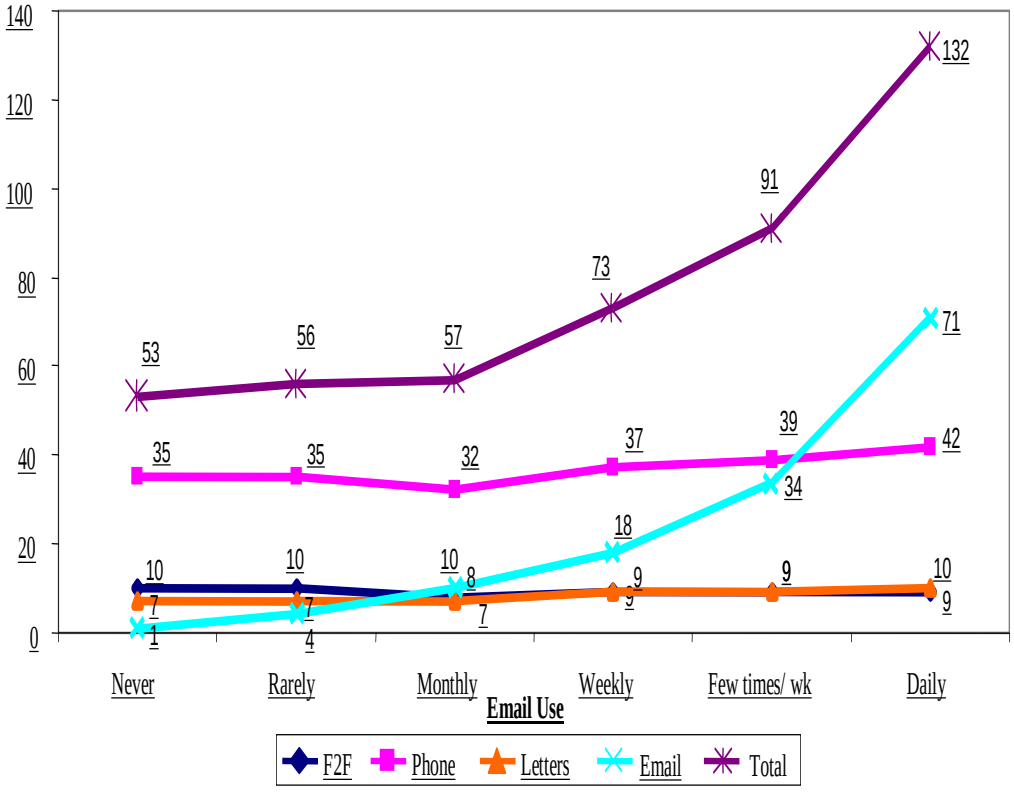


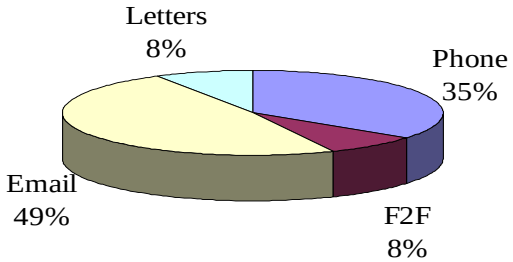
Chart Source: Sheldon Ungar, Dept of Social Science, Scarborough College, Univ. of Toronto, May 2002

Frequency of Contact with Far-away Kin (Days/Year)

Source: National Geographic Society Survey 2000, North American Data



Percentage of Media Used For Contact With Far-Away Kin (> 50 Km)



"Oh baby . . . oh baby . . . oh baby . . ."

By J.C. Duffy. Published in *The New Yorker* February 16, 2004

"I was addicted to porn before there was an internet."

By P.C. Vey. Published in *The New Yorker* February 2, 2004