Canadians, Culture, and Computers

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Report to Heritage Canada
by Wellman Associates

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Introduction

As the internet using population grows, key questions change

Seventy-five percent of Canadians were internet users in 2004 (Ekos, 2004). Younger Canadians had an even higher rate of use: 93% of people under 25 and 86% of people between 25 and 44 were internet users. Across the border, teenage use is very high, and presumably Canadian teens have similar high rates: 87% of American teens use the internet in 2005, with about half of the teen users having speedy broadband access (Lenhart, Madden and Hitlin, 2005).

Recent fears of the digital divide between users and non-users are becoming inoperative (Fong, et al., 2005; Reddick, Boucher and Groseillers, 2000; Wellman and Chen, 2005; Rideout and Reddick, 2005). Few Canadians or Americans do not have access to the internet—if not at home then at work, school, cafés, libraries or other public facilities (Ekos, 2004). The number and percentage of non-users is decreasing rapidly, as non-users age or go online, as heavily-using teens become young adults, and as even heavier-using young adults become middle-aged. For

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example, 94% of American eleventh and twelfth grades reported using the internet in 2004. The great majority of American teens (84%) go to websites about movies, TV, music or sports, three-quarters (76%) get news or current events online, and nearly half (43%) buy things such as music online. Girls are more active than boys in searching online for information about prospective schools, health, religion—and entertainment (Lenhart, Madden and Hitlin, 2005).

It is clear now that the great majority of the Canadian population have access to—and use—the internet. As the internet-involved teens (and tweens) become adults—and as elderly non-users fade away—the rate of internet use should increase more. Although there is much better data collected on the number of users than on the amount of their use, all available signs show that the average Canadian is also on the internet for more hours than five or ten years ago (Quan-Haase and Wellman, 2002; Wellman and Hogan, 2005). For one thing, there are more people online to communicate with and there are more websites online to check out. Moreover, the proliferation of internet uses since when only email and then websites were widely available in the mid-1990s now provides a greater variety of ways in which to engage: instant messaging, blogs, webcams, and more.

The key issue then turns from “do Canadians have internet access?” to “how are Canadians using the internet and other information and communication technologies (ICTs)”. As a recent evaluation of the Canadian digital divide concludes, the digital divide is more than a numbers count. It “is grounded in social practices and sustainable access to information and communication technologies” (Rideout and Reddick, 2005, p. 17). In short, the decade-old issue of mere use has become one of *informed use*. Do people know how to communicate, how to find information, and how to evaluate what they do find?

As the number of users grows, the potential impact of the internet on Canadian society also grows. As the internet gains acceptance as part of everyday life, it also gains the potential to change everyday life in subtle and sometimes far-reaching ways. Canadians are now moving past the stage of learning what they can do with the internet, into the state of making choices about how they will use the internet, including the ways they can incorporate the internet into their cultural and leisure activities. Yet, little scholarly work has been done so far on how people use the internet to facilitate cultural and leisure activities, both “high culture” such as symphonies and museums and “popular culture” such as movies, television shows and popular music. This is

a major gap: culture and leisure are important areas, both in terms of the role they play in people's lives and the role they play in sustaining a national identity. The goal of this report, and the study which serves as its basis, is to begin filling this gap by examining the extent to which Canadians make informed use with respect to finding cultural information online. We focus on three questions:

- How are Canadians finding cultural information?
- To what extent is cultural information now a part of informal communication with friends and family on and off the internet?
- How does obtaining information through the internet—both interpersonally through email, etc. and institutionally through the web and listservs—intersect with more traditional means of obtaining cultural information such as newspapers, magazines and broadcast?

This report has eight sections:

1. Discussion of the shifts in society, community and internet use that provide a context for changing modes of information searching and communication.
2. Description of the Connected Lives project from which the data for this report are drawn.
3. Description of the East York setting of the case study and of the study participants.
4. Using the Connected Lives survey and interview data to describe the current nature of internet use, especially the home use of the internet, the nature of social networks of information and communication, and how internet use fits in with other modes of information and communication.
5. Analysis of how Connected Lives interview participants are using the internet to engage with culture and leisure activities.
6. Typology of how internet non-users, reluctant users, instrumental users, and power users engage with culture and leisure activities.
7. Focused analysis of how new Canadian residents and members of multicultural communities are using the internet.
8. Discussion of the findings.

Searching for culture – what is known

Many people do not use the power of the internet to find and evaluate what they need to know. *Google* searching is not the same thing as informed searching. As Hargittai (forthcoming, p. 2) argues:

> As the medium spreads to a majority of the population, it is increasingly important to look at not only who uses the internet, but also to distinguish among people's varying levels of online skills. Skill, in this context is defined as *the ability to efficiently and effectively find information on the Web*. [author's italics.]

Hargittai has done pioneering research in the social analysis of internet skills, especially skills for searching online (Hargittai, 2003, 2005, forthcoming). When she gave a sample of Americans five search tasks to complete, only 50% were able to complete all five, while 32% completed four. At least 85% were able to search for a song, local events, children's art, or tax forms. But 39% were not able to find a web site that compares different US presidential candidates' positions on abortions. Moreover, search time for completing this task was usually 30%-40% higher than for other tasks: Overall, the time to search on the five tasks varied more than ten-fold: from 2.5 minutes to 33 minutes, regardless of whether or not people were able to search successfully.

There may be a general issue of computer skills. York Dobyns, the analytic coordinator of the Princeton (University) Engineering Anomalies Research centre reports on 26 years of research:

> There are some people who seem to have a natural rapport with computers and other complex machines, and there are other people who seem to manage to break everything even without touching (Horsey, 2005, p. 1).

While not all people can be computer MacGyvers (1985-1992), computer literacy and search skills do appear to be socially patterned and teachable. Adolescents and young adults—in their teens and twenties—do better in searching than do people aged 40 and older, when skill is measured in terms of success or in time to completion.

By contrast, gender did not matter: there were no significant differences between women and men (Hargittai, 2003, 2005). There has been is a substantial evening out of gender differences in

the past few years. Until recently, women had been online for a shorter length of time than men and women were not using the internet as much even when online (Chen and Wellman, 2004; Quan-Haase and Wellman, 2002). Now women have caught up by having lengthy experience and consummate skill. As most people have accumulated internet experience, gender differences—as well as prior experience with technology—do not have appreciable relations to internet searching skills. The only exception is that those with very little experience with technology do worse with internet searching. This suggests that internet searching is one of the first skills that internet users learn, except that many do not learn how to do informed or nuanced searching.

As has been the situation for other measures of internet skills and experience (NTIA, 1999, 2002), higher levels of education were associated with successful searching.

The embedding of the internet in everyday life

A principal conclusion of this report is that internet has become routinely embedded in everyday life. To give some background, recall that a decade ago, only email had substantial use, and the web was just beginning its growth. Mobile phones, email, instant messaging, blogging, webcams, internet phones, and SMS texting either did not exist or were used by a small, often-marginal, segment of the population.

When the internet first became widely used in the mid-1990s, enthusiasts saw it as a societally-transforming experience, a place where people could come to communicate, commune, work, and find community and information (see the review in Wellman and Gulia, 1999b). But the internet has as much been absorbed into society as transforming it.

In the early days, the internet was exciting because it was new and special. All things seemed possible. Internet initiates became avant-garde elites. Analyses occurred in fields of dreams permeated with technological determinism: assuming one-way causation from technological change to social change: “if you build it, they will come” (Kinsella, 1982). As Austin Powers said in 2002 to fellow time traveler Beyoncé, “It’s called the internet and it’s completely revolutionized the way we live” (Myers & McCullers, 2002).

A decade ago, there was widespread uncertainty about how these technologies would affect behaviour. Pundits felt licensed to make strong pronouncements on the utopian “death of distance” (Cairncross, 2001) or the dystopian virtual fragmentation of society (see the review in

Wellman & Gulia, 1999b). While some extolled the great changes in human endeavour coming from the internet, others voiced concerns about these same changes. The very term "internet" became a receptacle for both fame and infamy relating to any electronic activity or societal change. In the excitement, many lost their perspective.

At first, scholars shared in the melange of hope, hype, promotion, and fear about how the internet was going to change the world. Despite the world-changing pronouncements, actual research was largely small-scale laboratory and ethnographic studies about how people used ICTs as self-contained communication systems. As the internet filled imagination and commerce, governments, businesses and scholarly organizations wanted to know more about its characteristics. They were especially concerned with how many people were using the internet, what kinds of people were using it, and for what purpose. Hence, scholars turned to counting heads between 1995 and 2002 (Wellman & Haythornthwaite, 2002; Chen & Wellman, 2004; Haythornthwaite, 2005).

Now, with the demographics of the internet stabilizing in the developed world, a new phase of research is developing. Research is moving from counting who uses the internet to questions about the consequences of ICTs for community, civic involvement, and daily life—including cultural life. Analysts ask:

- Does the internet increase or decrease social and cultural information seeking and involvement, both interpersonally with friends and relatives and with more organized forms of civic and cultural life?
- Does it encourage cultural involvement, either online or out in shows, museums and galleries?
- If people are rooted to their computers, how does this affect leisure activities with household members?
- Do they pick different cultural involvements as ICTs shift to individual means of communication, such as the internet, mobile phones and personal MP3 players?

The pervasive and explosive global growth of ICT use has meant that more people are using more types of media in more ways. From being iconic rarities in 1995, ICTs are rapidly becoming taken for granted and domesticated. *Wired* magazine has shrunk in size, and both the

Toronto Globe and Mail and the *New York Times* have abandoned their weekly technology sections. ICTs no longer function as isolated communication systems. Rather, they are deeply embedded in people's everyday lives and relationships. To be understood, ICTs must be studied in their social contexts.

The dust has settled and consistent observations are coming in. ICTs have neither destroyed community nor ushered in McLuhanesque (1964) global villages. Yet a shift is happening underneath this surface continuity: from group-centered and place-centered network structures and processes (Figure 1a) to individual-oriented network structures and processes. ICT environments respond to, resonate with, and amplify this transition by providing technologies that increase personalization, mobility, and ubiquitous use. Where cars, planes, and phones have supported community groups (Figure 1b), ICTs support networking individuals (Figure 1c). The personal login and the individualized mobile phone ring tone has supplanted the household's doorbell and standardized wireline phone ring tone.

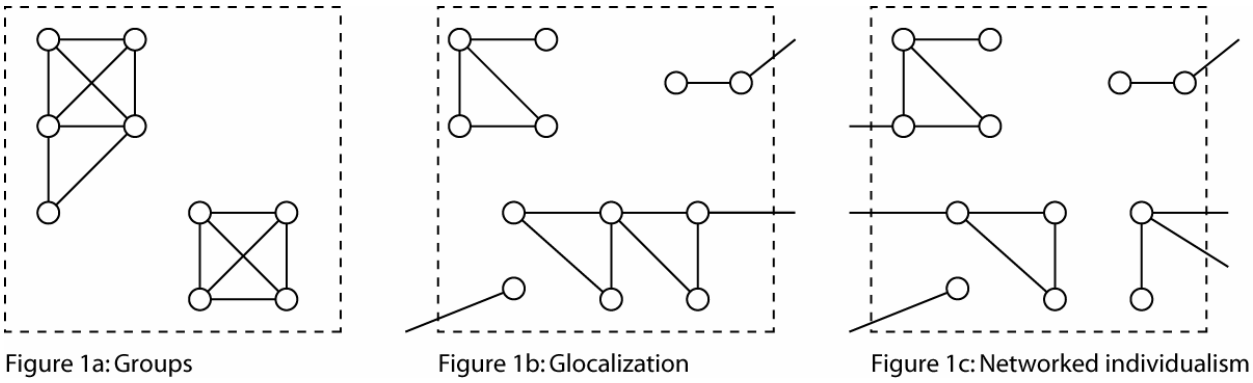

Figure 1: Three models of interpersonal structure (Copyright © Wellman Associates 2005)

From Groups to Far-Flung Networks: Just about everyone is connected these days—at most by six degrees of interpersonal connection and often by less (Milgram, 1967; Kochen, 1989; Watts, 2003). However, as ease of communication has grown, the nature of the connections has changed in ways that have implications for how people engage with culture.

The first implication comes from the finding that American (and probably Canadian) involvement in some group-oriented activities—such as bowling leagues, cultural associations and church groups—has declined in recent years. Instead, individuals are extensively involved in less-bounded, less-structured informal networks where they manoeuvre through multiple sets of

ties shifting in saliency and frequency of contact. Each person enacts multiple roles at home, in the community and at work. Their friends—and even their relatives—are often loosely linked with each other. These loose linkages do not imply a complete untethering of social relations: there are few isolates "bowling alone," as Putnam's metaphorical book title misleadingly asserts (2000). They are bowling in sparsely knit networks rather than in solidary groups (see research by Fischer, 1982; Wellman, 1979; Wellman and Wortley, 1990; and others reviewed in Wellman, 1999). This change suggests that people may be less inclined to join large leagues and other cultural and leisure organizations. Instead, they may be drawn to individual and small group activities.

Despite the changes wrought by both structural changes in society and the introduction of new technology, most interpersonal information networks remained largely based in a few specific and fixed places until late in the twentieth century—but their connections reached well beyond neighbourhoods. People's networks became "glocalized": both far-flung (global) and local. Households remained the pre-eminent units for organizing marital and community relations. Many friends, relatives and co-workers traveled and phoned substantial distances to keep in contact (Wellman, 1982; Wellman and Wellman, 1992; Wellman and Wortley, 1989).

People who are connected in such a "place-to-place" manner are aware of local contexts. Yet, they are not dealing with interstitial places in between as they travel, phone or email sizeable distances to connect with dispersed friends, kin and workmates.

Their glocalized networks contain overlapping groups of people. There is much group interaction within local places—homes and offices—but no overall integration. It is not that there are simply less or more ties, it is that there are clusters of ties which are really dense, many of which are groups of affinity associated with a particular context, such as neighbourhoods, church, work, old school friends, and kin (Feld, 1982; Wellman and Leighton, 1979; Simmel, 1903; Kadushin, 1966).

Thus, glocalized networks connect across small clusters of ties, rather than connecting within a single large, densely knit, all-encompassing cluster. As recent research into how information flows on the web has revealed, such inter-cluster connectivity can be efficient communication structures (Watts, 2003; Adamic, Buyukkokten and Adar, 2003; Wellman, 1988). Most clusters contain "super-connectors"—people linked to large numbers of others in multiple social

milieus—and these connectors rapidly diffuse information. At the same time, because the networks are not confined to one or two solidary groups, they acquire information from a variety of sources (Granovetter, 1973, 1995; Merton, 1957). The situation is even more network-efficient for humans than for websites, because people are more likely to connect to multiple other social milieus than do oft-isolated websites (Watts, 2003).

This new network structure suggests a second important implication of these changes for culture and leisure. Many people now have access to a much wider variety of information sources than before. ICTs and email mean that Canadians can look well beyond their own borders for cultural information, both by seeking information directly and through hearing about it from online acquaintances. This could be especially important for cultural products such as music and movies, which are easily digitized and can thus be shared over the internet. Our research has found that this is especially salient for immigrants, who use the internet to keep up with cultural activities in their countries of origin. However, this may change as a new generation grows up more comfortable with the internet as a communication tool and more familiar with the possibilities it holds.

The Connected Lives Project

The data that form the empirical basis of this report come from the Connected Lives project of household relations, social networks, ICT use, and information seeking. This field study fits between large-scale surveys that provide overall (often national) statistics and ethnographic studies of a small number of cases. The Connected Lives project has gathered quantitative and qualitative data through a large survey followed by detailed interviews and observations with a subsample of survey respondents. The large sample size of the survey provides statistical generalizability while its one-hour length provides useful detail. The in-depth interviews with a sub-sample of the same participants provide more detail plus the ability to acquire information about social networks and search processes not obtainable through surveys.

Survey

The Connected Lives team collectively developed a lengthy 32-page survey from November 2003 to June 2004. We randomly sampled English-speaking, non-frail adults (18+) in the Toronto area of East York. We completed 350 surveys between July 2004 and March 2005. The sampling frame yielded 621 valid names, and we obtained a response rate of 56%. Each survey

took between one and two hours to complete. They were dropped off at the respondents' homes and picked up one to three weeks later.

The survey makes it possible to establish a fairly good picture of how people in East York are currently using the internet. It asks about respondents' computers, jobs, household members, personal networks, community involvement, attitudes, and standard demographic information.[2]

Interviews

In-home interviews were conducted between February and April 2005 with one-quarter of the survey respondents (87 in total), and were combined with observations of how the participants actually interact with communication environments. The interviews were conducted by Connected Lives doctoral students and took two to four hours—usually in a single evening session. The interview schedule was developed by the Connected Lives team between September 2004 and January 2005, in tandem with the survey deployment. The response rate was 85% of those survey respondents who wrote "yes" or "unsure" when asked at the end of the survey if they would be willing to be interviewed.

Free and semi-structured observations and discussions were used to relate participants' actual behaviour to their interview and survey responses. The interview starts with a semi-structured section on daily routines and moves on to computer and internet use. The interviews obtained detailed information about household relations, internet use, travel behaviour, social networks, and information seeking. It includes a name generator to help describe the personal networks of the respondents (Carrasco, et al., 2005).

During the interviews, participants were questioned about their general culture and leisure activities, how they select specific activities to engage in, and the role the internet plays in their leisure lives. Information about cultural activities was gathered by having the participants rank a series of cue cards listing leisure activity groups, and then asking them to elaborate on the specific activities they engaged in. This was followed by a series of questions about how the participants gather information and make decisions about the culture and leisure activities they

[2] Standard scholarly survey procedures were used: an initial letter followed by an in-person follow-up and subsequent pick-up, *Tim Hortons*™ gift certificates to respondents, and extensive attempts to convert refusals and incompletes into completed surveys.

identified as being of interest. Participants were then asked about the role that the internet plays in information gathering, decision making, and engaging in activities.

Observations

Observations: If the interview participant had an internet connection, we concluded with an in-home observation of how the participant actually uses a computer and searches for cultural and health information. Interview participants were asked to demonstrate how they use the internet. This included both unstructured demonstrations of everyday uses plus structured demonstrations of specific skills, using a protocol developed from our study of computer literacy (Wellman & Romanovksa, forthcoming; see also Hargittai, 2005). The observations focused on how the participants obtain cultural and health information. We also photographed the participants' computer setups.

East York and the East Yorkers

East York

The case study is set in East York, a residential area of Toronto that has played host to NetLab's two previous community studies in pre-internet days (Wellman, 1979; Wellman and Wortley, 1990). A distinct self-governing "borough" of Toronto until metropolitan amalgamation in 1998, East York has always prided itself on its local community and small town atmosphere, symbolized by one of Canada's few lawn bowling greens (Davidson, 1976; Cooper, 2004). While it would be unfeasible to do a third wave of a longitudinal study 25 years after the last measurement date, East York still retains its value for comparisons with our pre-internet data, and it provides a fair cross-section of the Canadian urban public.

East York sits squarely within the arterial highway system of Toronto. It is bounded on the west by an expressway, on the south by a subway line, and buses frequently travel main routes. Mobile phone and broadband internet service is widely available throughout Toronto. As the largest metropolitan area in Canada, Toronto hosts many theatres, museums, musical performances, and a large library system.

East York is near the heart of metropolitan Toronto, 30-45 minutes travel from Toronto's central business districts (Figure 2a). Its population of 114,240 (2001 census) is ethnically and socioeconomically mixed, with a mixture of white Canadians and visible minorities residing in houses and apartment buildings, (Figure 2b).

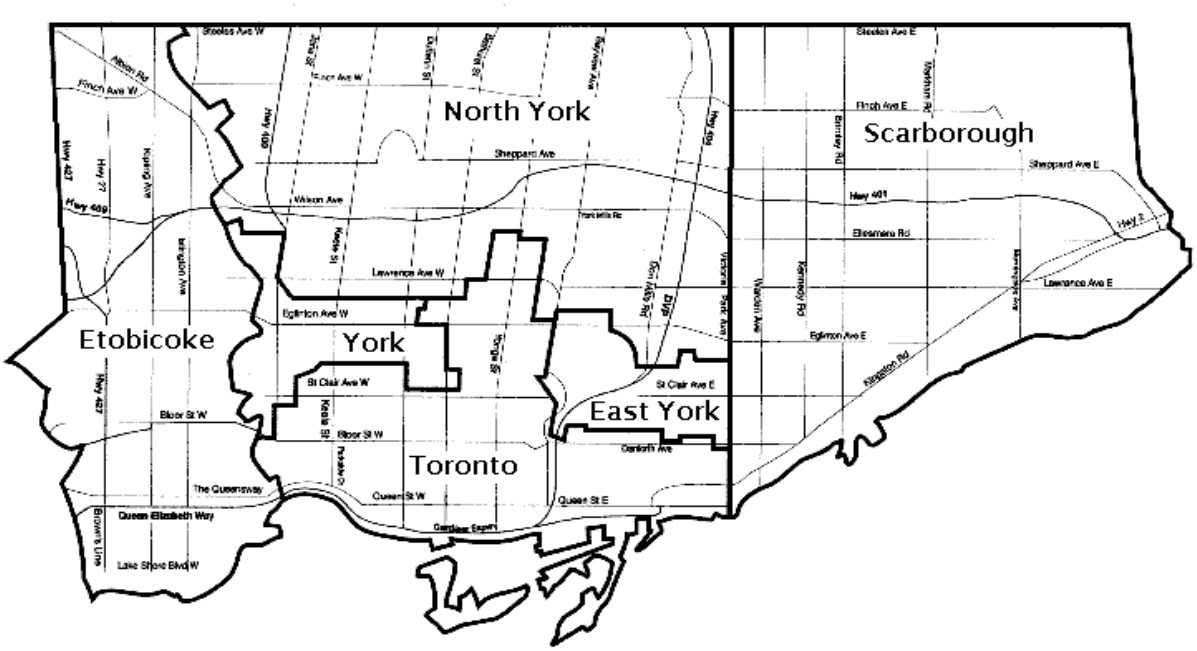

Figure 2a: East York in Metropolitan Toronto

Figure 2b: Houses and apartment buildings in East York

Characteristics of the East Yorkers

Three sets of demographics are of concern in this report, those of:

- The survey respondents.
- The subset of survey respondents who are interview participants.
- East York itself, as described by Statistics Canada in the 2001 Canadian census. The data show that in most respects, East Yorkers reflect Anglophone urban Canada.

Gender: In accordance with the demographic breakdown of East York, we had somewhat more women than men participate in the survey. In total, 57.7% of the survey respondents are women and 42.3% are men. The interview participants have gender ratios that are similar to the survey respondents: 58.6% of the participants are women and 41.4% are men. Both are slightly higher than the general population of East York, which is composed of 52% women and 48% men (Statistics Canada, 2001).

Age: The youngest survey respondent was 18 and the oldest was 93 at the time of the survey, with a mean age of about 45.1 and a median age of 43.0. This indicates that the survey population is older than the adult population of East York, which had a median age of approximately 39 in 2001 (Table 1).

TABLE 1
Age of Survey Respondents

	N*	Percent	Cumulative Percent
18-29	42	12.0	12.3
30-39	98	28.0	40.9
40-49	86	24.6	66.1
50-59	61	17.4	83.9
60-69	29	8.3	92.5
70+	26	7.4	100.0
Total	342	97.7	

* Eight respondents did not disclose their ages.

The interview participants are somewhat older than the survey respondents, with a mean age of about 49.3 years and a median age of 48.5 years (Table 2).

TABLE 2
Age of Interview Participants

	N*	Percent	Cumulative Percent
18-29	8	9.2	9.2
30-39	17	19.5	28.7
40-49	21	24.1	52.9
50-59	22	25.3	78.2
60-69	7	8.0	86.2
70+	11	12.6	98.9
Total	86	98.9	

* One participant did not disclose his age

Ethnicity: Recent immigrant migration and high-rise apartment development has made the East York cityscape more complex than its village-like past. When we previously gathered data in East York in 1968 and 1978-1979, almost all residents were Canadian born and of British-Canadian ethnicity. The situation has changed substantially in the past decades. East York is similar to much of the contemporary metropolitan Toronto (and different from many other places in Canada) in its high percentage of foreign-born residents. Fifty-three percent of East York residents were Canadian-born in the 2001 census (Statistics Canada, 2001), similar to the 51% Canadian-born respondents in our survey. Interview participants are more heavily native-born: 58% of them were born in Canada, reflecting the reluctance of foreign-born Canadians to participate in interviews.

The largest ethnic group remains British-Canadian, comprising nearly half (44%) of the survey sample. However, visible minorities (i.e., nonwhite-Canadians) comprise 27% of the survey sample: principally East Asians and South Asians, with Chinese-Canadians and Indian-Canadians being the largest groups. This is substantially lower than the 2001 Canadian census report that visible minorities comprised 36% of the East York population. Hence, these ethnic groups are underrepresented in our survey (and subsequent interviews) because of language and cultural barriers. In most other respects, our data reflects census demographics, including gender, age, income, education, and family composition.

Relationship and Family Status: More than three-fifths (62.3%) of the survey respondents are married or living in a common-law or long-term relationship (Table 3). This is slightly higher than the 55% of East York inhabitants who live in similar situations (Statistics Canada, 2001).

Twenty-three percent (22.9%) are single. Interview participants are closer to the East York population: 53.5% of them are married or living in a common-law or long-term relationship, while only 15% are single (Table 4).

TABLE 3
Marital Status of Survey Respondents

	N*	Percent	Cumulative Percent
Married	186	53.1	53.1
Common-law	22	6.3	59.4
Long-term Relationship	10	2.9	62.3
Single	80	22.9	85.1
Divorced	19	5.4	90.6
Widowed	15	4.3	94.9
Separated	10	2.9	97.7
Total	342	97.7	

* Eight participants did not disclose their statuses.

TABLE 4
Relationship Status of Interview Participants

	N*	Percent	Cumulative Percent
Married	45	51.7	51.7
Common-law	8	9.2	60.9
Long-term Relationship	6	6.9	67.8
Single	13	14.9	82.8
Divorced	6	6.9	89.7
Widowed	4	4.6	94.3
Separated	4	4.6	98.9
Total	86	98.9	

* One participant did not disclose his status.

Three-fifths (60.6%) of the survey respondents have at least one child. Interview participants are more likely to have offspring: 65.5% have children.

Education: A substantial number of the survey respondents are well-educated (Table 5): 72.0% have some post-secondary education, nearly half (43.5%) have graduated university, while 27.1% have a high school education or less. The education level of interview participants is somewhat higher (Table 6): 86.0% have some post-secondary education, more than half (51.7%) have graduated university, while only 19.5% have a high school education or less.

TABLE 5
Highest Level of Education of Survey Respondents

	N*	Percent	Cumulative Percent
< High School	32	9.1	9.1
High School or GED	63	18.0	27.1
College	62	17.7	44.8
Some University	41	11.7	56.5
Undergrad	101	28.9	85.4
Advanced Degree	48	13.7	99.1
Total	347	99.1	

TABLE 6
Highest Level of Education of Interview Participants

	N*	Percent	Cumulative Percent
< High School	1	1.1	1.1
High School or GED	15	17.2	18.4
College	16	18.4	36.8
Some University	9	10.3	47.1
Undergrad	30	34.5	81.6
Advanced Degree	15	17.2	98.9
Total	86	98.9	

* One participant did not disclose his status.

Income and Employment: The bulk of the East York population is working-class and middle-class—as are the survey respondents and interview participants. The median personal income of the survey respondents is between $30,000 and $40,000. With most of the adult household members doing paid work (62.0%), median household income is substantially higher, between $50,000 and $75,000.[3] A high percentage of those not doing paid work are retired (37%), students (16%), and full-time homemakers (13%). The rest of the survey respondents report being retired (14.1%), students (6.1%), between jobs (5.2%), full-time homemakers (4.7%), being on leave (2.7%), or gave other reasons for not working (5.2%).

[3] Following common survey practice, we asked respondents to tell us income within ranges, such as $30,000-$40,000. All dollar amounts are in Canadian dollars, which at the time of our research was equivalent to about 78 US cents, 67 Euro cents, 45 British pence, 87 Japanese yen, and 6.6 Chinese yuan.

A slightly lower percentage of the interview participants are in the paid labour force: 58.6%. The breakdown of the non-employed is also a little different. Of the 36 interview participants not engaged in paid employment at the time of the survey, 2.3% were between jobs, 4.6% were full-time homemakers, 2.3% were students, 21.8% were retired, 2.3% were on leave, and 9.2% listed other reasons for remaining out of the paid labour force. The biggest difference is the number of interview participants who are retired; this corresponds to the higher mean and median ages of the interview participants and is not surprising given that many retired people have fewer time constraints.

Computer Use[4]

With the shift of analytic attention from demographics—who uses the internet—to dynamics—who do they use the computer with, where, when and why and how—comes a need to understand the internet's role in households. Computer access is good in East York, with telephone and cable companies competing to provide broadband connectivity. Four-fifths (79.4%) of the survey respondents own a home computer, which suggests a largely computer literate population. Almost all (94%) of these computerized households are connected to the internet. A large majority of the respondents, 86.9%, have used the internet at some point and 75.1% continue to use it at home. This compares to the national percentage of 74% of Canadians with home internet access (Ekos, 2004; Rideout and Reddick, 2005).

Most survey respondents have had appreciable internet experience: more than three-quarters (77.7%) of the respondents are internet users who began using the internet before 2000. Almost all (99.9%) of the internet have used the internet for at least two years. This suggests that those who have not been using the internet are unlikely to start using it now. Respondents report being online a median of 10 hours per week, and send a median of 21 emails per week (Table 7).

[4] Tracy Kennedy led the research in the area of household computer use and played a substantial role in drafting this section.

TABLE 7
Weekly Hours of Active Internet Use of Survey Respondents

	N	Percent	Cumulative Percent
0	83	23.7	23.7
1-10	143	40.9	64.6
11-20	61	17.4	82.0
21-30	22	6.3	88.3
31+	41	11.7	100.0
Total	350	100.0	

Access and use statistics for internet participants are similar to those for survey respondents: 83.9% have a computer at home, 86.2% have used the internet at some point, and 77.0% currently have internet access at home. They report being online for a median of 8 hours per week. There are slightly more interview participants in the 11-20 hours range and slightly fewer in the 1-10 hour range (Table 8).

TABLE 8
Weekly Hours of Active Internet Use of Interview Participants

	N	Percent	Cumulative Percent
0	19	21.8	21.8
1-10	31	35.6	57.5
11-20	20	23.0	80.5
21-30	7	8.0	88.5
31+	10	11.5	100.0
Total	87	100.0	

Households and Internet Use

The internet is not a part of every home—even in Canada, nor does every Canadian feel it is the internet that connects them to the wider world. Yet, the internet and ICTs permeate Canadian society: many of those who do not have home computers have access to them at work, school, internet cafés, libraries, and other public spaces (Boase, et al., 1973). Several phenomena do play a role in internet use, especially higher levels of education and income, and the presence of children in the household (Chen and Wellman, 2002; Statistics Canada, 2002). That the presence of children makes a difference by itself suggests that parents have a particular understanding of what the internet is good for, perhaps even before they start to use it. While some use the internet

for a wide variety of things—communication, information, recreation, and commerce—others focus more. Some people still feel hesitant to shop online, while others see it as a tool for work rather than for recreation (Wellman and Haythornthwaite, 2002; Katz and Rice, 2002; Kraut, et al., 2002).

The complex lives of household members—coupled with their personal mobility and mobile connectivity—means that each household member often wants to use ICTs to communicate with other household members as well as with community members. Although enthusiasts have treated computer and internet use as an unalloyed good, in practice, use can create stress. A generation ago, some households argued about who would get the family car. Now, some households argue about who gets to use the family computer (Lenhart, Madden and Hitlin, 2005). Among households with more than one resident and at least one computer, 40% say they argue about who gets to use the internet, although only 5% say they argue half the time or more. Families with more than one child at home were 2.2 times more likely to argue than families with one or no children. They could be parents arguing with children about computer use and also children arguing with each other. Interestingly, the presence of a second computer in the house does not affect the likelihood of household disputes about computer use, perhaps because households with much tension may have already purchased multiple computers. For example, one household we studied has three internet computers in their living room, partially bought as a way to resolve disputes (Figure 3).

Figure 3: Networked at home: the three-computer household

The development of ICTs has resonated with the networking of technology. The development of ICTs has encouraged household members to go their separate ways while remaining connected and coordinated.

Household patterns of gender ideology and domestic divisions of labour have now expanded to include computer use, with some online activities interpreted according to pre-existing gender roles. Although women respondents to the survey use the internet as much as men, they specialize in different things (Figure 4). For example, women continue their longstanding role as social networkers by communicating with others online, while men do more searching for general information. The only anomaly is the tendency for men to do more online shopping. We believe that this may be linked to the greater involvement of men in searching for information, and that this may be a diminishing difference as women accumulate greater experience online.

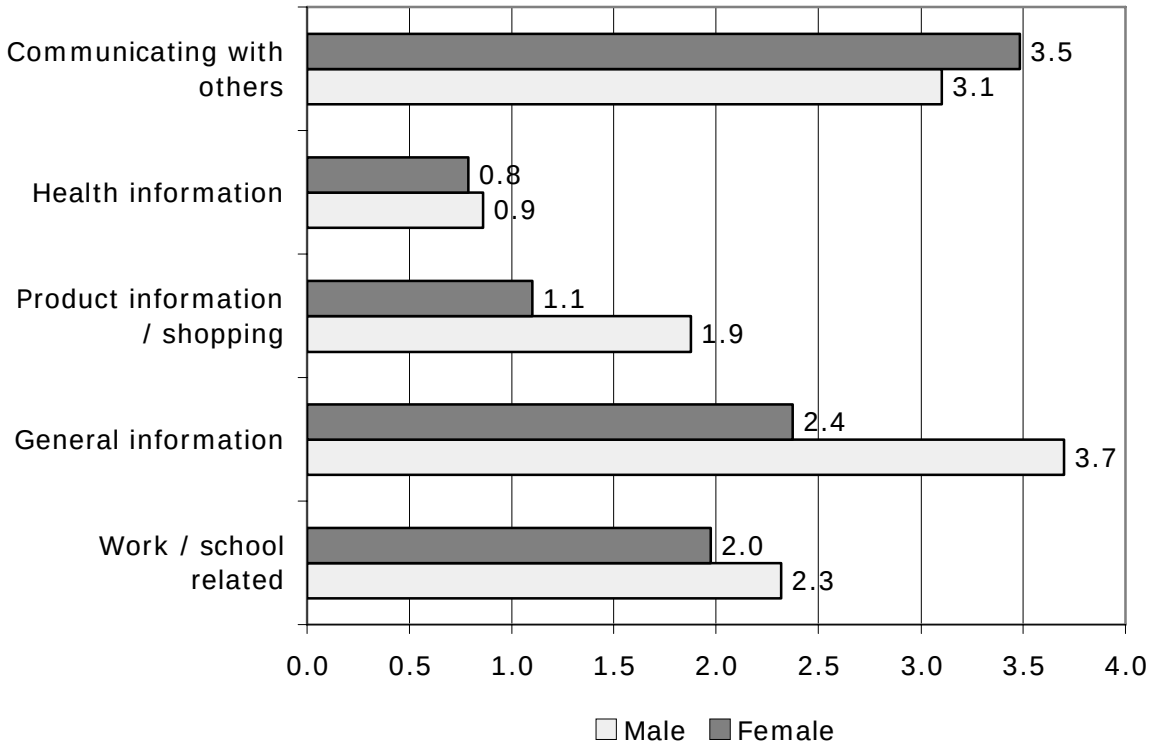

Figure 4: Mean number of hours per week spent on internet activities at home by gender – for those with the internet at home (N=235)

Although the survey participants were not asked to indicate the number of hours they spend using the internet to search for culture and leisure information, it seems likely that this activity was captured in the general information category. The gender divide in this category may indicate that men spend more time than women searching for cultural information; however, we know from the interviews that men and women are about equally likely to list the internet as a source of cultural information. Thus, if a gender difference exists, it is primarily one of quantity.

The Size and Composition of Social Networks

While the internet has become an important new source of culture and leisure information, social networks also remain important, and the communication affordances of the internet mean that social networks and computer networks intersect.

The size of a person's social network is difficult to measure. We estimated the network size of the participants is measured using the *summation method* (see McCarty et al., 2001). This method was chosen for the survey because it can be self-administered. The summation method was developed to capture network size more easily by breaking networks down into smaller,

more manageable (and more easily estimated) pieces. Overall, respondents report a median of 23 ties: 9 that are very close and 14 that are somewhat close.[5] These are sizes roughly comparable to those found in other studies of social networks (Fischer, 1982; Wellman, Carrington and Hall, 1988). We caution that such close ties are only the heart of a personal network: estimates of the overall size of a personal network (including weak acquaintances) range well upwards of 200 ties (Boissevain, 1974; Pool and Kochen, 1978; Bernard, et al., 1990; Kadushin, et al., forthcoming).

We obtained information about network size by:

(1) asking people to distinguish between their *very close* ties and their *somewhat close* ties;

(2) asking about the number of very close and somewhat close ties in each of eight different role relationships (Table 9).[6]

"Very close" ties include those ties with whom people discuss important matters, regularly keep in touch, or who are willing to provide help. Very close ties are often willing to provide resources that require substantial time, energy, and trust. They are more likely to provide intensive care for those in poor health and they are more likely to provide financial assistance (Wellman, 1992). Survey respondents have a mean of 11.6 very close ties and a median of 9. The standard deviation is 12.6. The disparity between the mean and median, coupled with the high standard deviation, indicates that a few respondents report having a large number of very close ties.

[5] Medians are smaller because a few respondents report huge networks.

[6] The same approach was also used successfully in February 2004 for a telephone survey of 2200 American adults in the Strength of Internet Ties study done by the Pew Internet and American Life project (Boase, Horrigan, Rainie, and Wellman, 2005).

Table 9: Mean number of somewhat and very close ties by role (N=297)

	Mean number of very close ties	% of all very close ties	Mean number of somewhat close ties	% of all somewhat close ties
Immediate kin	3.7	37.9	1.6	10.0
Extended kin	2.8	14.4	4.3	18.8
Neighbours	0.9	5.6	2.4	10.2
Work / school associates	1.3	8.4	3.9	16.5
People known only online	0.3	1.3	0.3	2.0
From voluntary associations	1.1	5.1	3.6	13.8
Other friends	3.3	25.4	5.2	25.3
Others	0.1	1.5	0.4	2.5

"Somewhat close" ties may have some or all of these traits, but to a lesser extent. Some research suggests that weaker ties are a better source of new ideas and information, since they tend to be involved in different social milieus (Granovetter, 1973).

Interview participants were instructed to consider as somewhat close ties people who were more than acquaintances, but who were not very close. Survey respondents have a mean of 16.8 somewhat close ties and a median of 10.0 somewhat close ties. The standard deviation is 22.4. As is the case for very close ties, this disparity between the mean and median means, coupled with the high standard deviation, indicates that a few respondents report having a large number of somewhat close ties.[7]

Access to Culture

ICTs convey information as well as communication. Finding information, just like communicating, is a process affected by social phenomena. People differ markedly in their ability to find information online. Unlike the early years of the internet, women search as readily as men. But older people have less skill in doing web searches as do people with little technological experience (Hargittai, 2002a, 2002b). Such differences between individuals are more important in networked individualistic situations where people may be less apt to have someone physically present to help them with their searches than they would in active neighbourhood groups.

[7] For further information on our findings regarding network size, composition, and management, see Wellman & Hogan, 2005.

The Connected Lives project is interested in how individuals search for information, both online and offline. Is the turn away from groups and institutions to social networks associated with much reliance on interpersonal ties? Is the combination of widespread internet use and an abundance of information on the web leading to a reliance on online sources of information? Our research concern is with how people's social networks intersect with their ICT networks to provide them with information.

With the move from groups to networks, finding information has become more contingent on the nature of separate relationships. Where the village/neighbourhood once controlled and provided information—as Hillary Clinton (1996) says, "It takes a village to raise a child" —such information is now provided by spatially and socially dispersed network members. Previous studies of East York have shown that information is largely supplied in discrete relationships rather than in groups, with different relationships specializing in the kind of information that they provide.[8]

With the proliferation of ICTs, timely questions include determining the effect of emerging technologies such as the internet and mobile phones. Location-aware technologies are emerging which can send messages to mobile phones and PDAs telling people what cultural treasures lie behind nearby walls, from Henry Moore to The Henrys. Yet such use of ICTs are not fully driven by technologies, existing and new. Of equal importance are the evolving relationships between men and women, the potential impact of an aging baby-boomer generation and their relationship to other cohorts, and the effects of the high level of cultural diversity of East York, Toronto and indeed, cities across Canada and abroad.

When dealing with finding cultural information, people look for it from their families and social networks; specialized government and non-governmental organizations (such as Heritage Canada or the Danny Grossman Dance Company); and published and broadcast sources (Toronto *Globe and Mail*; *People* magazine; CBC radio and TV). ICTs can amplify many of these information sources, providing email information from friends and relatives and web information from organizations. It is also easy to find new sources of cultural information from strangers via chat rooms and listservs.

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[8] Wellman, 1979; Wellman, 1985; Wellman and Wortley, 1990; Wellman and Wellman, 1992; Wellman and Frank, 2001; Plickert, Wellman and Côté, 2004.

Cultural knowledge and activities are strongly related to success in both school and jobs (e.g., DiMaggio, 1982, 1997; Bourdieu, 1984). The rise of ICTs, particularly the internet, has been accompanied by a massive increase in potential access to cultural information. Yet, such access is only meaningful if people actually use the internet for such purposes. Culture is a broad term that can encompass a vast array of concepts. For the purposes of our analysis, culture will be limited to leisure-type activities from both "high culture" and "popular culture" categories, including reading and writing; television and film; music; fine art; performing arts; and games and sports.[9]

Studies of the relationship between culture and life outcomes suggest that the types of cultural knowledge people possess are also important in determining outcomes, although the relationship is far more contingent and far less straightforward than was once believed (Erickson, 1996). Given the importance of cultural knowledge and the ability of ICTs to expand access to information of all types, it is important to investigate how people are taking advantage of this new access for cultural purposes.

The popularity of many online sites indicate that people are going online to engage with culture. Some examples are the Internet Movie Database, iTunes, and the ESPN sports website; online book vendors such as Amazon and Chapters/Indigo; and the websites of public libraries. However, there has not been much scholarly (non-proprietary) research on which sites people are going to and what they are looking for. Much research on the connection between leisure and the internet has focused on exclusively online activities such as multiplayer games and online gambling (Reid, 1999; Bryce, 2001; Kendall, 2002; Griffiths and Parke, 2002; Chee and Smith, 2003). Others have looked at behaviours often perceived as deviant, such as cyberporn (Mitchell, Finkelhor and Wolak, 2003; Stack, Wasserman and Kern, 2004) and its more mainstream cousin, cyberdating (Whitty, 2004; Baker, 2005; Whitty and Carr, 2006).

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[9] High (or elite) culture is defined in the literature as "the art, music, literature, and other symbolic products that were (and are) preferred by the well-educated elite…. [as well as] the styles of thought and feelings of those who choose these products—those who are `cultured.' Mass culture, on the other hand, refers to the symbolic products used by the `uncultured' majority." (Gans, 1974, p. 10). Note that Gans—and ourselves—reject the pejorative connotation of "mass culture" and use instead the term, "popular culture". See also DiMaggio, 1997.

Such research, while valuable, is limited because it treats going online as a leisure activity unto itself and ignores the interplay between online and offline activities in everyday life. Interacting with culture directly online is only one way that the internet can interact with—or facilitate access to—culture. In addition to providing a location for engaging in leisure activities, the internet can also facilitate access to information about new cultural products through features such as book reviews; offer information that enables people to access culture offline, such as movie times; enable people to manufacture and share with others their own cultural products such as photoblogs; and improve ease of communication about culture through email and instant messaging programs.

Gaps in the literature suggest some important questions. In general, we are concerned with from where people get cultural information and how they decide which cultural products to consume. Our more specific, internet-focused questions are:

Who goes online in search of culture? What types of people are most likely to go online, and what types of people are least likely to do so?

For what kinds of cultural information are people searching? Included in this is the question of what types of online cultural activities are people engaging in? Are people interested in online cultural experiences, such as games and podcasts? Are they interested in supplementary information, such as biographies of musicians and reviews of books and movies? Or are they going after access to offline experiences, using the internet as a gateway to learn about—and buy tickets for—concerts and galleries?

The internet can facilitate access to culture in five key ways:

- Supplying immediate access to cultural artefacts such as online museum displays and downloadable music.
- Providing information about new cultural products, such as online book reviews.
- Offering information online that helps people to access culture offline, such as providing the times when movies go on or enabling online ordering of tickets to shows.
- Enabling people to manufacture and share their own cultural products, such as photoblogs.

- Improving ease of communication about culture via email and instant messaging programs.

All of these features are important, yet not all are equally popular with Canadians. Different categories of users approach internet use differently, and while some uses cut across virtually all categories, others are restricted to a small number of people.

Propensity: Who searches for cultural information?

Methods: What factors influence the frequency of seeking cultural information offline, including the role played by the internet? We use the Connected Lives survey data to provide a baseline measure of who looks for cultural information. This baseline measure informs analyses focusing on the internet.

To measure people's propensity for searching for cultural information, we combined four variables from the survey to form a scale measuring the frequency of obtaining new cultural information from one's very close ties. The questions that generated the variables used to construct the scale are:

(1) When talking with people you are VERY close to, how often do you get information about musicians or musical groups?
(2) When talking with people you are VERY close to, how often do you get information about restaurants?
(3) When talking with people you are VERY close to, how often do you get information about movies?
(4) When talking with people you are VERY close to, how often do you get information about books?

The responses to these questions were tested to ensure that they clustered appropriately, and were then added together.

Regression analysis was performed using the scale as the dependent variable. The variables that were analyzed for their potential influence on frequency of information seeking were age, sex, education, personal income, the number of people's very close and somewhat close ties (two measures of network size), hours of internet use at home and at work/school, and numbers of emails sent.

The nature of internet use is drawn from two survey questions. The first asked people to estimate the number of hours they spent actively using the internet from home for general information purposes during a typical week. The second asked people to estimate how many hours they spent actively using the internet from work or school for general information purposes during a typical week. These variables were combined to create a measure of the total number of hours participants spent actively using the internet during a typical week.

Email was treated in a differentiated manner to reflect the diversity of communication in the survey. Participants were asked how many emails they send from home during a typical week to household members, to relatives, to friends, and in relation to work or school. They were also asked how many emails they send from work or school during a typical week to the same four groups of people. These variables were then combined to create a measure of the total quantity of email communication that participants engage in during a typical week.

Findings: Table 10 shows the findings from the regression performed on the frequency of obtaining new cultural information from very close ties. The *unstandardized coefficient* measures how the dependent variables each affect the frequency of obtaining cultural information from close ties, while the *standardized coefficients* allow for comparisons by revealing the relative strength of the different variables. Regression analysis identifies two variables that are significantly related to frequency of getting cultural information from the people whom the participants identify as very close (Table 10): age and the size of very close networks.

TABLE 10
Obtaining Cultural Information from Very Close Ties

	Unstandardized Coefficient	*Standardized Coefficient*
Demographics		
Age	-0.084**	-0.395
Male	0.183	0.035
Education	-0.119	-0.067
Personal Income	0.155	0.067
Network Size		
Very Close Network Size	0.046*	0.223
Somewhat Close Network Size	-0.001	-0.011
internet Use		
Hours of Active Use per Week	0.009	0.011
Number of Emails Sent in a Typical Week	-0.001	-0.039

Adjusted R^2 = .173; F = 6.534; N = 211; *p ≤ .05. **p ≤ .001.

Age has the strongest effect. The negative coefficients indicate that the younger you are, the more often you get new cultural information from your very close network. Table 11 provides a more detailed breakdown of how often each age group obtains cultural information from their very close networks. In this table, the frequency of obtaining information has been broken down into often, sometimes, and rarely. While nearly half of the participants under 29 often obtain cultural information from their very close networks, no more than 27% of those 40+ often obtain cultural information from their very close networks.[10]

TABLE 11
Frequency of Obtaining Cultural Information From Very Close Ties by Age

		Percent by Age					
		18-29	30-39	40-49	50-59	60+	Total
Frequency	Rarely	0	21	11	27	25	(53)
	Sometimes	53	48	68	61	61	(175)
	Often	47	32	22	13	14	(76)
	N =	(38)	(92)	(74)	(56)	(44)	(304)

X^2 and tau-b are both statistically significant at .001.

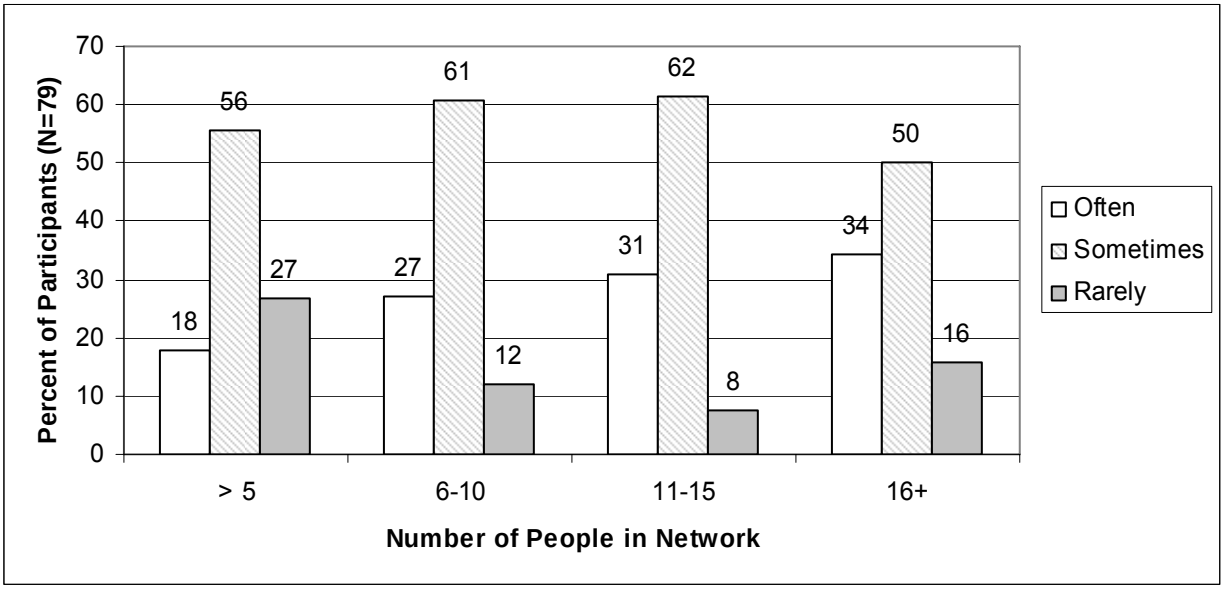
[10] Note that sex, education, and personal income have no significant effect on the frequency with which people seek information from their very close ties.

There are several possible explanations for these findings. One is that more young adults may have more time to devote to cultural pursuits, including time to ask their friends for information about cultural activities. A second possibility is that many younger people may still be forming their cultural preferences, and thus tend to receive more input as part of that process. Third, more analysis needs to be done to see if the relationship between age and searching for cultural information is the same for different types of cultural information. For example, young adults may search more about music and older adults about theatres.

The ***size of very close networks*** is the second strongest variable that is significantly related to the frequency of obtaining cultural information. People with larger networks obtain cultural information from their networks more often. For example, only 18% of people with a very close network of five or less often obtain cultural information from their ties. By contrast, 40% of people with a very close network size of twenty-five or more often obtain cultural information from their ties .

While the differences are most obvious between the two extremes, there is a general trend to get information more often as the number of very close network members reaches 15 (Figure 5). The percentage of respondents often obtaining cultural information from very close network members nearly doubles: from 18% for those with less than 5 very close ties to 34% for those with 15+ very close ties. However, once the very close network size exceeds 15, the percent of people who often obtain cultural information increases, but so does the percent of people who rarely obtain cultural information. Moreover, the percent of people who sometimes get cultural information falls. This may be related to the quantity of time required to maintain an exceptionally large very close network.

Figure 5: Frequency of obtaining cultural information among very close ties by network size



The increase in the frequency of obtaining cultural information as network size increases could be related to the possibility that people with large very close networks spend more time socializing with network members(Wellman and Gulia, 1999a). Another possibility that bears investigation is that people with large very close networks have more diverse networks, and thus have access to more varied sources of information and more interest in discussing cultural activities.

It is only the number of *very clo*se ties that seem to matter. The lack of statistical significance for the number of *somewhat close* ties is not surprising given that the survey questions about information deal with how often people consult their very close networks. However, some pundits have made a fuss about the strength of weaker ties (e.g., Gladwell, 2000) and it is worth remarking that larger numbers of somewhat close ties are neither facilitating nor discouraging people from consulting their very close ties. Large numbers of somewhat close ties seem neither to be a time sink nor a stimulus to inquire about cultural information.

Neither number of hours spent online nor number of emails sent during a typical week has any influence on the frequency with which people consulted their very close ties for information about music, movies, books, or restaurants. That the hours of internet use are not related to acquiring cultural information from network members suggests that people discussion and recommendations from the network members complements online activity rather than replacing it.

The non-significance of email use is also consistent with previous findings that email tends to complement other forms of communication rather than replacing it (Quan-Haase and Wellman, 2002; Chen, Boase and Wellman, 2002). It further suggests that the structural characteristics of email are not noticeably influencing the content of personal communication to an extent that would affect the frequency of obtaining new cultural information from networks.

Although there appears to be no clear relationship between the extent of internet use and the extent of obtaining cultural information from social networks, there still remain a large number of ways that internet access could be interacting with culture. In the next section, data from the interviews will be used to highlight the ways that people are using the internet to broaden their cultural horizons.

2. *Patterns:* How do people search for cultural information?

Methods: The methods that people use to seek cultural information are relatively unstudied, and thus remain fairly opaque. The Connected Lives project addressed this by questioning interview participants about how they make decisions about future consumption of products related to their favourite leisure activities. We further inquired as to what role the internet might play in facilitating the participant's access to culture.

We find that when seeking cultural information, people turn to a variety of sources, including knowledge of favourite authors or directors, the internet, helpful sales clerks, bookstores, magazine articles, newspaper reviews and articles, people they know and people they encounter, brochures, radio, and television. Figure 6 displays the percentage of interview participants who referred to each source of cultural information when asked how they gather cultural information or decide which cultural products to consume. The two most commonly cited sources of information are *social network ties* (with family, friends, and acquaintances), mentioned by 70.9% of interview participants; and the *internet,* mentioned by 68.4% of interview participants.

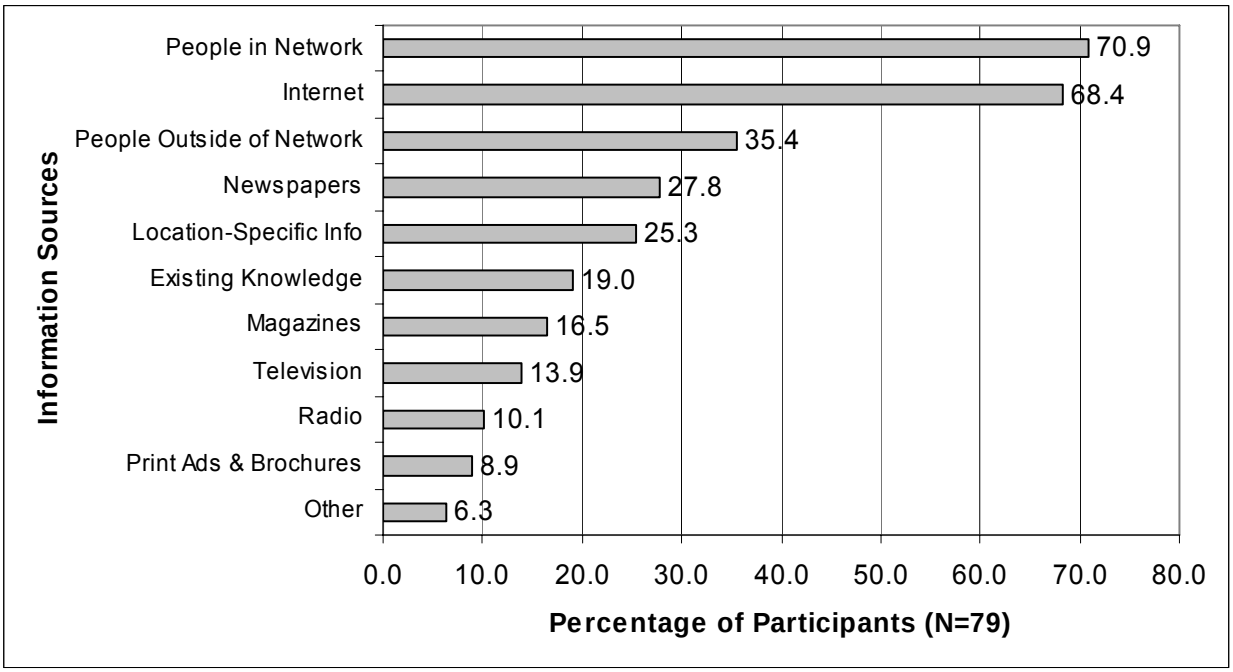


Figure 6: Sources of cultural information

The Internet Effect: The internet is the second most popular source of cultural information after conversations with other people: 80.6% of the internet users we interviewed mention using the internet for cultural purposes. The types of information that most people seek online tend to be specific and different from the types of information they get from other sources. Most of the cultural information sought online is highly focused, and much of it is intended to facilitate access to offline activities. For example, eleven interview participants say they look for movie times, tickets, or locations online—after they have selected a movie using other sources. Seven people mentioned looking up movie reviews online using *imdb.com* (the Internet Movie Database) or watching trailers online, but no one said they go online in search of new movies.

Similarly, a few people mentioned going online to find out when their favourite band was coming to town, but no one said they go online to discover new music. Seven people said they go to *Amazon.ca* or *Chapters.Indigo.ca* to read reviews and purchase books recommended by friends or family. Yet, no one said they seek out new authors who have just begun publishing online, or browse the online bookstores for reading inspiration, despite the great effort and

ingenious software that Amazon puts into such recommendations.[11] Most people brought up the same few activities of music downloads, movie information and book ordering, while more esoteric internet phenomena such as e-zines received no mention at all.

The popularity of looking for information about music, movies, and books online corresponds to the stated interests of the participants (Table 12).

TABLE 12
Cultural Activities of Interest

Cultural Activity Area	# of Participants Who Cite	% of Participants	# Who List in Top 3	% of Participants
Reading & Writing	60	80.0	54	72.0
Television & Film	56	74.7	44	58.7
Games & Sports	47	62.7	29	38.7
Music	46	61.3	36	48.0
Hobbies	38	50.7	26	34.7
Performing Arts	32	42.7	16	21.3
National & Ethnic Heritage	31	41.3	11	14.7
Fine Art	25	33.3	7	9.3

While interest undoubtedly plays a role in determining what people look for, the structure of web sites may also encourage people to favour popular pursuits such as movies and music over more arcane activities such as gallery openings (Hargittai, forthcoming). On *Toronto*.com, a site that several participants were observed using, music and movies are both assigned individual categories on the main page. By contrast, a wide variety of other performance and fine art activities are grouped together. The more prominent positioning of music and movies should lead to greater awareness of these activities. Additionally, the positioning serves as a visual reminder to visitors to the site that movie listings are available online, leading to greater use of that service.

Although most people focus their leisure-related internet use on useful information such as movie times, participants also report a wide range of culture-related activities. Nearly every internet user with a particular passion or hobby has tried using the internet to search for

[11] A case study of respondents to an online National Geographic survey in 2000 (Griswold and Wright, 2004) found a positive correlation between internet use and pleasure reading, based partly on the fact that some people go online to seek out pleasurable reading.

information about their interest. These searches cover an array of topics, including gardening tips, bird watching locations and sightings, online tango lessons and instructor information, reading about foreign cultures, hints on winemaking, information about sailing, knitting and crocheting patterns, information about sports equipment, and buying photographs online from children's swim meets. Most people do not turn to the internet for recommendations of casual leisure activities, but they will go looking for information about their personal interests.

When users go online for general cultural information, they usually begin with a search engine. Almost half of the participants—40 in total—use *Google* for their searches. This is a rate of 46.0%, well above the 30% user rate in the general internet user population (Sullivan, 2003). The second most frequently mentioned search engine is *Yahoo*, with 16 users among the interview participants. *AskJeeves* and *Dogpile* were mentioned three times each. The participants demonstrated a variety of tools they use to make return visits to known sites: bookmarks/favourite lists, the drop-down menu in the location bar of recent sites visited, and search engines.

The sites most frequently mentioned as receiving regular visits for culture and leisure purposes are *Toronto.com* (6 mentions), the Toronto Public Library (4 mentions), *Amazon.ca (*3 mentions), *Chapters.Indigo*.ca (4 mentions), and *CBC.ca* (2 mentions). All of these most popular non-search engine sites are Canadian sites, and two of them are local. This is not entirely surprising given the frequency with which people use the internet as a gateway to offline culture, especially attending movies and shows. American sites, although sharing the same language, do not facilitate access to offline activities.

Eight participants mentioned communicating with people who they met through the internet for cultural purposes. Three mentioned playing games such as Mahjong, Scrabble, and cards; two mentioned online discussions about specific topics such as sports; and one mentioned contacting a dance instructor through the instructor's website. Most people are interested in a one-way flow of information, and not a two-way flow of communication with strangers.

Most participants say they are aware that information found online could be misleading, and most have some criteria for distinguishing between good and bad sites. When asked how they evaluate the accuracy of a website, people often cite three factors:

1. *Who is sponsoring the site?* In general, people are more likely to trust government sites, official university sites, and sites run by recognizable organizations (e.g., Toronto Public Library, CBC).
2. *How professional does the site look?* Better designed sites tend to be trusted. People look for sites that look professional and look like they contain relevant information. Overly flashy sites are usually ignored.
3. *Does there seem to be a consensus among sites?* Information that is repeated on multiple websites is often treated as accurate. On issues related to health, most people confirm information they find online with their doctors (Wellman and Hogan, 2005). On issues related to culture, people will sometimes be creative in finding other ways to confirm suspect information. For example, people researching a digital camera or seeking information about a book will turn to the manufacturer's or publisher's site for product information, but they will look for independent review sites and seller sites that publish user reviews before making a final decision.

Although the internet was a widely used source of information, many of the participants expressed some concerns about the limitations of the information available online. These concerns might partially explain why use of the internet is mostly limited to gateway activities that facilitate access to offline leisure, rather than focusing on online cultural experiences.

Ten participants used terms like "overwhelming" and "too much information" when discussing internet use. Not everyone has the patience or inclination to sort out the reliable and helpful from the misleading and inaccurate. Yvonne, 55, is one of the less patient surfers: [12]

> I find that searching internet for information can be quite tedious, time consuming and not quite successful. You can spend hours trying to find one stupid fact and there is too much information, which is really hard to sort out.

A second limitation brought up by participants is the relatively small amount of desired information available for some products. Digital goods cannot be held or turned or examined in detail the way some physical goods can be. While this is not necessarily relevant for all goods—music, for example, is often easier to sample online than in the store—the internet imposes

[12] All names are pseudonyms.

definite restrictions for examining items such as paintings or exhibits, or books. For example, Patty finds these restrictions influence her buying habits:

> I'll just type it in, and I'll go to it, and then books will come up. And usually I do this to see what's available, and what the prices are. But I don't buy it unless I've gone to the store and actually looked at it, because it doesn't give you more information than that. That's why. If it did, I would. But it doesn't give you—like, if it had a table of contents, or something like that, then I would scan that. But it doesn't even give you that. So that's why I want to go to the store, and at least look at the book a little bit more.

A correlation analysis of people who use the internet to search for information on culture and leisure activities reveals two significant variables:

1. People who use the internet for culture are likely to be young ($p<.01$).
2. They are likely to be well educated ($p<.05$).

Both of these variables have been commonly found to be associated with the presence of internet activity (Chen and Wellman, 2005). Indeed, once the analysis is limited to people who have used the internet, the effect disappears. The statistical pattern suggests that age and education help drive people to the internet. However, once people are internet users, age and education cease being a factor in using the internet to search for culture.

Other variables are not statistically significant: such as gender, employment status, relationship status, and presence of children. One effect that remains even when internet use is controlled is a sense of skill and comfort when using the internet. People who use the internet for culture are significantly more likely to self-identify as being comfortable using word processors ($p<.05$), using internet browsers ($p<.05$), and downloading files ($p<.01$). This is similar to what Hargittai (2005) has found that general skill in using the internet is related to better searching.

The temporal order of this effect is uncertain. It is possible that people who are more comfortable with internet browsers and downloading will be more likely to go online to search for leisure information, and it is also possible that people who go online for leisure activities become more comfortable through practice with using these features. It is probable that the two

form a cycle, such that people who have some degree of comfort are more likely to go online in search of leisure information, which leads to further improvement in skill. The positive correlation with comfort using word processors—which are not generally used during internet browsing—suggests that people may be more likely to go online once they are comfortable with basic computer use.[13]

The Influence of Networks: Although the internet is useful for looking up specific information, ideas for what to look up usually come from elsewhere. When deciding what book to read or CD to buy or movie to watch, people tend to turn first to non-internet sources. The most popular non-internet source is word-of-mouth through networks. As shown above, very close ties are especially important. Petra, 33, observes:

> What people tell me [is more important than ads]. Like *The Incredibles*. We rent this movie. … But they [the children] didn't like it. The movie was okay for us, but not for children. It's about government…they were waiting for something to happen and finally they get tired.

For many people, information from social networks plays an important role in determining what cultural events and products they look into. This was particularly noticeable among people who have cultural specialists in their network. For example, Olivia, 44, explains:

> [T]wo of my brothers are musicians. So quite often they'll, you know, introduce me to new music.

However, even people whose ties are not cultural specialists will still seek (or receive unsolicited) information and recommendations from their networks. Word-of-mouth can work in several ways. Some people actively seek this information, turning to friends with similar tastes to ask what book they should read next.

> I just said to my family, I wouldn't mind reading some of those classic novels. And so my brother just bought me two books. [Patty, 26]

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[13] Comfort with using a word processor is not significantly correlated with age, but it is significantly correlated with education, which could lead to a confounding effect. Neither comfort using a browser nor comfort downloading a file are significantly related to age or education once non-users are removed from the sample.

Other people have friends and family members who are particularly enthusiastic about a topic and who actively inform the participant of things they think the participants should know about. Hilary, 39, notes her experience with this:

> I normally listen to rock but [my sister] tends to listen to country and stuff like that so she'll always call me when she hears a really good song before—"oh have you heard this song, you really have to hear it"—she'll tell me about it on the phone.

Often, people do not actively seek cultural information. Instead, it comes to them in the course of regular conversation with family, friends, and co-workers. Several participants indicated that they did not take recommendations from family or friends even when offered because of differences in taste. Rhianna, 57, is one of those people; she says:

> I don't quite like everything [my sister] reads. Even though it's nice, I am not into that genre like Nora Roberts. I have read her books, they're nice but I'm not really into it. She likes Wicca and witch stuff; I've already been through that period.

Along similar lines, Greta, 52, says:

> To each his own. Your tastes might be different from mine.

Some note that their friends continue to give recommendations despite knowing the participant does not care. Clay, 27, says:

> They just let me know what they think [about movies]. And half the time it's because they know I don't really care what they think. So they just talk.

However, many participants find word-of-mouth recommendations from their networks and from strangers a valuable way of learning about cultural events and products, particularly if the recommendation came from someone they know to have similar tastes. For example:

> [T]he only person that I can enjoy the same movies is [my best friend]. Then when I go visit and if I have new movies, I bring them with me and we usually enjoy them because we seem to have the same—I mean [my friend's daughter]

> would never watch the same movies we watch—but whatever I bring over, we enjoy them. [Vonya, 68]

Selection by Knowledge, Preference, and Locational Cues: A second non-internet source for choosing cultural products is using existing knowledge, used by 19.0% of interview participants. Many people choose movies by director, actor, and genre; select books by known authors, and buy music of a particular performer or time. Vitali, 66, prefers this method:

> [I choose CDs] [m]ainly through looking by artists. These three guys—I already have three CDs from them, I like them very much.

Elaine, 58, also likes this approach:

> I have favourite authors and you know I usually go there, or favourite types of topics that attract me, and so I go and find books on those topics.

Other people (25.3%) use a tangible technique that depends on physical presence. They go to the bookstore and scan the shelves for interesting titles, or drive to the theatre and select a movie based on the times of the shows. Another 10.1% pick up new bands from those playing on the radio. Kent, 73, likes the scan-the-shelves technique:

> I'll just go to the mall and stop at the rack and just take a look at what bestsellers are out and just take a look at the back to see if anything interests me.

Clay prefers to drive by the theatre:

> Sometimes we just show up at the theatre and look at the posters. And find out who is directing what and flip a coin.

Print (Newspapers, Magazines, and Brochures): Print is a major source of cultural information, relied upon by 37.9% of interview participants. Newspaper reviews are a popular source of book titles; mailed brochures are a common source of information about concerts, museums, and galleries; and magazines are a frequent source of information about a wide range of hobbies. Linda, 51, typifies this preference:

> I read reviews. I like to read the *Globe and Mail* book reviews. I'll read a book review and seek out something that interests me.

The Offline-Online Cycle of Information and Communication

What all of these methods have in common is that, for most people, they serve as the initial prompt. It is also relatively rare for people to go online in search of general cultural information without a clear idea of what they seek. Most people use the internet to search for specific information; usually prompted by something they discovered offline. Brianna says this explicitly:

> I usually find something outside of the internet that leads me to the internet.

It is after people have a recommendation or suggestion—from their network or from elsewhere—that they often turn to the internet for information. They usually seek specific information, such as upcoming performances by a favourite band, book reviews, or hotel prices for a summer vacation. This suggests that ICT-involved individuals are going beyond the longstanding theory of the "two-step flow of communication" (Lazarsfeld, et al., 1948). The initial conception of this theory stated that most people are not directly influenced by messages from the mass media. Instead, opinion leaders filter the messages and influence their followers through social networks. It remains an influential theory even though later studies have identified several weaknesses with it: underestimating the degree of direct influence that exists, ignoring the possible lack of a clear division between opinion leaders and followers, and ignoring the possibility of horizontal opinion sharing rather than vertical opinion giving (Weimann, 1982).

Our data support the idea that social networks are more influential in spreading word of cultural products than direct advertising, although both clearly play a role. However, with the proliferation of ICTs, our findings suggest an interesting twist on the two-step flow of mass communication. While social networks remain influential in spreading the word about cultural matters, a large number of people are adding a step by taking the recommendations they receive from their social networks and going online to research these recommendations further. This suggest the existence of continuous feedback spirals, where people learn something online and share it with friends who then go research it further online before sharing the information with others. It could also suggest an interruption in the traditional two-step pattern if people are going online and finding opinions that contradict the recommendations they receive from network members.

Profiles: Differences in the Ways People Use the Internet to Access Cultural Information

While some generalizations can be made about the ways that people use the internet for culture, there is still a continuum of varied use that is characterized by differences in the number of activities done online, the types of activities, the frequency of use, and user attitudes towards the internet. The interview data suggests that users can be divided into four categories, each with its own profile. The differences between the categories are not always a matter of actual use: more often, it is an issue of attitude, of orientation towards the internet. While some throw themselves gleefully into cyberspace, others take a more measured approach. Some people use the internet only under duress, and others manage to avoid using it at all.

The categories we present are somewhat arbitrary, with some people falling on the boundaries between categories. However, the categories are still helpful as a way of distinguishing between patterns of use and improving understanding of the range of ways that people use the internet.

Non-Users (14.1%)

Demographics: The first category is straightforward and quite small. The 12 non-users are the people who do not use the internet; all except one do not use computers at all.

Almost all of the non-users are older people who came of age after computers became ubiquitous and who lack the drive or the incentive to learn to use them. There is only one non-user who is younger than 45: a 36-year-old woman who has used the internet in the past but is currently running a home daycare and finds she has no need for it. Apart from her, the non-users range in age from 45 to 88. Seventy percent of people over 70 fall into this category, although it drops quickly after that: only 16.7% of people in their sixties are non-users.

There are no significant gender differences in this category: 14.3% of women and 14.7% of men fall into this category, a nearly identical percentage. Fifty-eight percent of the non-users we interviewed were women and 42% were men, mirroring almost exactly the gender division in the interview sample.

Patterns of Use: Apart from the fact that people in this group do not access cultural information online, there is no clear pattern in their means of accessing culture. Many members of the group, like the majority of the people in the survey, rely on word-of-mouth and

recommendations from friends and family when deciding what cultural products to consume. Some mentioned television interviews and ads, other magazines and newspaper reviews.

A few, like Burton, get other people to do their research for them:

> I go ask people things and they find out things from the internet. I do my research that way.

It seems unlikely that most of these people will ever find their way online, but it is also unlikely that sizeable numbers of non-users will continue to exist in Canada for too many more years.

Reluctant Users (23.5%)

The second group comprises people who only use the internet when they must. Members of this group tend to limit their online activities to work-related matters and rarely, if ever, use the internet for leisure purposes. Some, like Brent, 56, have noticed that the internet can sometimes "suck you in" as a hobby instead of supporting his original offline hobby:

> I'm not a computer person in the sense that I try to avoid the computer taking up too much of my time. I know it's easy for it to suck you in there and the next thing you know it's the hobby [rather] than the thing that you were using for the hobby.

Others, like Wendy, 57, find browsing to be frustrating or unpleasant:

> The other day I did browse…I hated it. I decided it was a waste, it was too much information, it was advertising, it was frustrating…and when I want to go to British Columbia or Vancouver and Victoria, I will try to get written material. I will contact friends. And not browse, because I hated it.

Demographics: There are 20 reluctant users among the interview participants: 26.5% of women fall into the reluctant user category, along with only 20.6% of men. The actual split is 13 women (65.0%) and 7 men (35.0%).

Reluctant users range in age from 39 to 73. Only one of the reluctant users is past the age of 65; he is currently employed fulltime. Two (10%) of the reluctant users are in their thirties, two (10%) are in their forties, twelve (60%) are in their fifties, and two (10%) are in their sixties.

This means that 30% of participants in their eighties, 25% of participants in their seventies, and 54.4% of participants in their fifties are reluctant users.

Patterns of Use: Reluctant users offer several criticisms of the internet. The refrain of too much information is a common one. Kate, 41, says:

> [W]ith the internet, I also find it's almost too much, it's just very hard to filter it. You know, you look for say a cottage in Muskoka, and you get 4000 things that come up, so to me it almost becomes useless.

The difficulty in sorting through the wealth of information available online leads some, like Brent, to conclude that more traditional sources of information are simpler:

> I find books are much easier to refer to if you know they've got the information. Books are dog-eared; they've got lots of pieces of paper marking places for information that I use regularly.

Elaine, 58, also prefers print material:

> I guess I grew up with the print material and as a result I'm most comfortable with print material.

There is also concern about possible misinformation. Beth, 54, says:

> I guess the only negative—and it's more than a caution then a negative—I think you have to be careful of the sources of information that you're getting there because there's a lot that are completely unreliable.

In addition to preferring more traditional information sources, members of this group also prefer non-electronic communication. Some dislike the expectation of immediate replies that go with email and purposely restrict their email address. Others, like Sam, simply prefer letters:

> I prefer to write a letter, because it's more personal. The letter has my handwriting. I can express what I want more precisely. And nobody other than the recipient knows what I put in the letter. The internet is not all that confidential, because people who know how can access the source.

Some reluctant users also note that electronic communication can sometimes be overly direct. Not surprisingly, reluctant users almost never use instant messaging or other real-time (synchronous) chat programs. Prue says:

> [W]here I see it's horrible is where normally you would have, years ago, called up and asked [a question], you probably would have had a little chat as well. The email is so impersonal, so there's no chat that goes along with it.

Although many reluctant users prefer telephoning people to emailing them, some agree that email can be useful. Linda, a reluctant user, says that when dealing with her financial advisors:

> [I]t really helps to have the internet for communication, cheaper than phone calls, and more able to explain things in a concrete way.

Linda is not alone: in the survey, 10 reluctant users say that the internet has made it somewhat easier or much easier to connect with relatives, and 16 reluctant users say that the internet has made it somewhat or much easier to connect with friends.

Linda also notes that electronic communication sometimes has drawbacks. When she used email to try to organize an annual canoe trip with a group of her friends, she found:

> [I]t's much more difficult to make a plan than it was when we had a phone. The ease of it allows people to be less definitive. I noticed that when we literally had to put a stamp and send a letter, or pick up the phone and call, we made plans much quicker and more agreeably. Now it can go 10 or 12 back and forths before a decision is made. The convenience makes it harder for people to make commitments.

Reluctant users are not necessarily technologically incompetent or fearful. Two-thirds (65%) describe themselves as at least somewhat comfortable with computers, although many qualify this by pointing out that they are not as good as their friends, or that they are only comfortable with specific programs. A few, such as Brent, a Bell technician, are extremely proficient with computers but choose to invest their free time in other activities. Nonetheless, most members of this group came of age without computers, and did not have the benefits of early exposure and the comfort that comes with it.

Several expressed opinions suggesting that they associate computers and the internet with work rather than with leisure or sociability. Hedda, 54, says:

> I really personally only go on the computer when I'm working. And to me to go on the computer, it's always just going to work….I'd rather talk to a human than read a computer screen.

With this attitude, it seems unlikely that most members of this group will ever be lured online in search of cultural information. Like the non-users, they will continue to rely on newspapers, magazines, radio, television, and their friends, family, and co-workers for their cultural information. However, given sufficient incentive and guidance, some might be coaxed online in search of information about a favourite topic.

Instrumental Users (34.5%)

Demographics: Patty, 26, describes herself and her husband as "not internet people." She states that they have the internet because it's convenient for paying bills and similar activities, but argues that "it doesn't really play a significant part of our lives." This is an attitude typical of instrumental internet users.

Instrumental users are the largest group of users; there are 30 of them in the sample. Men and women once again differ in how many fall into this category: 32.3% of men are instrumental users, along with 38.8% of women. This means that 14.3% of female interview participants and 14.7% of male interview participants fall into this category.

Instrumental users run the full range of ages, from 24 to 74 (Table 13). However, this is a category that is most populated by the young: 62.5% of people under 30 are instrumental users, along with 53.5% of people in their thirties and 52.4% of people in their forties.

TABLE 13
Age Breakdown of Instrumental internet Users

	N	Percent	Cumulative Percent
18-29	5	16.7	16.7
30-39	8	26.7	43.3
40-49	11	36.7	80.0
50-59	5	16.7	96.7
60-69	0	0.0	96.7
70-79	1	3.3	100.0
Total	30	100.0	

Patterns of Use: Instrumental users are not reluctant to use the internet, but they are judicious about it. They will use the internet when they think of it and think it will help, but they express no enthusiasm over the possibilities it presents. Francis, 32, notes:

> I like it for certain purposes, more than for others. I have read the news on the internet, but I'm not one to spend time on the internet reading. For me, it's really the information that I'm interested in, that I want.

Dana, a 58-year-old supply teacher, expresses similar views. She describes herself as:

> [I'm] the type of person that if I need an answer to something, I search it out, get it, and leave it. And that's it. Get my information and do what I have to do. I don't like flitting around on the computer.

The desire to use the internet for specific purposes, as a means rather than an end, is the main characteristic of instrumental users.

Since instrumental users do not generally wish to spend a lot of time online, they tend to avoid activities that they view as time-consuming. Zowie, 32, gave up talking to online acquaintances because of the time requirements. According to her:

> You actually have to spend time cultivating relationships with them online, and I don't have time for that.

For most of the people in this category, the internet is another helpful household tool, useful for paying bills, looking up necessary information, and helping children with homework. It is not necessarily the first place they will turn to for information, but it is on the list. Brianna, 31, says:

> For health concerns, I have books that describe the symptoms, then they would tell you what you should do. So if it's health, I go to my books. If it's something that I don't have a book for, then I'll go to the internet.

Like the reluctant users, instrumental users sometimes note that the internet can be overwhelming in the information it makes available. However, members of this group seem to have more patience for sorting through the information, and experience less frustration with their online experiences. Heather, 25, says:

> I like [the internet as an information source]. I mean, you can usually find what you're looking for, but I think that you can't get exactly what you're looking for, they give you kind of broad… you always have to keep hunting and then you can never find *exactly* what you're looking for, which bugs me.

In some cases, the broadness of the available information can lead instrumental users to push the internet further down the list of sources. Carter, 24, says:

> Usually, what I do is go to the books first, because I know the information. So it's faster for me to just go open the book. When there is more specific information, that I know is not in the books, then I go to the internet.

Carter does not often use the internet to look up information about his native country. He did, however, use it extensively to research digital cameras before his uncle made a purchase. His internet activities are driven by how useful he thinks the internet will be in a given situation, rather than by pleasure in looking things up online.

Like most other users, instrumental users are aware of some of the need to be careful in evaluating information gathered online. Sam, 71, says:

> Electronic information is there because someone decides they want to share this knowledge, or somebody's selling it. They're not always accurate. Nobody nails them for their accuracy…there might be a thread of truth in it, but how big a thread? …It goes back to personal judgment….

Sally is a little more positive, but still notes the need for caution:

> [A]s a research tool, it's bringing information quickly, it's making things far more accessible for people. But…there's skill involved in finding information online.

> Because you have to know what you're looking for, you have to narrow your search, you have to know how credible it is, when you go on to search.

Speed and efficiency are major factors in determining what sources instrumental users turn to. Carter, for example, notes that he likes banking online because it's faster than going to a branch. He also says:

> If I need to look for a schedule for a movie, if I need to see information about where I'm going like festivals or concerts, things like that. That's faster.

Vamos, 47, has a similar attitude:

> If I need something very particular about Toronto, or Ontario, I email a question to a friend or I phone. Because if I need something very quickly, it's more simple to get the phone, a friend or an organization, and ask him…. For general [information], I use the computer.

Although they tend to be very specific in their requirements, instrumental users have some range in how they use the internet. Alex, a semi-retired professor and current author, selectively combines the internet with other sources:

> I would not bother buying a book on the human circulatory system, for example. I wouldn't buy a book on climate change. The books are too far out of date. Things are going so fast that by the time the book's published it's out of date. So I go to the primary sources and do a search on the internet and, if necessary I'll contact a professor at the University of Chicago and ask if I can have a copy of their paper. I say, "I saw a summary on the internet, I'd like a copy." So that's the way I go, I go to the primary sources now, and I don't buy a lot of books anymore.

On the cultural side, instrumental users tend to use the internet for finding movie times and buying tickets, but not making their own movies. They look up singers they heard on the radio and find out when their favourite bands are coming to town, but they do not seek out the cutting edge groups whose music can only be found online. They look up museum times, but they do not go in search of online exhibits, unless their children need the exhibits for homework or they get drawn in despite themselves. When seeking cultural information and recommendations, they combine the internet with other sources. For example, Elaine, 58, says:

> [T]he only time I've gone [to the internet] is when I want to see a movie and I want to see the write up on it. So if I've heard some good about this movie, I'm going to see what the write-up is, and I would go on the internet for that.

This behaviour reflects a combination of the two most widely-cited sources of information on cultural consumption: word-of-mouth and the internet.

Online cultural products that will appeal to instrumental users should be practical, easy to navigate, and preferably lead back to the offline world. Most instrumental users do not view the internet as a playground; if a site does not have an obvious use, they are unlikely to visit it. However, a particularly intriguing demonstration of online could lure some instrumental users in, and potentially even lead them to assume a more playful, power user mindset, at least temporarily.

People in this category will not go looking for new cultural artefacts online. Online culture must be brought to their attention through ads or some other means before they will investigate it.

Power Users (24.1 %)

The final group of internet users is the power users. There are some behavioural differences between power users and instrumental users, but the most important difference is attitude. Where instrumental users view the internet as a tool, power users treat the internet as a toy. These are the people who take to the internet with great enthusiasm, and use it for as many things as they can. For example, James, 36, says:

> There's nothing better. To me, it's just like a giant library. If there's anything that I need to know, personally or otherwise, the information is always there.

Power users are universally comfortable with computers. Some find going online easier than making a phone call or showing up in person; others marvel at the quantity of information available and the speed with which they can access it. For these users, having internet access is essential. One participant compared it to rent. For him, it is not optional.

Demographics: There are 21 power users among the interview participants. Power users tend to skew young: 70% of them are under 50 (Table 14). Viewed another way, 37.5% of people under 30, 26.7% of people in their thirties, 33.3% of people in their forties, and 18.1% of people

in their fifties are power users. Moreover, a full 50% of people in their sixties are power users, although we caution interpretative restraint because of the small sample size (N=3 out of 6). We wonder if people in their sixties who bother using computers at all tend to be very enthusiastic about their use, and that if they are retired, they have more time available to use them.

TABLE 14

Age of Power Internet Users

	N	Percent	Cumulative Percent
18-29	3	14.3	14.3
30-39	4	19.0	33.3
40-49	7	33.3	66.7
50-59	4	19.0	85.7
60-69	3	14.3	100.0
70-79	0	0.0	100.0
Total	21	100.0	

Once again, there is a noticeable gender difference: only 20.4% of women are power users, while 32.4% of men fall into this category. This suggests that men might be more likely than women to view the internet as an involvement unto itself.

Patterns of Use: Power users tend to spend more time online than other users. While instrumental users may spend a few hours researching an upcoming trip, power users are often happy to devote several hours each day to personal internet use. One power user estimates that he spends about eight hours each work day online outside of work, and describes himself as being online constantly during the weekend.

Many power users are information junkies. They delight in satisfying their curiosity, learning new things, or keeping up with the news. Hannah, 41, says:

> I just have to be on top of what's going on…. I'm a news person. I find that the internet provides such a wealth of information, it's amazing, you feel like you're in the mainstream.

Oliver, 55, takes pleasure in the *speed* of internet news:

> Before I used to subscribe to newspapers; now I don't subscribe to newspapers…I already know the news before the newspaper publishes it. Like what shortwave

> used to do; I supplement it…I still do it mainly for folk and culture. I come in straight there.

Steve, 60, likes the internet because of the *extent* of the information it provides:

> I wish I had this before because, with the internet, I can see where my stocks are doing and so, in the past I lost a lot of money because I didn't have information when I didn't have a computer. Now with the information I have on the internet, I can protect myself.

Although power users make use of the internet for practical purposes such as buying movie tickets, they also enjoy going beyond the merely instrumental. Power users, unlike most instrumental users, may be *site-oriented* rather than topic-oriented. They may have a collection of favourite sites that are updated regularly, such as online magazines (e.g., *Salon* or *Slate*) or news sites (e.g., *CNN.com* or *CBC.ca).* In addition to researching specific topics and looking for answers to specific questions, they will also regularly visit these sites to see what has been posted. Matthew, 26, says:

> I think I'm more site oriented, unless I'm researching something. But I have my sites and my list of the ones I've already been to.

The collection of favourite sites unrelated to a specific topic moves the internet from a tool to a leisure activity. It can also lead to situations such as Chico's who decided two years ago (when he was 40) that he was too dependent on the internet and decided to take a six week break. He says:

> When I got internet again, it was like I was playing catch-up….I don't think I've caught up yet!

Power users are integrated into online life, whether as participants or observers, in a way that most other users are not. Many power users prefer doing things electronically, in contrast to instrumental users, who prefer a wider range of methods. While instrumental users seek the most efficient route, of which the internet is one possibility, power users tend to express a belief that online is almost always more efficient. Clay, 27, says:

> I don't usually really like to sit down and read a book. I'm not that type of person. Can't remember the last time I read a novel. So I go online a lot. You can select

> things. It's quick, it's easy. You can copy and paste it into *Word* and read it later if you are out on the road somewhere. I just find the information is so much easier to transport because I have a laptop. Because I am always on the go, I am saving a lot of files.

For Clay, it does not matter what the topic is: finding the information on the internet is always the most efficient way. Olivia, 44, enthuses over the range of government information available online:

> I've looked up the city website to get an exemption for dumping. So I went to the website to find that. Things like I had to request a garbage schedule because I had lost the calendar. You know if I needed anything related to the city or the government, the internet is a great source for that. I find it a lot easier than looking it up in the yellow pages or something like that.

Like Clay, she strongly prefers the internet to more traditional information sources.

In terms of cultural activities, power users tend to be the most adventurous and the most comprehensive. Some, like Marcus, 47, spend their days playing cards online and put pictures of their embroidery up on websites for others to see. Others, like Chico, have a long list of sports sites memorized, and they visit them daily. Some manage to work the internet into every cultural and leisure activity they engage in. Clay, a young salesman, uses the internet to check which DJs are playing at his favourite dance clubs, to find out what new clubs are coming to town, download MP3 music, to download movie trailers and read reviews of movies, to check movie schedules, to read restaurant reviews before going out, and to plan all of his activities with email and text messaging.

Immigrants on the internet

Immigrants, especially recent immigrants, are an important subgroup of participants in the Connected Lives study of internet use. While most immigrants use the internet for cultural purposes similar to those of Canadian-born participants, recent immigrants also tend to display a few distinctive patterns of culture-related internet use.

Demographics: Approximately 44.3% of the survey respondents reported being born outside of Canada. Of these, 39.4% are men and the remaining 60.6% are women. Thus, there is a

slightly higher percentage of men than the 42.9% men and 57.1% women in the Canada-born survey respondents. The immigrant subsection of the survey sample is not significantly different in age from the Canadian-born subsection. The mean age of the immigrant subsection is 44, compared to a mean age of 46 for the Canadian-born subsection. The median age of the immigrant subsection is 41, compared to almost 45 for the median age of the Canadian-born subsection of the survey sample (see Table 15).

TABLE 15
Age of Survey Respondents –
by Place of Birth (Percent)

	Immigrant	Born in Canada	Total
18-29	14.2	10.3	(40)
30-39	32.3	25.1	(94)
40-49	20.6	28.0	(81)
50-59	16.8	19.4	(60)
60+	16.1	17.1	(55)
	(155)	(175)	(330)

The immigrant subsample of the survey has slightly more education than the non-immigrant subsample, although the difference is not statistically significant (Table 16).

TABLE 16
Highest Completed Level of Schooling –
by Place of Birth (Percent)

	Immigrant	Born in Canada	Total
< High School	7.6	11.3	(32)
High School or GED	16.6	19.2	(60)
College	19.1	15.3	(57)
Some University	14.6	10.2	(41)
Undergrad	28.0	29.0	(97)
Advanced Degree	14.0	14.1	(47)
	(157)	(177)	(334)

The mean number of hours of internet use per week for the immigrant subsection of the survey sample is nearly 12, with a median of 5. Similarly, the mean of hours of internet use per week for the Canadian-born subsection of the survey sample is nearly 12, although with a slightly higher mean of 6.5 (Table 17).

TABLE 17
Weekly Hours of Active Internet Use: Interview Participants – by Place of Birth

Hours	Immigrant	Born in Canada	Total
0	22.1	25.6	(78)
1-10	42.9	37.8	(132)
11-20	14.1	22.0	(59)
21-30	9.8	5.5	(25)
31+	11.0	9.1	(33)
Total	(163)	(164)	(327)

Patterns of Use: Communication

A comparison of the demographics of the immigrant and non-immigrant subsections of the survey population suggest that the immigrant subsection does not differ in significant demographic or technological ways from the native-born population. This does not mean, however, that there are no differences in how the two groups use the internet. The interview data suggests that immigrants largely make the same uses of the internet as the native-born do. However, the distinct situation of recent immigrants also leads to some additional common uses of the internet.

The first and most frequently cited specialized use of the internet by recent immigrants is for communicating with friends and family back home. This phenomenon appears among immigrants from all countries where the internet is available, and it has been extensively described in an ethnographic study of Trinidadian emigrants (Miller and Slater, 2000). Similarly, Hannah, 41, who came to Canada from Jamaica learned to use a computer when she got here so that she could communicate with her family "back home":

> Oh man, that was such an introduction to computer use, so you know first year. And then from then it's been I need to be in touch with what's going on. If it's not by TV, then it *has* to be by computer. To keep in touch with my family, my siblings, my parents. I have to be, because I'm the only one here with my daughter.

Everyone, immigrant and non-immigrant, uses the internet for communication purposes. What distinguishes recent immigrants is their unusual reliance on instant messaging programs, on voice programs such as *Skype* and their use of cameras for broadcasting conversations. Nora, 36, who moved here with her husband and children from Pakistan, says, the main reason they

decided to get internet at home was “to connect with the family members back in Pakistan through MSN Messenger.”

The participants favour the internet for communication because it is cheaper than regular phone calls, and the voice quality is often as good. Time differences can sometimes cause problems, particularly when both partners have family in other countries they wish to speak to. Some immigrants manage to find creative ways to deal with the challenge. Zowie, 32, and her husband address it by using the computer simultaneous to communicate with their families in England and Karachi. Zowie says:

> I talk to my family verbally and he types…. I’m on the mic on the speaker. They will be on MSN Messenger, so they use it. He uses the typing thing, my family comes on Yahoo! Messenger, and we use the audio.

Patterns of Use: Culture

The second specialized use of the internet by immigrants is maintaining a connection with their native culture. This can involve a variety of activities. For example, Nora downloads Pakistani serial dramas from the internet while her husband pays to watch cricket online. Petra, 33, goes online to read the headlines in Bulgaria, a common practice among many recent immigrants. James, 36, goes online to look up information about his native Jamaica to satisfy his Canadian-born son’s curiosity about his father’s country of origin, and Malcolm, 39, goes online during the Islamic month of Muharram to fulfill his religious duties by listening to Muslim scholars speak.

The third specialized use of the internet by immigrants is learning about Toronto and about Canada. Many immigrants mentioned that they used the internet to learn about Canada before coming here. Some continue to rely on it for information. Isabelle, 47, says:

> I get a lot of information from the internet. This information is necessary, for example, I learn about Toronto from the internet.

Patterns of Use: Education

No one among the immigrants interviewed mentioned using the internet to locate people in Canada, either Canadians or other immigrants. All of the recent immigrants know people in Canada, but they are mostly people met offline: in ESL classes, in a nearby apartment, and

through work or other friends. When the internet is described as being used to adapt to life in Canada, it is always in an informational rather than communication capacity.

Yet the trans-national communication capacity is important for nearly all recent immigrants. Several mentioned that leaving their families behind was the hardest part of emigrating, and nearly all recent immigrants rely on the internet to keep in touch with the daily lives of their parents and siblings elsewhere.

Summary and Conclusions

Summary

The internet is not a separate system, but is embedded in everyday life. The people you deal with online are the people you deal with offline. This is true both for communication and information.

People get their information from very close relationships.

These relationships are largely dealt with separately, rather than in groups.

The younger people are, the more likely they are to seek cultural information (music, movies, books, restaurants) from their very close social networks. It is possible that this behaviour carries over into other cultural information seeking (e.g. online)

Greater email use with friends leads to discussion of cultural things with very close ties; this could be because email is a more directed form of communication than telephone or face-to-face

Much cultural information is gathered online for offline cultural activities, for example, learning movie times or purchasing electronic tickets to shows.

Canadian sites are used more than American sites. Local sites are especially popular because they facilitate in-person cultural experiences.

Most people tend to use the internet to search for specific information, usually with a practical bent (movie times, concert dates).

People usually receive the inspiration for what to search for online from pre-existing preferences (favourite bands) or from things they hear from other people.

There is a feedback cycle between gaining information from social network members, going to the internet to check on it, and then going back to friends and relatives to discuss matters.

Internet users can be grouped into four categories:

Non-users: older, do not use the internet at all

Reluctant users: mostly fifty-something; associate the internet with work and prefer not to use it in their personal lives. They may occasionally go online by choice

Instrumental users: younger; comfortable with computers but not overly enthusiastic about the internet. They view the internet as a household and work tool. A higher percentage of women than men fall into this category.

Power users: younger; very comfortable with computers. The internet is their playground and their preferred means of both communicating and gathering information. A higher percentage of men than women fall into this category.

Immigrants:

Use the internet extensively for communicating back home with family; cheaper than phone calls.

Use the internet somewhat for maintaining connection with culture (downloading music, television serials, scholarly speeches, etc.)

Rarely use the internet for building ties in Canada or learning about Canadian culture (other than immigration rules before they arrive). They tend to rely on people they meet face-to-face to build new communities here. Most know a fair number of people from their own country who now live near them in Canada in ethnic enclaves.

Conclusions

This, our initial reconnoitering of Connected Lives, has found that ICTs have become part of everyday life– from mobile phones to the internet. Rather than the separate, online-only virtual communities so beloved of the media, we have discovered that most people use ICTs easily and routinely to find information and to contact family, friends and neighbours. Rather than special household shrines to personal computers, we have found computers sharing domestic space in living rooms, family rooms, and bedrooms. Even home offices – home to computers in nearly half of the households – are usually accessible to all household members.

The most popular time to use home computers (and the internet) is during traditional evening family hours. Even though all household members are not as likely to be at home as yesteryear for family dinners or gatherings around the television, people use mobile phones, IM and email extensively in order to contact them – be they across the continent or in the next room. Indeed using the internet to communicate with family, friends and acquaintances is second only to using it for work and school. Contrary to the pre-internet era, men do as much online information-gathering and communication at home as do women. Indeed, working online from home now takes a bit more of the average woman's time than does doing household chores. Men do about the same level of online work from their homes as do women but, as usual, they do less household chores.

The high level of ICT-based information-gathering and communication reflects the networked lives of household members and the continued strength of personal community networks. East Yorkers have an average of nine very close members of their personal communities and fourteen somewhat close members. These are substantially higher numbers than when NetLab last measured network size in 1979 and 1968, although we caution that different network generators were used then to estimate network size (Wellman, 1979; Wellman and Wortley, 1990). Moreover, given the well-known ability of the internet to support even weaker ties, we suspect that the size of personal community networks is larger than it has been since the post-World War II move away from neighbourhoods and villages to suburbs and castle-like homes. Our data suggest a situation similar to Japan, where mobile phones are used extensively to keep in touch with extremely close ties – household members, friends, immediate kin, work partners – and to make local arrangements while the internet is used to keep in contact with ties ranging from the extremely close to acquaintances and strangers (Miyata, et al., 2005). Email scales up more effectively than the mobile phone to support more contact with more network members. In addition, rather than substituting for in-person contact, it lubricates and increases in-person contact, both locally and via long distance travel. And the data show that the larger the network, the more social activities.

People get a variety of useful information through their social networks, but their communication and information are often specialized in different relations. On average, only two or three role relations (friend, neighbour, etc.) give any one type of information Contrary to early fears (detailed in Wellman and Gulia, 1999b; Kayahara, 2005), the internet does not turn people

away from supportive interactions. Where both the internet doomsayers (e.g., Stoll, 1995) and the community doomsayers (e.g., Putnam, 2000) have argued that things are falling apart, we find that things are becoming more complicated and lively with the help of ICTs.

ICTs are information technologies as well as communication technologies. “We’re entering an era in which people are participating rather than just receiving information,” said Jonathan Swartz, president of Sun Microsystems (Knowledge@Wharton, 2005, p. 2). Our Connected Lives data agrees, showing that the internet is used extensively for finding a good deal of diverse information about culture. The internet is second only to network members for providing cultural information, well more than any other means of providing information. The very nature of ICTs as both information and communication technologies means that these two domains are interpenetrating more than before. People discuss with network members what they have found on the internet. Similarly, people go to the internet (and mobile phones) to check out what they have heard from network members. Our interview participants describe multistep feedback spirals between network information and interpersonal information – communicated online and offline – that goes far beyond the traditional model of the two-step flow of information.

In short, as computer, communication and social networks have intertwined, ICTs have become part of the household and community. ICTs are increasingly being taken for granted. They are becoming part of the furniture, like the living room couch, and when they get old, they may hang around as coffee tables (Richtel and Markoff, 2005).

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