JCMC 8 (3) April 2003

Message Board

The Social Affordances of the Internet for Networked Individualism

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Abstract

We review the evidence from a number of surveys in which our NetLab has been involved about the extent to which the Internet is transforming or enhancing community. The studies show that the Internet is used for connectivity locally as well as globally, although the nature of its use varies in different countries. Internet use is adding on to other forms of communication, rather than replacing them. Internet use is reinforcing the pre-existing turn to societies in the developed world that are organized around networked individualism rather than group or local solidarities. The result has important implications for civic involvement.

Introduction

The Internet Becomes Embedded in Community Life

As the Internet evolves, its users and uses grow and diversify globally. Many analysts, mesmerized by the power of the Internet, persist in thinking about the Internet as a separate sociotechnical system. Yet, the Internet has become embedded in the daily lives of much of the developed world (DiMaggio et al., 2001; Howard, Rainie & Jones, 2002; Wellman & Haythornthwaite, 2002).[1] Hence, we think it more useful to understand what the consequences of the extensive diffusion and intensive use of the Internet are for people?s lives.

The time of gazing in awe at the Internet is over. There has been a widespread analytic turn since the late 1990s to documenting the impact of the Internet in people?s lives. We present here knowledge gathered from a number of such studies done around the world by our NetLab about how the Internet affects community. We have been concerned with how the Internet is influencing interpersonal relationships and organization involvement in their social networks cum communities:

1. Do people communicate more because the Internet offers them the capability to contact people at a distance?
2. Do they primarily communicate via the Internet or are face-to-face meetings, phone calls, and gatherings still important in creating closeness and providing emotional support? More specifically, we have been asking:

- Are people reaching out to neighbors and to their communities?
- Are they getting involved in neighborhood associations and in public activities?
- Does the Internet reduce the time we have available to dedicate to community life?
- How do people use their networks, social communication, and computer to access information at home, work, and leisure?
- What sense of belonging to communities do networked people have?

The Turn Towards Networked Individualism and E-Citizenship

Although our discussion is primarily about relationships, our special concern here is the impact of the Internet on the change in society away from groups and towards networked individualism. This change is not only occurring at the interpersonal level but at the organizational, interorganizational and even the world-systems levels. It is the move from densely-knit and tightly-bounded groups to sparsely-knit and loosely-bounded networks. This move to networked societies has profound implications for how people mobilize and how people and governments relate to each other ? in all forms of societies ? but especially in democracies. That is because democracies are heavily in the business of dealing with the aggregated demands of their citizenries. Historically, these demands have had geographically-defined, multilevel aggregation, with local and regional groups dealing with central groups who represent them to central governments. To some extent, electronic citizenship can merely replicate this pattern., with e-mail being just another way to communicate between such groups, and the Web being just another way for central groups and governments to communicate to local groups and citizens. For example, the Scottish Parliament now accepts petitions on e-mail and publishes much of its discussion. This exercise in e-citizenship speeds up communication and information diffusion. But such e-citizenship also facilitates, and to some extent reinforces, mass society, with the individual in direct relationship with the state without the intermediary of local and even central groups. More importantly, we argue that citizenship (including e-citizenship) is affected by the ways in which Internet use is in a positive feedback loop with the turn away from solidary, local, hierarchical groups and towards fragmented, partial, heavily-communicating social networks. Some of the issues that the intersection of networked individualism, the Internet and e-citizenship provoke are:

- How many people (citizens and non-citizens) will seek to participate in civic matters and government, on and off the Internet?
- What kinds of people will seek to participate, in terms of demographic characteristics and social variety?
- What sorts of information will they seek and obtain?
- What is the structure of interpersonal relations and communities that seek participation in civic matters and government? (see also Fountain, in press; Malina, in press).
- In all of these matters, what is the interplay between Internet use and other,

more physical, forms of involvement and participation.

To inform our concerns, we draw on findings and implications of research done by NetLab members:

- An ethnographic and survey study of a wired suburb, ?Netville.?
- A very large Web-survey (?Survey 2000?) hosted at the Website of National Geographic Society.
- International data from the same survey with respondents from 178 countries.
- A study of Catalans and their uses of the Internet.
- Results from a study of Japanese users and uses of the Internet.

Rethinking Sociability, Neighborhood, and Community

The developed world has been experiencing for over a century a shift away from communities based on small-group-like villages and neighborhoods and towards flexible partial communities based on networked households and individuals. Many definitions of community treat it, explicitly or implicitly, as occurring within rather small territorial limits, such as would be found in a rural village or a distinct neighborhood. As ?community? is partially defined by social interactions among a set of persons who know each other, the composite definition of a ?neighborhood community? is of a bounded geographical area in which many of the residents know each other. This approach has been the traditional one in the past, arising out of the pastoralist assumption of happy rural villagers as being the paragon of community life, with urban communities struggling vainly to approach this pastoral ideal (Wellman & Leighton, 1979).

Since the 1960s social scientists have vigorously contested the one time orthodoxy about the nature of sociability, community and domestic life. The debate about the nature of community under contemporary conditions has been called the ?Community Question? (Wellman, 1979). This Community Question wonders how societal changes such as informatization, computerization, bureaucratization, industrialization, and urbanization have affected community. Reciprocally, it also wonders how the changing nature of community affects society. This Community Question has evolved as community scholars changed their ideas about what constituted community and where to find it. Given its importance to humankind and accessibility to public discourse, it is a safe guess that the Community Question in some form will remain open to the end of time.

Yet, important transformations have taken place in analyses of the Community Question: The zeitgeist of community turned from pessimism in the 1950s to optimism born with the student and civil rights movements of the 1960s (Castells, 1982; Fellman, 1973; Gitlin, 1987) to more guarded (and sometimes gated) ambivalence since then. Armchair speculation was replaced by ethnographic and survey techniques that have demonstrated the persistence of communities

whenever social scientists bothered to actually look for them. Communities no longer were defined only by localities. Interest grew in often far-flung communities defined by shared subcultures (Fischer, 1975; Wellman, 1988), including work-oriented communities of practice (Teigland, 2000; Wenger, 1998).

These techniques and zeitgeist were applied to thinking about communities of the past. The past became viewed in a way that emphasizes the strength of community in the transition from the pre-modern to the modern world (Kertzer & Hogan, 1989; Sabean, 1990; Wrightson & Levine, 1979). There was a renewed emphasis on the importance of family, kinship and community relationships in history (Hareven, 1977, 2000; Laslett, 1965, 1988).

Both fieldwork and survey research show that sociable community relations continue to be abundant and strong. Large institutions have neither destroyed nor withered communal relations. To the contrary: the larger and more inflexible the institutions, the more people seem to depend on their informal ties to deal with them. Research shows that while communities may have changed in response to the pressures, opportunities and constraints of large-scale forces, they have not withered away. They buffer households against large-scale forces, provide mutual aid, provide partial identity and a sense of belonging, and serve as secure bases to engage with the outside world, as citizens, consumers, and community members (see reviews in Fischer, 1976; Warren, 1978).

In North America, neighborhood ties remain important, but usually only as a minority of relationships in personal networks. For example, although ties with neighbors and workmates constitute only a minority of Torontonians? active and intimate ties, the easy accessibility of such local relationships means that they represent nearly half of all encounters with community members: face-to-face, by telephone, and by the Internet (Wellman 1996). In the inner streets of Chicago (Sampson, Morenoff, & Earls, 1999) and the cozy buurten of the Netherlands (Thom?se 1998; Thom?se & Van Tilburg, 2000; Zamir, Volker, & Flap, 2001), companionship, support and social control by neighbors remains important.

One way of engaging in such community is for people to interact in semi-public spaces such as pubs or caf?s (Oldenberg, 1989). This is community as a public activity, one that is visibly alive and well on the streets of Catalonia. In North America, much sociable community is private activity, based on interactions in people's homes. This is a situation more feasible in contemporary North America because the large size of homes facilitates entertaining community members (Michelson, 1976; Warren, 1978). Thus in suburban Levittown, NJ (Gans, 1967) and exurban southern Ontario (Clark, 1966), there has been little community interaction in public spaces but a fair amount of in-home visiting among neighbors. There are many indicators in the United States ?of an increase in private activity at the expense of public activity? (Lofland, 1989, p. 92). At the same time, the emancipation of women has meant that women's community, which often had been private in the past, is becoming more public.

Community has obviously expanded well beyond the neighborhood so that in the developed world, the modal community is probably a community of shared interests, be they shared friendships, bridge playing, child-rearing, or cultural pursuits. Indeed, neighborhood communities can well be seen as one, partial community of shared interest, that pertaining to shared proximity. At a different

spatial scale, electronic diasporas link friends, kin, and former neighbors across nations and oceans (Mitra, in press). One common shared interest is work: Hence, communities of practice (Wenger, 1998) and learning (Haythornthwaite, in press) are flourishing, as similarly-occupied people share knowledge within and between organizations.

Yet, Robert Putnam (2000) has made a persuasive case that community involvement declined in America from the mid-1960s through the 1990s. He finds the decline to be especially marked for involvement with voluntary formal organizations, such as labor unions and sports leagues. The privatization of community appears to have happened. The fact that people are not interacting in formal organizations or visible public spaces does not mean that they are in isolation. An analysis of the impact of the Internet needs to consider how the Internet may be contributing to new forms of interaction and community that cannot be measured using standard indicators of social capital. People may be going online to chat with friends on instant messenger, visiting online communities by playing multi-user games such as MUDs or MOOs, or exchanging short text messages through ?list serves? or ?newsgroups? (Kraut et al., 1998; Matei & Ball-Rokeach, 2002; Smith, 1999). Their civic involvement may increasingly be taking the form of e-citizenship, networked rather than group-based, hidden indoors rather than visibly outdoors.

Technological Changes Create Social Affordances

The Internet is not a one-dimensional technology. Rather, it merges several media into one medium. Nor is it static. A set of current and imminent changes creates possibilities ? social affordances ? for how the Internet can influence everyday life:

Broader Bandwidth

Broadband communication facilitates the rapid exchange of large amounts of data, instant messaging, feedback, attached text, picture, voice, and telepresence. Users can go from sending short, simple text messages to posting and sending political manifestos, images, graphics, and videos. Streaming audio and video can be sent of political events as they occur.

Always Connected

Broadband also facilitates keeping connected to the Internet twenty-four hours a day, seven days a week, every day of the year. This embeds the Internet heavily in everyday life, for as soon as a communication is thought about, it can be sent immediately and easily. It is not necessary to make a special ritual of signing onto the Internet. This connectivity further de-privileges physical proximity connectivity, and it also makes the multiple communication aspects of the Internet about as simple as the telephone call to a single person or household. In our Netville study (Hampton & Wellman, 1999), people valued such connectivity more than sheer speed. They could share a thought, political or not, with their comrades at a moment?s inspiration.

Personalization

Computer mediated communications are developing towards personalization, with more control over the sources people want to get messages from, when, and about what. This form of communication and the ensuing interactions are more tailored to individual preferences and needs, furthering a more individualized way of interacting and a way of mobilizing as fluid networks of partial commitment. This can easily fragment polities; it can also facilitate coalition building between polities.

Wireless Portability

Wireless connectivity enables telephone and Internet access anywhere and on the go. Randall (2001, p. 5) has identified the everywhere-nowhere phenomenon: ?Communication will be every*where*, but because it is independent of place, it will be situated no*where*.? This facilitates personalized communication. The person becomes the target of communication. An individual and not a household is called. The person is the node to which communication is directed. Person-to-person communication is supplanting door-to-door and place-to-place communication. Personalization and portability are not the same. Personalization recognizes anywhere who people are. With portability, people take their devices with them. The combination facilitates the emphasis on individuals connecting and (mobilizing) to individuals, rather than individuals connecting to groups or groups connecting to groups. It has also facilitated crowds to gather and coordinate for political protest.

Globalized Connectivity

The digital divide ? the socio-economic gap between those who use computer-mediated communication and those who do not ? is shrinking in the Western world. This may mean an increase in the small world phenomenon, with potential connectivity over the Web to all, either directly or through short chains of indirect ties. This can reduce the danger of ?technological apartheid at the dawn of the Information Age? (Castells, 1998, pp. 93-94). It also facilitates transnational connectivity, be they migrants staying in touch with their homeland or transnational networks mobilizing around issues. Paradoxically, it is the globalization of connectivity that has extended and intensified globalized protests against globalized trade.

Documenting the Current Situation of the Internet

To further understand the Internet?s place in society, it helps to understand exactly how it is being used. Research shows that more people, in more countries, are using the Internet in many different ways. Internet use has diffused from white, young North American men to the rest of the world. Gender and age have ceased being barriers. Although few poor people, less-educated people and non-whites

use the Internet, the digital divide between such groups and traditional Internet users is closing (Chen & Wellman, in press). Most Internet users send and receive e-mail, with e-mail becoming more widely used than the telephone (Gershuny, 2003). Most Internet users also Web surf. Moreover, Web surfers are spending more time online and using the Internet more often. In September 2001, Internet users spent an average of 10 hours and 19 minutes online, up 7% from the nine hours and 14 minutes recorded a year earlier (Macaluso, 2001). Usenet members participated in more than 80,000 topic-oriented collective discussion groups in 2000. More than eight million participants posted 151 million messages (Smith, personal communication, August 10, 2001; see also Smith, 1999). This is more than three times the number identified on January 27, 1996 (Southwick, 1996). Although reliable data are hard to come by, Internet telephone accounted for 5.5 % of international traffic in 2001 (ITU, 2001). New forms of computer-mediated connectivity, not using the Internet, are developing over smart mobile phones and personal digital assistants. East Asian and European countries such as Japan and Finland are leading in this.

This transmutation of the Internet from elite tool and toy to everyday information and communication appliance points to its significance for e-citizenship. It is becoming a prime means by which a great many people in the developed world obtain information, transmit information, and discuss this information with others, one-on-one and in large and small groups.

What Are the Internet's Effects on Community?

Analysts have proposed three basic ways in which the Internet may affect community:

The Internet Decreases Community

The Internet through its entertainment and information capabilities draws people away from family and friends. Further, by facilitating global communication and involvement, it reduces interest in the local community and its politics (Nie, Hillygus, & Erbring, 2002). At worst, it results in isolated individuals dealing unequally with large governments and organizations, in the kind of ?mass societies? that political commentators warned about in the 1950s (e.g., Kornhauser, 1959).

The Internet Transforms Community

The Internet provides the means for inexpensive and convenient communication with far-flung communities of shared interest (Barlow, 1995; Rheingold, 2000; Wellman, 2001). Through its low costs and asynchronous nature it increases communication among friends and family, especially contact with those who are far away. Widely dispersed communities of shared interest become dominant; neighborhood communities become quaint residuals.

The Internet Supplements Community

A third perspective sees the Internet as another means of communication to facilitate existing social relationships and follow patterns of civic engagement and socialization (Wellman & Gulia, 1999). The Internet blends into people?s life. People will use the Internet to maintain existing social contacts by adding electronic contact to telephone and face-to-face contact. Their offline hobbies and political interests continue online.

Evidence to address the debate about the impact of the Internet on community is thundering in. We report here on three studies done at NetLab that are congruent with the broad base of findings about the nature of the Internet.

Netville: Neighboring and Long-Distance Community in a Highly Wired Suburb

To obtain insight into how the evolution of the Internet in the near future might affect community, one NetLab study analyzed ?Netville:? an experimental ?wired suburb? that was a new mid-priced housing development near Toronto.[2] The study shed light on the social implications of transition away from ?dial-up? to ?broadband.? ?Dial-up,? using traditional modems, is a relatively slow-speed service (30-50 kilobit) that competes with telephone use and hence can rarely be left on 24 hours per day, 7 days per week. By contrast, ?broadband? connections (either by cable or telephone company ADSL) currently have speeds that are at least ten times as fast (500 kilobit ? 1 megabit), do not compete with telephone use, and can be left on continually at no extra cost. The experimental Internet development in Netville went even further, installing a much higher speed (10 megabit) ?asynchronous transfer mode? system in most of the homes.

This research has focused on how access to some of the most advanced new communication technologies available affects the amount of contact and support exchanged with members of their distant social networks. We wondered how living in ?Netville? affected people?s community relations, online and offline: in the neighborhood and further away? Our findings suggest that high-speed Internet access supports neighboring rather than weakening it.

One might expect that the global reach of the Internet would encourage people to direct their interpersonal energies over long-distances at the cost of local ties. This would be consistent with the research finding that time-use is zero-sum: if people spend more time on one thing they spend less time on something else (Robinson & Godbey, 1997; Robinson, in press). Yet, ?wired? Netville residents with high-speed Internet connections have much more informal contact with neighbors than did the ?non-wired? residents who had moved into the same development but had not yet received their high-speed access. Wired residents know the names of 25 neighbors, while non-wired residents knew only eight. They talk to twice as many neighbors as do the non-wired neighbors. Wired residents make 50% more visits to each other?s homes, and their contacts with neighbors were more widely dispersed in the development.

Yet, this expanded local contact does not exhaust the Netville residents? supply of sociability. Wired Netville residents also maintained more long-distance contact with friends and relatives than non-wired residents did. All Netville residents had left friends and relatives behind when they moved into the new development, but only the wired residents were able to use the Internet to maintain their pre-move levels of contact with non-local friends and relatives.

The Internet also helped provide social support for wired Netville residents. There is an interplay between Internet contact and face-to-face contact. Distant friends and relatives were especially apt to provide support when they lived close enough for occasional face-to-face get-togethers. After moving into their new suburban homes, 82% of wired residents reported no change in social support with friends and relatives living 50-500 km. away, only 6% reported a decrease, and 12% even reported an increase. By contrast, the majority of non-wired residents (55%) reported a decrease in support. Only 5% reported an increase and only 40% reported that support stayed at about the same level (Hampton & Wellman, 2002).

Taken together, the evidence suggests that wired residents have become ?glocalized,? involved in both local and long-distance relationships (Hampton & Wellman, in press; Wellman, in press). They connect both with neighbors and far-flung friends and relatives. Moreover, the wired nature of the contemporary Internet means that the more people are online, the more they must stay physically rooted to fixed personal computers and Internet connections at home, work, school, or public places. The paradox is that even as they are connecting globally, they are well placed to be aware of what is happening in their immediate surroundings.

The wired residents of Netville were better equipped to be civically involved. The wired network reduced the cost and increased the speed of community organization. The wired residents? online discussions of local matters, from babysitting to trespassers, built bonds of communication and sharing. This built a social infrastructure that was easily and effectively mobilized to protest against the disliked developer?s attempt to double the size of the suburb. Such a high number and percentage of wired residents protested to the town government, that the town council rejected the usually routine development application. At least in Netville, glocalization was the rule. Local interaction and e-citizenship thrived even as the wired residents were becoming heavily involved with non-local ties and interests.

Community Networks in North America

To understand the relationship between online and offline community ties, NetLab collaborated in the National Geographic Survey 2000.[3] The *National Geographic* magazine and society publicized this worldwide Web survey and featured it on their popular Web site, September - November 1998. Visitors to the site were encouraged to answer the survey on the spot. Most respondents were North American, reflecting the predominant clientele at that time of the Web (and of the

National Geographic magazine and Web site). The North American sample comprises 20,075 adults: 17,711 Americans (88%) and 2,364 Canadians (12%).

North American results are presented separately because the demographic profile of North American Internet users is appreciably different from the profiles of users from other developed and less-developed countries. We have found:

Experience Counts

The longer that people have been online, the more they use the Internet. However, the effects of experience are confounded with the different demographic and cultural characteristics of early Internet users as compared to relative latecomers. The demographic characteristics of the Internet population are rapidly becoming similar to the characteristics of the general population. Gender and age composition are quite similar. The digital divide is real but diminishing for people who have less money, have less education, and are less fluent in English.

The More the More

Rather than weakening community, the Internet supplements existing face-to-face and telephone contact. Heavy Internet users have a greater overall volume of contact with community members because Internet use suppplements telephone and face-to-face contact. It does not displace it. Frequent contact via the Internet is associated with frequent contact via other means. For example, those in the sample who e-mail daily report 345 overall contacts a year (e-mail, phone, face-to-face) with socially close friends who live within 50 km, as compared to the 207 contacts of those who rarely e-mail, a ratio of 1.7 to 1. It is probable that people not only have more relationships than in pre-Internet times, they are in more frequent contact with community members.

Distance Still Matters

Although the Internet increases the number and intensity of friendship and kinship ties that can be sustained at long distances, relatively local ties remain important. For example, while daily e-mailers report 345 contacts annually with socially close friends living within 50 km., they report only 128 contacts annually with friends living beyond 50 km: a ratio of 2.7 to 1. While kinship ties tend to be more far-flung than friendship ties, geographically-close kin (living less than 50 km away) have a reported 228 contacts per year as compared to only 132 contacts per year with more geographically distant kin, a ratio of 1.7 to 1.

Frequent users of the Internet also have a more positive sense of *online* community with friends and family. However, frequent Internet users have neither a higher nor a lower sense of overall community. Moreover, the strengthening of community ties through more frequent contact on and offline means that community members can be more readily mobilized for aid.

Organizational Involvement

Organizational involvement is limited, offline as well as online. Congruent with Putnam?s argument, there is little participation in any organization except for labor unions and churches, and hardly any active participation. The Internet is rarely

used. The few politically active participants have relatively frequent contact with friends, both online and offline. However, there has been continuing growth in online participation since these data were collected in 2000.

These findings support the add-on model of how the Internet is fitting into everyday life. Those who communicate more in other ways also communicate more by e-mail and are more apt to participate in political activity. This suggests that e-citizenship is more apt to build on increased participation by those already involved rather than new participation by those who have not been involved.

International Users and Uses of the Internet

Survey 2000

Taking advantage of Survey 2000?s data from 178 countries, NetLab has also compared the users and uses of the Internet in North America with users in other developed (OECD) countries and in less-developed counties (see Boase, Chen, & Wellman, 2002).[4] In addition to the cautions noted above, the sample was further affected by the availability of the survey only in the English language. Nevertheless, this first comparative international study provides evidence in support of the following three points:

First, the Internet is used in similar ways in many parts of the world. Throughout the world, frequent users use the Internet in multiple ways ? socially, instrumentally and recreationally ? and combine it with face-to-face and telephone contact. However, as our focused Catalan and Japanese studies show, particular social, spatial, and economic conditions affect Internet use in societally specific ways that vary markedly from the original American-centric Internet (see the discussion in the following sections). Moreover, the users of the Internet around the world vary more than the uses of Internet. The profile of respondents outside North America is similar to that of North American Internet users a half-decade earlier. They tend to be male, well-educated, and younger adults. Where North American Internet use has become broadly based, international use is more restricted to elites and students (who are elites in training), especially in developing countries.

Second, North Americans usually have been online longer, use the Internet more frequently, and do more kinds of activities online. North America has continued to be the leading region of the Internet whose influence and activity outweighs the rest of the world combined. Yet the dynamics of use are often similar in North American, OECD and less-developed countries. As in North America, experience counts around the world. The longer that people have been online, the more they use the Internet. Moreover, as is the case for our North American research, the Internet is not a self-contained online world.

Third, rather than operating at the expense of the ?real? face-to-face world, it is a part of it, with people using all means of communication to connect with friends

and relatives. The Internet is another means of communication, which is being integrated into the regular patterns of social life. Other NetLab research suggests that this integration of online and offline life is also true for ?communities of practice? at work (Haythornthwaite & Wellman, 1998; Koku, Nazer, & Wellman 2001; Koku & Wellman, in press). In such situations, the Internet is used extensively by elites for gaining political information, arranging get-togethers, and discussing civic matters. Yet, the high use of the Internet by students, and the evolving use of public access facilities by poorer people suggest the diffusion of e-citizenship over time, as an add-on to existing modes of civic involvement (Boase, Chen, Wellman, & Prijatelj, in press; Fernandez-Maldonado, in press).

Catalans and the Internet

Most analysts have implicitly assumed that in time, the use of the Internet would eventually become the same around the world and that most countries would come to follow in the footsteps of evolving American usage. Enough people in developed countries would go online that the Internet-using population of a country would become similar to the general population, and that the uses of the Internet would even more quickly become the same around the world. Certainly, our NetLab research group thought so, writing:

Ontogeny is recapitulating phylogeny. The profile of respondents outside North America looks similar to that of North American Internet users a half-decade earlier. (Chen, Boase, & Wellman, 2002, p. 106)

To see if we were correct in assuming evolving uniformity, NetLab joined a project organized by the International Internet Institute of the Open University of Catalonia in 2002 to survey (in person) 3,005 residents of this autonomous region of Spain. A major part of this study looked at the relationship of Internet use to social networks and computer use. [5]

The survey shows that Catalans? personal networks contain more friends and neighbors than they do kin. By contrast, North American networks are typically evenly balanced between kin and non-kin. With a median size of 21.8, these personal networks are slightly larger than those typically observed in North America. The number of kin, friends and neighbors are all higher in Catalonia.

However, Catalan networks are more local than their North American counterparts. Nearly two-thirds (63.7%) of Catalan network members live within the same municipality. These 13.5 local network members comprise parents, including those living in the same house (0.8), kin (4.5), friends (5.5) and neighbors (2.7). A major reason for this is that a higher percentage of friends than kin live in the same municipality despite the tendency of many adult Catalans to live with their parents. At the same time, kin are more likely than friends to live elsewhere in Spain or in a foreign country. The greater localism of Catalan friendship as compared to kinship suggests the better ability of the kinship system to withstand the strain of living in different localities. When network members move apart, active friendship ties are less apt to continue than kinship ties.

Personal encounters are the predominant mode of communication among Catalans, especially for the great majority of network members who live within the same municipality or elsewhere in Catalonia. Telephoning is of secondary

importance. The Internet is hardly ever used except to communicate with those few friends who live in other countries. Proximity and contact reinforce each other. The closer together Catalans live, the more they communicate in person. The small distances within Catalonia keep most network members within short travel distance. Personal network contact with the rest of Spain is less intense; contact with the rest of the world is minimal.

This localism affects Internet use for communication. Although one-third of Catalans are on the Internet to some extent, few Catalans use the Internet to communicate with relatives or friends. Indeed, only a minority of Catalans who use the Internet and have relatives and friends living at an appreciable distance ? in another country ? use the Internet to communicate with them. By and large, Internet users resemble other Catalans in their sociability, except that Internet users have larger networks outside of Catalonia than do non-users. Moreover, the coming of age of the ?Internet Generation? suggests that the sociability of Internet users may come to be more widespread in Catalan society. Although some Internet users are more likely to feel dissatisfaction and psychological upset in their relationships, this should not be overemphasized. The majority reports satisfaction rather than than the alternative.

Catalans put a premium on the multidimensional communication of face-to-face, high touch personal encounters. When this is not possible, they resort to the less rich medium of telephone contact. Those Catalans who are Internet users rarely use it to communicate with friends and kin, even when such network members live in foreign countries. The interaction of physical proximity and face-to-face contact makes Catalonia a different place than North America, where people stay home at night and drive, phone, or use the Internet to communicate. They are satisfied with their interpersonal lives, and if anything, some friends and many kin are clamoring for more personal encounters. The Internet is used more for acquiring information and making information than for communication with relatives and friends.

How do Catalans accomplish so many personal encounters where there is no custom of frequent visits with friends and relatives at home? Look to the streets: no wonder Catalan bars and cafes are so crowded and vibrant.

Catalan use of the Internet is clearly different than the extensive American and Canadian use of the Internet to keep in touch with relatives and friends. This does not seem a matter of Catalans' not catching up yet to the American norm, for even experienced Catalans use the Internet differently. North American network members are more dispersed than those in compact Catalonia.

The North American mode of using the Internet has been viewed incorrectly as a norm diffusing around the world. Yet, Catalans have taken a different route to building social capital in a modern society than have North Americans. The implications for e-citizenship are important. Catalans use the Internet extensively for obtaining information, including political information, and to some extent for arranging get-togethers to discuss shared interests. But their interpersonal solidarity is local as well as interest-based.

The Mobile-ized E-Communication of the Japanese

NetLab?s cooperative research into Japanese users of computer-mediated

comunication also shows a society using computer-mediated communication quite differently from the supposed North American norm. A late 2002 drop-off survey of 1,320 adult residents of Yamanshi prefecture (the site of Mount Fuji, and not far from Tokyo) shows that both personal computers (PCs) and mobile phones are used separately and together to send messages and find information.[6] Younger adults use mobile Web-enabled phones (Webphones) to send and receive e-mail, short text messages, and to obtain limited information from the Web. They are often on the go and often less able to afford wired telephone and broadband lines (see also Funk, 2001). By contrast, more settled adults use PCs, but often in conjunction with their mobile phones. The more media used, the more communication exchanged holds true here too. Those who use both PCs and Webphones to exchange e-mail have more ties (and espcially more weak ties) than those who only use PCs or Webphones. By contrast, those who use only Webphones are less skilled in using computers and less active in communication.

The great development and use of mobile phones means that physically separated Japanese are able to keep in frequent contact with each other. The different media, PC and Webphone are supplementing each other and other media as well in facilitating communication. Although messages are short, recent experience in mobile-using Indonesia and the Philippines shows that they can play significant roles in connecting citizens to organize collective social movements (Tkach Kawaski, in press).

The Rise of Networked Individualism

The proliferation of the Internet is facilitating social changes that have been developing for decades in the ways that people contact, interact, and obtain resources from each other. Yet the Internet is not technologically deterministic. Even before the coming of the Internet, other social, economic and technological phenomena affected the transition from groups to networks:

- ***Social Changes:*** Birth control and liberalized divorce laws and dual-career families have both reflected and driven the transition from a place-to-place to a person-to-person mode of domestic and community life.
- ***Land-Use Changes:*** Zoning separation of residential from commercial and work uses meant that people had less contact with coworkers in the community and that their travel time had eaten into their community networking time.
- ***Technological Changes:*** The proliferation of car ownership, expressways, affordable air transportation, and inexpensive long-distance telephony enabled people to have more frequent meaningful contact with physically distant relatives and friends.
  [7]

Now the emphasis on connectivity in the developed world appears to be moving from transportation to communication: from airport terminals and road networks to computer terminals and networks. Our research suggests that the Internet is not a self-contained world. Rather than operating at the expense of the ?real?

face-to-face world, it is an extension, with people using all means of communication to connect with friends and relatives. The Internet is another means of communication that is being integrated into the regular patterns of social life. Other NetLab research suggests that this integration of online and offline life is also true for communities of practice at work (Haythornthwaite & Wellman, 1998; Koku, Nazer, & Wellman, 2001; Koku & Wellman, in press).

Communities and societies have been changing towards networked societies where boundaries are more permeable, interactions are with diverse others, linkages switch between multiple networks, and hierarchies are flatter and more recursive (Castells, 2000; Wellman, 1997, 1999, 2001). Hence, many people and organizations communicate with others in ways that ramify across group boundaries. Rather than relating to one group, they cycle through interactions with a variety of others, at work or in the community. Their work and community networks are diffuse, sparsely knit, with vague, overlapping, social and spatial boundaries.

Changes in the nature of computer-mediated communication both reflect and foster the development of networked individualism in networked societies. Internet and mobile phone connectivity is to persons and not to jacked-in telephones that ring in a fixed place for anyone in the room or house to pick up. The developing personalization, wireless portability, and ubiquitous connectivity of the Internet all facilitate networked individualism as the basis of community. Because connections are to people and not to places, the technology affords shifting of work and community ties from linking people-in-places to linking people at any place. Computer-supported communication is every*where*, but it is situated no*where*. It is I-alone that is reachable wherever I am: at a home, hotel, office, highway, or shopping center. The person has become the portal.

This shift facilitates *personal communities* that supply the essentials of community separately to each individual: support, sociability, information, social identities, and a sense of belonging. The person, rather than the household or group, is the primary unit of connectivity. Just as 24/7/365 Internet computing means the ready availability of people in specific places, the proliferation of mobile phones and wireless computing increasingly is coming to mean an even greater availability of people without regard to place. Supportive convoys travel ethereally with each person (Ling & Ytrri, 2002; Katz, 2002).

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, spatially dispersed, social networks creates demand for collaborative communication and information sharing, the rapid development of computer-communications networks nourishes societal transitions from group-based societies to network-based societies (Castells, 1996, 2000; Wellman, 2002).

Networked societies are themselves changing in character. Until quite recently, transportation and communication have fostered place-to-place community, with expressways and airplanes speeding people from one location to another (without much regard to what is in between). Telephone and postal communication have been delivered to specific, fixed locations. At present, communication is taking over many of the functions of transportation for the exchange of messages.

Communication itself is becoming more mobile, with mobile phones and wireless computers proliferating.

Each person is a switchboard, between ties and networks. People remain connected, but as individuals, rather than being rooted in the home bases of work unit and household. Each person operates a separate personal community network, and switches rapidly among multiple sub-networks. Even in more localistic Catalonia, people appear to meet their friends as individuals and not in family groups. In effect, the Internet and other new communication technology are helping each individual to personalize his or her own community. This is neither a *prima facie* loss nor gain in community, but rather a complex, fundamental transformation in the nature of community.

(E-) Citizenship in a Networked Society

What are the implications of this networked society ? the interplay of computer-supported communication networks and social networks ? for citizenship? For one thing, people are communicating more via the Internet, mobile phones and other communication technologies, adding on to other means of communication rather than substituting for them. Moreover, while there had been early fears that the quality of computer-mediated communication would permit only instrumental messages, it is now quite clear that all sorts of emotions have successfully been communicated online (see Haythornthwaite & Wellman, 2002).

Not only has the volume of communication increased, we suspect that the velocity of communication has also increased. Although e-mail is asynchronous and does not necessitate instantaneous response, in practice many people respond quickly just as they would respond to voice-mail. Moreover, distant network members who did not have much contact when limited to face-to-face, telephone or postal communication now keep in frequent touch: they rely on the Internet for a higher proportion of their contact than do community members who live nearby. Thus, the impact of computer-mediated communication will be that people have larger-scale social networks: more people, more communication, and more rapid communication. This should allow information ? and perhaps knowledge ? to diffuse more rapidly.

It is not clear whether the high use of computer-mediated communication will foster more densely-knit communities ? good for conserving resources ? or more sparsely-knit communities ? good for obtaining new information and other resources. On the one hand, some characteristics of the Internet foster denser networks: the ability of Internet users to communicate simultaneously with multiple others, and the ease of copying and forward messages to others. In such cases, it is more likely for the friend of my friend to become my friend. On the other hand, as social networks become larger it is often more difficult for them to maintain their density. As the size of the network increases arithmetically, the number of ties must increase geometrically to maintain the same level of density.

The turn towards networked individualism before and during the age of the Internet

suggests more people maneuvering through multiple communities of choice where kinship and neighboring contacts become more of a choice than a requirement (Greer, 1962; Wellman, 1999). This suggests a fragmentation of citizenship. Rather than a unified neighborhood, people increasingly operate in a number of specialized communities that rarely grab their entire, impassioned or sustained attention. To be sure, when attention is gained, computer-mediated communication can facilitate mobilized citizenship as happened on the national level where short text messages via mobile phones were used to organize political demonstrations in the Philippines and on the local level where agitated members of a wired suburb organized against further construction of homes (Hampton, 2001). The multiplicity of communities should reduce informal social control, as it is easier for people to leave unpleasantly-controlling partial communities and increase their involvement in other, more accepting, ones. This may lead to increased state control, as governments fill the once-informal role.

Social capital, like communities, is becoming both more specialized and more mobilizable via the Internet. Both our National Geographic and our Netville data show the substantial use of the Internet to provide affective as well as instrumental support. The increasing bandwidth of communication allows more affect (such as emotional support) to be transmitted with less imagination as audiovisuals supplant hard ASCII text. More bandwidth also facilitates online arrangements for offline deliveries of material support. Multiple communities yield specialized support (Wellman, 1999). Even household units are losing their solidarity, with separate schedules and agendas, and as the lure of computer-mediated connectivity with the outside world draws people away from their household relations (Nie, Hillygus, & Erbring, 2002; Putnam, 2000). Networked individualism should have profound effects on social cohesion. Rather than feeling a part of a hierarchy of encompassing polities, like nesting Russian dolls, people believe they belong to multiple, partial communities and polities. Some may be global, such as is found in electronic diasporas linking dispersed members of emigrant ethnic groups (Mitra, 2003). Some may be traditional local groups of neighbors with connectivity enhanced by listservs and other forms of computer-mediated communication (Hampton, 2001), for NetLab?s research has fit into the growing realization that the McLuhanesque ?global village? (1962) complements traditional communities rather than replacing them. McLuhan argued, ?the new electronic interdependence recreates the world in the image of a global village.? Yet, in a person?s ?glocalized? world (Wellman, 2003, in press), extensive local involvements fit together with far-flung communities of friendship, kinship and shared interest. This is especially true today when almost all computers are physically wired into the Internet, rooting people to their desk chairs. Yet even as the world goes wireless, the persistence of tangible interests, such as neighborly get-togethers or local intruders, will keep the local important. E-citizenship will be both local and global.

The personal communities of a networked world are both homogeneous and heterogeneous. An individual?s partial communities will often be homogeneous, because search engines and discussions tend to find and link others with shared interests. Yet an individual?s overall community will be heterogeneous because people have multiple interests, and those who shared interests in one area are unlike to share interests in others. Moreover, the properties of computer-mediated communication easily allow inclusion of others in conversations through multiple address lines and chatting. While ostensibly this will expand the scope of

homogeneous discussion, in practice the larger the net the more heterogeneous the participants (Feld, 1982).

Thus, the move towards a networked society creates interesting possibilities for governments more used to dealing with hierarchies of local solidarities. No longer are communities local, all-encompassing, and stable. Instead, people have multiple, shifting sets of glocalized ties. The local becomes only one kind of ?special interest.? Even more than in the past social mobilization will be apt to develop over non-territorial issues, be it shared affect (?ecology,? ?Islam?) or shared material interests.

To cope with and serve such a networked society, there will be a need for new, fluid forms of government and democracy. To date, such needs are scarcely met, online or offline. Will government bureaucracies themselves become networked organizations to deal with a society fuzzily composed of computer-supported social networks?

Acknowledgments

Kristine Klement, Monica Prijatelj, Uyen Quach and Carlton Thorne gave fine research assistance on the projects reported here. Uyen Quach and Andrew Ng helped with the final preparation of this paper. The Social Science and Humanities Research Council of Canada, Communications and Information Technology Ontario, IBM?s Institute of Knowledge Management, and the Catalan and Japanese governments provided financial support for our research.

Footnotes

1. In a recent Pew survey, 53% of Internet users reported having been online yesterday. Also see: http://www.pewinternet.org/reports. We estimate the percentage of American and Canadian households using the Internet to some extent at the start of 2003 as more than 60%. We hesitate to give specific percentages because the number and percentage are growing daily (Howard, Rainie, & Jones, 2002; Reddick, Boucher, & Groseillers, 2000).
2. Keith Hampton and Barry Wellman led this study. For details, see Hampton (1999, 2001, in press); Hampton & Wellman (1999, 2002, in press).
3. James Witte (Clemson University) led the data collection with Barry Wellman as co-investigator and Keith Hampton as research associate. Anabel Quan-Haase and Barry Wellman were principally responsible for data analysis. For more detail about Survey 2000, see Witte, Amoroso, & Howard (2000); Chmielewski & Wellman (1999); Quan-Haase, et al. (2002). ?Survey2000? is available at http://survey2000.nationalgeographic.com.
4. Other European survey studies include Anderson & Tracey (2002) and Gershuny (2003) about the United Kingdom, and Wagner et al. (2002) about Germany.
5. Manuel Castells and Imma Tubella (Open University) led the entire study in coordination with Teresa Sancho, with Barry Wellman doing analysis of the interpersonal relationships section in cooperation with Isabel Diaz de Isla. Data about civic involvement and political participation are not available to NetLab at this time.

6. The study is led by Kakuko Miyata in collaboration with Ken?ichi Ikeda, Barry Wellman and Jeffrey Boase. Rachel Yould has provided useful advice. For preliminary results, see Miyata, Boase, & Wellman (in press).
7. See Wellman (1999, 2001) for a more detailed argument.

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