

Technology-Enabled Political Empowerment

by

Jacob William Faber
S.B., Management Science (2004)
Massachusetts Institute of Technology

Submitted to the Department of Urban Studies and Planning
and the Engineering Systems Division
in Partial Fulfillment of the Requirements for the Degrees of

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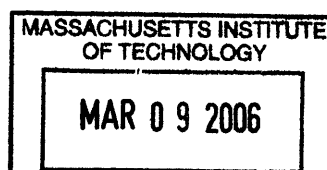
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ABSTRACT

Political participation and community involvement in the United States have declined steadily and significantly over the past four decades, and some attribute the fall to new media, such as television and the Internet. This thesis is a study of new technologies and their impact on political and community involvement. I-Neighbors.org is a technology allowing individuals register a free website and email list for their neighborhood. Through a particular feature of I-Neighbors called GovLink users can contact their elected officials for free. This thesis is based on a study of the behavior of I-Neighbors and GovLink users, looking for evidence that these technologies affect community involvement and political participation. Data gathered through surveys, the United States Census, and a short case study shows that new media can have a profound impact on community dialogue and political involvement.

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Introduction

Political participation and community involvement in the United States have declined steadily and significantly over the past four decades, and some attribute the fall to new media, such as television (Putnam 2000). This thesis is a study of new technologies and their impact on political and community involvement. The number of individuals using the Internet has expanded considerably over the past decade, as has the wealth of services offered (Warf 1999). Many of these services have potential to improve government functionality, particularly in regards to the relationship with its citizens (Wong 2004). However, access to and use of the Internet is not evenly distributed among all demographic groups. This “digital divide” has important social implications (DiMaggio 2001). Although the gaps between many groups are shrinking (Chakraborty 2005), they remain significant as technology develops and its use becomes more empowering and important.

Political participation can manifest itself in many different forms: citizen voting, a community mobilizing around the need for a new stop light, two neighbors discussing their children’s education, or an individual contacting their elected official. Ideally, individuals and communities could use the Internet and related services to communicate with one another and their government representatives. Cellular phones, email, and websites could be used for information gathering and dissemination. The government would integrate public feedback into their decision-making process, and implement policy reflecting this dialogue.

I-Neighbors.org is a technology allowing individuals to register a free website and email list for their neighborhood. This website allows neighbors to communicate with each other through features such as an events calendar, neighborhood polls, and reviews of local services.

Each community is also given an neighborhood email list. Through a particular feature of I-Neighbors called GovLink users can contact their elected officials for free.

This thesis is based on a study of the behavior of I-Neighbors and GovLink users, looking for evidence that these technologies affect community involvement and political participation. Data was gathered through two surveys of I-Neighbors users, the Survey of Political Participation and the Response Survey, observation of the use of I-Neighbors features and email behavior, United States Census Bureau reports (United States Census Bureau 2000), the Social Capital Community Benchmark Survey conducted in 2000 (Saguaro Seminar 2001), and the World Values Survey conducted from 1995-1997 (Inglehart 1999).

Analysis of these data shows that new media can have a significant effect on community involvement and local political participation. Some users have sent messages to their neighbors asking to help look for lost dogs, set up play groups for young children, arrange social functions, and find the proper recipient for incorrectly-delivered mail. Others have effectively created perpetual town hall meetings through the use of the email lists, where numerous citizens can discuss topics relevant to their community. These results are promising for those defending technology's ability to build social capital.

Literature Review

Declining Political Involvement

Participation in the United States political system has declined steadily and significantly in the past three decades. Putnam (2000) shows this deterioration manifests itself in many forms, such as voting and involvement in civic organizations. Americans are also not expressing themselves politically as much as previous generations through such means as signing petitions, giving speeches, attending political rallies, or writing letters to Congress. Putnam reports the latter activity has declined by a staggering 23 percent from 1973 to 1994. This information is concerning, since political participation is needed for a strong democracy (Putnam 2000).

Civic involvement has been shown to reap significant political benefits, such as more effective and innovative public policy. Rice (1997) developed an index of civic culture as a measure of social capital based on several factors such as newspaper circulation, philanthropic groups, gender equality in the workplace, trust, and non-profit organizations. To measure government performance, Rice then designed indices of policy liberalism, innovation, and administrative effectiveness. When applied to American states, the measure of civic culture correlated substantially with all three measures of government performance, indicating that a greater level of citizen involvement leads to better government (1997).

Much of the decline in involvement has come from the politically moderate, leaving only the voice of extremists. Self-described “very liberal” or “very conservative” Americans are more likely to participate politically through actions such as attending public meetings, writing Congress, and joining local civic organizations than more moderate citizens. These poles have strengthened over recent years, as moderates have disproportionately abandoned the political arena. In the 1990s, these moderates were half as likely to participate in political events as the

same group was in the mid-1970s. This increasingly partisan environment is making the dangers of factions discussed by the founders more relevant (Putnam 2000). This is the fear that extreme groups, which are not representative of the entire public, hijack the political process and only allow their special interests to influence policy (Madison 1787).

Television and New Media

Putnam (2000) places some of the blame for declining social capital on new technologies, specifically entertainment technologies such as television. Nearly five hours of the average American's day are spent in front of the television. Bimber (1998) also says that it is easy for people to "find better things to do than participate in politics." While the average American has actually seen an increase of 6.2 hours per week in available leisure time from 1965-1995, we spend more of this free time watching television. In 1965, we spent an average 30 percent of our leisure time watching television. As of 1995 we spend 40 percent. This has resulted in less time spent on child care and housework, and less involvement in non-religious organizations. Time invested in voluntary groups has fallen from 3.7 hours per month to 2.3. On the average day in 1965, 7 percent of Americans spent some time working with such organizations and in 1995 only 3 percent did so (Robinson 1997).

However, not all research has shown that new technologies degrade social capital. In particular, television does have the potential to build social capital, as the more people watch a particular show the more people can talk about that same show at bus stops, around water coolers, and at dinner tables. By producing media watched by a large number of individuals, each has the ability to discuss with family, friends, co-workers, and strangers. Programs watched by a diverse audience have the additional potential to bridge gaps across socioeconomic lines. In an environment where the proliferation of television stations is fragmenting the market and therefore reducing the potential number of people watching a particular program, public

broadcasting is better positioned to engineer these shared experiences, as purely commercial broadcasting efforts have little to no incentive to improve social capital. Programs designed with building social capital through discussion among diverse groups of people in mind do not need to be highbrow, as the soap operas *EastEnders* and *Coronation Street* are among the top ten television shows in Great Britain among both whites and minority groups. However, programs with some intellectual or cultural component could serve to better boost understanding and empathy across diverse groups of society. Examples of such programs are the 2002 BBC series *Great Britons* and coverage of the Queen's Golden Jubilee in 2002, which encouraged meaningful discussion about the nation's people and history (Brookes 2004).

The Internet has the capability to distract through entertainment in an even more extensive manner than does television, due to the incredible wealth of information and services available. Similarly, the Internet also has the ability to build social capital by mediating interaction of individuals through such services as email lists, online forums, and blogs. While some Internet activity may be responsible for reducing social capital, the abundance of news, educational, and cultural information and ability to connect with your elected officials or neighbors through electronic communication may increase social capital.

Generational Change and Perception of Politics

It is also possible that this decline in political participation is due to the fact that baby boomers, Generation X, and Generation Y were not beneficiaries of government programs such as the GI Bill and others during the great depression and both world wars. These programs created a "civic generation" of those Americans who grew up in a time where the government played a greater role in the lives of its constituency. Because of this involvement and investment in the public, the public was tied closer to the government, and so felt a greater responsibility to participate in the political process (Mettler 2004).

Putnam (2000) believes this generational change shows a shift of priorities from community values towards individual and material values and attributes more of this change to World War II. The World War II generation had an incredible shared experience of adversity, which spurred a burst in civic activity. Over 25 percent of the population (16 million men and women) served in the armed forces. Nearly 80 percent of men born in the 1920s served. Patriotic themes saturated popular culture and volunteerism boomed as people joined the civilian defense corps, Red Cross, Boy Scouts, and other organizations. Most Americans thought this war to be just, unlike Korea and Vietnam, which did much to divide the country and expose social inequality in military service. Veterans of World War II successfully integrated back into society at higher rates than did those of later wars. This may be part of the explanation as to why other military conflicts did not have the same effects on civic engagement than did World War II. The difficulty experienced by veterans of Korea and Vietnam is also shown in some of those coming home from combat in Iraq (McLemore 2005).

More recently, many Americans have a negative view of politics. Of a survey conducted in 2000, 87% of respondents agreed “most politicians are willing to say whatever it takes to get elected” and 71% believe “politics in America is pretty disgusting” (Swanson 2000). This view of the political establishment may be responsible for the decline in political participation. If the citizenry has little or no trust in the system, they may be less inclined to invest their time and resources in improving it. For example, if someone believes that his voice is being heard and he can influence the system, he is more likely to participate (Grimsley 2003). The converse suggests if there is a lack of trust in the system, or it is seen as “disgusting”, the same person is less likely to contribute to the process. Research conducted by Paxton (1999) shows there is further evidence there has been a decline in trust in individuals. In this light, the research conducted by

Swanson (2000) may indicate one compelling reason for the staggering decline in political participation in the United States.

The sheer number of voluntary associations per capita in the United States has grown over the past several decades. However, while the number of groups has roughly tripled, average membership per group has fallen by 90 percent. Many of these new groups are large political groups that communicate via mail, such as the Children's Defense Fund and the National Wildlife Federation, whose interests are to influence policy, not build connections between members. Although these groups are of growing political importance, their ability to create social capital may be limited (Putnam 2000). While national groups do rely on individual citizens' financial donations, membership in such a group is different from, say, a religious congregation, which brings people together on a regular basis for community building. Individual members are less likely to attend a meeting of one of these massive organizations, and ties formed between members are likely not as strong as those between regular attendees of a local gardening club or prayer group (2000). This trend toward joining associations not tied to the immediate neighborhood might cause a decline in social capital due to a decrease in interactions between individuals (Paxton 1999).

The declines in social capital and political participation in this country have potentially dire consequences. Research has shown a direct link between social capital and political participation (McClurg 2003). As indicated by the research of Rice (1997), citizen involvement leads to improvements in government policy and function. Without it, we may find ourselves in a politically stagnant environment, where public policy does not reflect the concerns of the citizens, or one in which only the voices of extremists influence policy and moderates are marginalized (Putnam 2000).

Finding solutions to these issues will be a great challenge for social scientists, politicians, and other community leaders. Engineers also play a role in the solution, as information technologies have the potential to connect people and communities in ways not possible before. Tools of the information society may provide access to the political environment for those who have not previously been involved and can help address the marginalization of particular groups, such as minorities and the poor (Jennings 2003). Harnessing new media technologies for the purpose of building social capital and increasing community involvement and political participation is an important goal.

E-Government

Studies show citizens' trust in their government is driven by the extent to which they can influence decisions made by their representatives (Grimsley 2003, Tolbert 2003). Adoption of information technologies by the government, or E-Government, has the potential to enhance the relationship between citizen and elected official and improve citizen influence of public policy (Ogden 1994). Lenk (2002) sees the Internet used for "democratic deliberations, citizen information, and electronic voting," as well as many other functions. The Internet is a force that can restructure American democracy, as it significantly lowers communications boundaries between citizen-based political groups and the government itself (Bimber 1998) and offers new opportunities to participate. These tools have been shown to not only supplement organizational and political involvement, but to increase activity in some cases (Wellman 2001). The importance of information technology persuaded the Federal Government to pass the E-Government Act of 2002 with the goal of increasing citizen involvement in the government through the use of technology (Jaeger 2004). New methods of political communication lead to new opportunities for involvement (Swanson 2000) and may increase political participation

(Tolbert 2003). Information and communication technologies (ITCs) therefore are needed to preserve the future of a strong democracy.

Political Websites

Currently, most political websites, such as those for political parties, government offices, candidates, or special interest groups provide information, facilitate basic communication, and function as resource generators. These features alone are essentially extensions of activity that is already happening outside the Internet (Becker 2001, Berghel 1996, Meeks 1997). For example, in the 2000 elections, 75% of candidates' websites had features allowing for citizen contact, such as email or web forms (Foot 2002). In this election, exit polls showed that one third of voters used the Internet to gather information on candidates (Howard 2003).

So far, research tells us a majority of citizens have been pleased with government websites. In a study conducted by Thomas (2003), over 800 Georgia residents were surveyed by phone about their Internet use in general and their opinion and use of government websites. When asked to compare government websites to other sites, 68 percent of respondents rated their ease of use as good or excellent and 76 percent found their information to be good or excellent. An impressive 93.7 percent of respondents said they would visit government websites again.

Blogging and Web-Enhanced Political Uprising

Becker (2001) discusses the potential for the next level of political web sites, which offer a wide array of facts and perspectives to their visitors, and the power of email as a tool to rapidly organize groups. He lists several examples, including the WTO protest in Seattle, the IMF protest in Washington DC, and Citizens Solidarity in Korea. These groups, or "cyberorganizations", use their web sites to inform and coordinate their members through networked and non-hierarchical organization. Compared to previous technologies, such as the telephone and traditional mass media outlets, new information technologies allow these groups

to function without the typical top down structure and improve member empowerment, which drives participation and event turnout beyond what authorities can predict.

In a recent example of this type of dynamic political organization, blogging and mobile phone text messaging have assisted French youths organize rioting across the country. Several youths have been arrested and are under investigation for comments on Skyblog, a website owned by the national radio station Skyrock, the station with the largest audience among 13-to-24-year-olds. Over three million blogs are hosted on Skyblog, growing at a pace of 20,000 per day. This site is possibly the most popular online meeting place for French youth. On one blog, posts describe time and location for attacks on police stations, forcing authorities to consider censoring blog posts (Crampton 2005).

New research supports these anecdotes and has shown that politically active citizens in the United States are using blogs to further their political interests in the virtual world. In a study by Kavanaugh (2005), citizens of Blacksburg and Montgomery County, Virginia were surveyed about their political involvement and Internet use habits, specifically their knowledge of and contributions to the blogging community. Respondents who have heard of blogs or are active bloggers are more likely to be politically active online as well as offline. Political bloggers were also more willing to participate in local political dialogue offline, such as at public meetings, and were more likely to offer a dissenting viewpoint at such meetings. These bloggers also discuss political issues with a greater number of people. Blogging is a new form of political participation, acting as a mediating tool through which citizens can communicate with each other. The interactive nature of blogs differentiates this technology from the typical website, even most political websites (Kavanaugh 2005).

Government-Technology Partnerships

Taking ITCs even further, the Liberal Party in Nova Scotia partnered with Maritime Telephone and Telegraph in the early 1990s to televise their convention and allow party members to vote on party leadership by using their telephones. Each member of the party was given a personal identification number to use when voting electronically. The results were impressive, as the participation in the convention process increased significantly and a new kind of leader was elected to head the party. Part of this growth was due to the fact that many who could not easily participate before were now empowered to do so, such as the elderly, the working class, and those who lived in geographically remote areas. The Conservative party of Saskatchewan and the Liberal party of British Columbia have since replicated this service (Becker 2001).

The encouraging results from these Canadian initiatives show us that government-sponsored efforts to incorporate information technologies into the political environment can encourage political involvement. The notable attribute of these programs is that citizens were able to participate from their homes at any time, simplifying the political process and empowering previously-marginalized groups. What may be shown by this experience is that there are many who desire to participate in the political process, but are unable, discouraged, or otherwise left out. By allowing citizens to voice their opinions from their couch, this subpopulation can now contribute to the political dialogue.

Online Community Networks

Gregson (1997) has shown that online community networks, in the form of simple computer bulletin boards or Internet based systems, lead to increased political participation. These networks create new ways for citizens to communicate with each other and their elected officials. This communication leads to an improved awareness and appreciation for political

issues. Networks that focus on local issues further ease this information flow, as elected officials and different points of view are more accessible.

In Gregson's (1997) study, volunteers who wished to learn how to use the Internet to become more politically active were gathered through the solicitation of politically oriented university groups and one local high school social studies class. Participants were introduced to online resources which could be used to support political activity, such as search engines, news groups, and web page authoring skills. The students developed projects to work on and were coached on how to most effectively use information technologies to benefit their projects. Some projects included promotion of a student environmental group, providing information about the abuse of women, and anti-drug programs (Gregson 1997).

Gregson's primary finding was that people are interested in learning about new tools to be used for political participation. Those who already have interest in political matters and experience using the Internet were better equipped to use these new tools to encourage political involvement. People with political experience, but little Internet savvy benefited most from the training, but needed first to gain basic Internet skills and become comfortable using the Web. Unfortunately, those without interest in either political matters or the Internet did not become politically active solely due to the training (Gregson 1997).

The main problem with this study is that most of the participants were already politically active. For example, of the 24 students in the project, 14 had previously written to a government official, 12 had signed a petition, and 10 had volunteered for a political campaign. Of the high school students who were under voting age, two thirds professed an interest in politics (Gregson 1997). While providing new tools to those who are already politically involved is admirable, a greater accomplishment would be to encourage those who were not currently active to participate. While Gregson did not find that introducing these tools to the politically inactive

encouraged them to participate, the small sample of this population does not allow us to completely dismiss the potential of new technologies to encourage political participation. However, it is important to note going forward that those without basic Internet skills will face great difficulty using these new tools.

A Wired Community

In observations of a technologically-enabled community, Netville, information and communication technologies (ITCs) were used to organize collective action, as residents were better equipped to build support for local concerns. Netville, self-titled “Canada’s First Interactive New Home Community”, was a test by corporate partners of new ITCs in a middle class suburb. Of the 109 homes in Netville, 64 had access to a free trial fiber network offering a 10Mbps connection. Residents were provided with video phones, personal email, a small number of network-accessible CD-ROMs, and a neighborhood email list. These services were provided by the Magenta Consortium, a group of public and private companies. The residents varied in their computer literacy, while technology ownership was similar to other Canadians with similar household incomes. From October 1997 to August 1999, Keith Hampton lived in Netville and conducted an ethnography of the wired community. Residents who were and were not connected to the network were also surveyed for social network data. (Hampton 2003).

Magenta’s decision in 1999 to end the free trial high speed network was met with opposition and collective action from Netville residents. ITCs reduced the cost of organizing and mobilizing a group of individuals and so encouraged many more citizens to participate than would have if these technologies were not available. Discussion over the neighborhood email list led to a spread of information throughout the community at a much faster rate than that of numerous phone calls or paper flyer distribution. Residents of this community were able to use ITCs to bypass administrative assistants and contact Magenta’s office directly, and even organize

a mass email campaign, or “flooding”, to add emphasis to their frustrations. The collective action against Magenta was also leaked to local media outlets, including the local bi-weekly newspaper. Magenta did not expect the ability of Netville residents to use ITCs to organize resistance and so was unable to anticipate the size and speed of residents’ collective action. The momentum of this organized movement eventually led to the addressing of concerns by Magenta with greater resources and speed (Hampton 2003).

By the end of 1998, this collective action against Magenta had concluded. Even though most residents were still unsatisfied with the service, the community was discouraged by how the media portrayed their complaints. Magenta pushed on with the downgrade. Traffic on the email list decreased significantly, but it is unclear whether or not it would be used again if another neighborhood concern arises (Hampton 2003).

Email and Political Uprising

Similar to the Netville study, in 1991, email was used by the faculty of a medium-size American university to stage a rebellion against their president. In reaction to a new research funding policy developed by the president, the faculty launched an email campaign to put pressure on the president and his policy. The initial catalyst for the revolt was an email sent to the faculty and administration by a senior engineering faculty member criticizing the president and claiming his new policy would be devastating for young faculty. A heated email exchange between top officials at the university followed, including the president himself, senior faculty, and new faculty. This debate occurred over a university-wide mailing list (Romm 1998).

Shortly after this exchange began, the local press became interested and proceeded to provide regular updates of the debate to the general public. Top administrators responded to this greater exposure by claiming the rebels were not representative of the greater community and their disdain was a result of personal problems with poorly managed departments. As the debate

became more intense, local and national television news outlets became interested in the story and attended university forums where these issues were discussed (Romm 1998).

The rebellion eventually migrated from the university-wide email list to an informal email list of about 20 faculty members. This more secretive forum allowed the rebels to build a strong coalition of supporters who were not ready to go public with their discontent, such as department heads. The smaller, stronger group conducted an email survey of the entire faculty, polling opinion on a number of issues. The results of the survey showed an overwhelming dissatisfaction among respondents, and were distributed to the entire academic community. The president reacted by initiating a review of all departments, which within weeks spoke negatively of teaching, research, and administration and forced the resignation of two department chairpersons. By the end of 1993, the rebels abandoned email as the primary group communication tool because of security reasons. An unknown member of the coalition was leaking information to the local press, which allowed the administration to prepare for and preempt some of their maneuvers. Eventually, all other communication within the group ended as well, concluding the rebellion (Romm 1998).

The use of email at this university dramatically changed the institute's politics, allowing for communication at much faster speed, involving many more voices, providing a record of dialogue, and allowing for message manipulation by senders and receivers. Email proved to be a technology with strong political potential and a contributor to social unrest. However, the interaction of the press with the rebels raises interesting concerns about the use of electronic communication and the ease with which it can be forwarded and disseminated to outside parties. Clearly, secrecy and security were issues the rebel group did not anticipate, and they were discouraged when the useful aspects of email were abused by others in their group (Romm 1998).

E-Government Drawbacks

The potential for Internet applications to encourage political participation has been demonstrated by Becker (2001), Crampton (2005), Hampton (2003), and Romm (1998), and new tools will continue to appear. While there is much promise for the use of e-government technologies to encourage political participation, we must not be overly optimistic about the magnitude of the outcomes. Existing attempts have been limited, and there are potential drawbacks these technologies present. Some citizens show a lack of trust in the ability of e-government to keep personal information secure and confidential (Jaeger 2004). Additionally, the Internet may not be an inappropriate method through which to communicate certain concerns to government officials. For one, notifying emergency services such as fire or police may never be done faster through a computer than dialing 911 on a telephone. Serious and personal concerns and frustrations may not be satisfied through a simple email (Thomas 2003).

In choosing which communications technologies would be most effective for communications between government official and constituent, email may not be the best choice. Research has shown that choice of communication medium can impact negotiation outcomes. Media richness is the amount of information a particular medium can convey, with face to face on the rich end of the spectrum and computer-aided communication on the lean side. Those using leaner media can suffer during negotiations, while rich communication media are more likely to lead to collaboration between individuals (Purdy 2000). Faxing, while not as good as a telephone call or face to face meeting, is a slightly richer medium than email, and can be done as easily as sending an email. Faxes tend to have more symbolic meaning and carry greater weight in organizations. This is most likely due to the physical nature of a fax message, as it falls between email and a written letter in most measures of media richness (Treviño 2000). Use of

faxes for e-government communication may then be more effective and satisfy those who are reluctant about how their email message will be perceived and addressed by their representatives.

Another negative associated with the use of information technologies is the fact that sensitive electronically stored data can easily be disseminated if leaked. While physical documents can be passed along and distributed with political consequences, the speed with which this can be done does not compare to that of electronic media, where an email can be forwarded to hundreds or thousands of individuals in seconds. This issue led to the abandonment of email as the primary tool for political movements in Hampton's (2003) study of Netville and Romm's (1998) study of rebellion in the university setting. In these cases, information held by the rebel group was prematurely released to the press and the opposing authority, undermining the efforts of the political uprising and discouraging the rebel group. As these technologies improve and gain feature such as tracking and protection of documents, one would hope that issues of secrecy and security will be addressed, but it is likely that technology will not outpace the mole and such political sabotage will always be a concern.

The Digital Divide

There is another hidden problem with using technology to address a social problem, which is the reality of inequitable distribution and adoption of technology along demographic lines. This is particularly true regarding Internet technologies, as research into the "digital divide" has shown that current users tend to be wealthy, educated, young, urban, white males (Chaudhuri 2005, DiMaggio 2001, Haythornthwaite 2001, Katz 2001). This disparity has been found to be even wider when looking at visitors of government websites, as they are more likely to be white, better educated, and wealthier than other Internet users (Thomas 2003).

The digital divide raises a serious problem in light of the studies conducted by Wellman (2001), Hampton (2003), and others concluding that ITCs can be used to increase and benefit political participation and collective action. Fundamentally, those who need these tools the most (individuals and communities who are currently the most disenfranchised) are the least likely to have knowledge of or access to the Internet and related technologies. The divide has serious consequences for political awareness and involvement (DiMaggio 2001), and results in a cyclical problem, where those in need are kept in need by tools which may have incredible potential to alleviate the division between haves and have nots (Warf 2001).

Although the gaps between many groups are shrinking (Chakraborty 2005), they remain significant as technology develops and its use becomes more empowering and important. Technological skills are required in the workforce, social settings, and the political arena, as information is disseminated through the Internet more so than in previous generations (Katz 2001). Owning a computer and having access to the Internet at home positively affects a child's performance in school and makes it more likely that a child will be in school (Fairlie 2005). Additionally, statistics showing a trend of closing gaps often only address access to the technologies, rather than usage, which is of greater importance to those concerned with empowerment through technology (Haythornthwaite 2001). It is one thing for an individual to have a computer, but if he or she does not use it, either because he or she does not know how or does not feel compelled to do so, there is no benefit gained.

According to research conducted by Chaudhuri (2005), the strongest predictors of Internet purchase are income and level of education. Race is also a factor, as African Americans and Hispanics are less likely to have Internet access. One likely cause of this divide is financial obligation. A computer with Internet access requires an up front cost as well as a system of regular payments. Compare this to the one time cost of a television or radio, which have reached

all but saturation in all communities rather quickly. This difference can also be seen in other technologies with recurring costs, such as telephones and cable, which have unequal usage among income groups. Other reasons for the persistent divide are social or individual preference, as some people do not consider themselves to be “computer users” and others are simply uncomfortable using the Internet or allowing their family (especially children) to do so. (DiMaggio 2001).

The digital divide has very serious implications for those developing e-government and other technologies with the hopes of improving community involvement and political participation. Until the gap between haves and have nots is reduced to the point of insignificance, new ITCs have the potential to aggravate the situation by disproportionately aiding the already empowered. The challenge is to build tools that are easy to use and accessible to even disenfranchised demographic or political groups.

Research Questions and Hypotheses

Problem to be studied

A democratic state cannot function properly without adequate political participation. Healthy democracy needs a diversity of voices from which to make decisions (Putnam, 2000). Not only does American democracy lack individual involvement, those who do choose to contribute are not representative of the population. Those participating do not display adequate diversity along socioeconomic lines, or the political spectrum, as moderates have abandoned the political arena at higher rates than extremists over the past several decades (Putnam 2000).

Purpose of the proposed research project

The purpose of my research project is to study how information technologies, specifically a service that connects citizens with their neighbors and elected officials, can be used to address the problem of inadequate political participation in the United States.

Major research question

My research will answer the following question: Can new media be used to encourage community involvement and political participation?

Minor research questions

Several more focused questions will also be answered through my research.

Q1: Who will be using this technology?

q1: What demographic groups will be heavy users?

q2: Will users be those who are already politically involved?

q3: Will users be political extremists?

Q2: How will I-Neighbors be used by communities?

q1: Which tools will be most commonly used?

q2: How will new media affect neighborhood dialogue?

Q3: How will GovLink be used by individuals?

q1: What topics will be most common?

q2: Will there be differences in volume or content across levels of government?

q3: Will this be used for collective action?

q4: Will there be spikes of use around national or local events?

Q4: How will policy-makers respond?

q1: Will policy-makers reply to electronic communication?

q2: Will policy be influenced by participation?

Major hypothesis

Easy to use tools, such as I-Neighbors and GovLink, will encourage citizens to become politically involved. This increase in political activity will be driven primarily by one factor: this tool will lower the communication boundary between citizens and government officials. GovLink will make it very easy for users to identify their representatives, compose a message, and send it through the website. Similarly, I-Neighbors tools will encourage community dialogue by making it very easy for neighbors to contact each other.

Minor hypotheses

H1:Users of “GovLink” will tend to be those on the “have” side of the “digital divide”. The demographic qualities of users will not be representative of the United States population. Wealthy, educated, young, urban, white males will represent a disproportionately large part of the sample.

H2:Users will primarily be those who are or have been politically active. Most of the users of “GovLink” will be regular voters, who have previously contacted a public official. Although most users will be politically active, “GovLink” lowers the communication barrier between government and citizen sufficiently such that some users will use “GovLink” for their first contact with their representatives.

H3:Users will be more satisfied with the responses from lower (local) level officials. I base this hypothesis on my belief that a mayor or other local official is more likely to care about the views of a single voter than a governor or congressman. One factor for this is the much smaller constituency a local official is responsible for, where a single vote

matters more. Also, issues on the lower level will likely be more manageable, such as the need for a stop light, as opposed to the larger issues that higher levels deal with, such as health care or war, which may take a much longer time to resolve.

H4: Targets of collective action will more likely be higher (state or federal) level officials.

Again, local level officials will be more focused on more manageable issues, such as stop lights. Higher level officials have a larger constituency and also deal with larger issues that affect more people, such involvement in a war, which will generate broader appeal.

H5: I-Neighbors communities will initially use the features available on the website a great deal. This activity will eventually migrate to the neighborhood mailing list due to the simplicity of sending email.

H6: I-Neighbors communities that are larger in size will see more activity per user, as there are positive network externalities associated with neighborhood growth. Each individual member is encouraged to participate by each other member. As membership increases, so does the inclination to be involved in the community. This analysis is consistent with research on threshold models conducted by Granovetter (1978), which suggest that the more an individual sees others contributing to a community, the more likely they are to do so as well.

Methodology

I-Neighbors

Figure 1: I-Neighbors.org homepage



My research group in the Department of Urban Studies and Planning at the Massachusetts Institute of Technology has developed a service that allows geographic neighborhoods to create their own, free website. (This research group moved to the Annenberg School for Communication at the University of Pennsylvania in September 2005.) Neighborhoods are grouped by ZIP code. Creators of I-Neighborhoods are encouraged to limit the potential membership to a small geographic area consisting of fewer than 500 households. Each neighborhood is given a unique and simple URL to facilitate growth, such as <http://i-neighbors.org/02139/centralsquare>. I-Neighbors.org costs nothing to use, and is free of advertisements and spam. These factors, as well as our association with MIT and the University

of Pennsylvania, have attracted over 5000 neighborhoods in the United States and Canada after 16 months of service.

Figure 2: An I-Neighbors neighborhood page

The screenshot shows a user interface for the I-Neighbors website. On the left is a vertical navigation menu with icons for HOME, MY PROFILE, DIRECTORY, EVENTS, PHOTOS, REVIEWS, POLLS, E-MAIL, and GOVLINK. The main content area is titled "Welcome to Massachusetts Institute of Technology" and shows the date "November 15th, 2005". A "GovLink" message is displayed, addressed to Mayor Michael Sullivan (D) with the subject "Traffic Vs Pedestrians in Central Sq. Area". Below the message are links for "Send a free fax", "Read more about faxes", and "Officials' Response Ratings". A "Description" box on the right explains the neighborhood's focus on on-campus housing and lists links for "Entrance", "Log Out", and "Unsubscribe/Leave". A "Newest Poll" section, dated Sep 03, 2004, shows a poll titled "What schools are people in?" with results: Architecture and Planning (16.67%), Engineering (29.17%), Humanities, Arts, and Social Sciences (12.50%), Sloan School of Management (4.17%), and Science (33.33%). A "Newest Neighbors" list includes Gautam Bisht, Vic Margot Brereton, Melissa Mark Palmer, and a link to the directory. Below the poll is a "Help Grow I-Neighbors" section with links for "Print a Flyer", "Invite Your Friends", and "Create a Neighborhood". A "Nearby Neighborhoods" section lists "MidCambGardeners", "TremontStreet", "HarvardSquare", and "DanaHill". A user profile for "Jacob" is shown, including a photo, a "Trust Level" of 4.17%, and a list of neighborhoods: "mitmit" and "centralsquare".

To register with I-Neighbors.org, users must provide their first name, a valid email address, and their ZIP or Postal code. Next, they are presented with the option to either join an existing neighborhood in their ZIP/Postal code or create a new one. Once a member of a neighborhood, a user can go to that neighborhood's page and access all of I-Neighbors.org's features. Figure 2 above is a screenshot of one of the home page for the Massachusetts Institute of Technology community.

Figure 3: User-submitted neighborhood photos



I-Neighbors.org offers an event calendar, reviews section, user-submitted neighborhood photographs (Figure 3), polling ability, and several other features common to other online community websites. Each registered neighborhood is also given a personalized email list. Users can post to this list by using their own email client or through a web interface on I-Neighbors.org. This web interface also acts as an archive for messages posted to the mailing list.

GovLink

Figure 4: The GovLink page for federal representatives

Step 1 of 3

Federal Representatives

Federal Officials

President George Bush (R)	<input type="button" value="More Info"/>	<input type="button" value="Send Fax"/>
Vice President Richard Cheney (R)	<input type="button" value="More Info"/>	<input type="button" value="Send Fax"/>

United States Senators

Edward Kennedy (MA - D)	<input type="button" value="More Info"/>	<input type="button" value="Send Fax"/>
John Kerry (MA - D)	<input type="button" value="More Info"/>	<input type="button" value="Send Fax"/>

United States House of Representatives

Michael Capuano (MA - D)	<input type="button" value="More Info"/>	<input type="button" value="Send Fax"/>
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Send a fax to state officials

Send a fax to city/town/county officials

If there is incorrect information on this page, please **contact us**

Fax FAQ

“GovLink”, a feature of I-Neighbors.org, enables users to send free faxes to their elected representatives, as shown in Figure 4 above. Once logged in to a neighborhood on I-Neighbors.org, a user is presented with a list of those officials representing their ZIP code. Users fill out a web form with their message, and the computer system sends the fax for them. On the other end, the selected government official receives a physical, paper fax. Users must provide their phone number and postal address so that their officials can respond. Before composing a fax, each user is presented with guidelines for improving the effectiveness of their communication (Figure 5).

Research conducted by Purdy (2000) and Treviño (2000) show that choice of communication medium can impact negotiation outcomes. While not as rich as a telephone call

or face to face meeting, faxing has shown to be a more effective communication tool than email.

The fact that faxes tend to have more symbolic meaning and carry greater weight in organizations motivated the choice to use faxing technology instead of email.

Figure 5: GovLink faxing guidelines displayed to all users

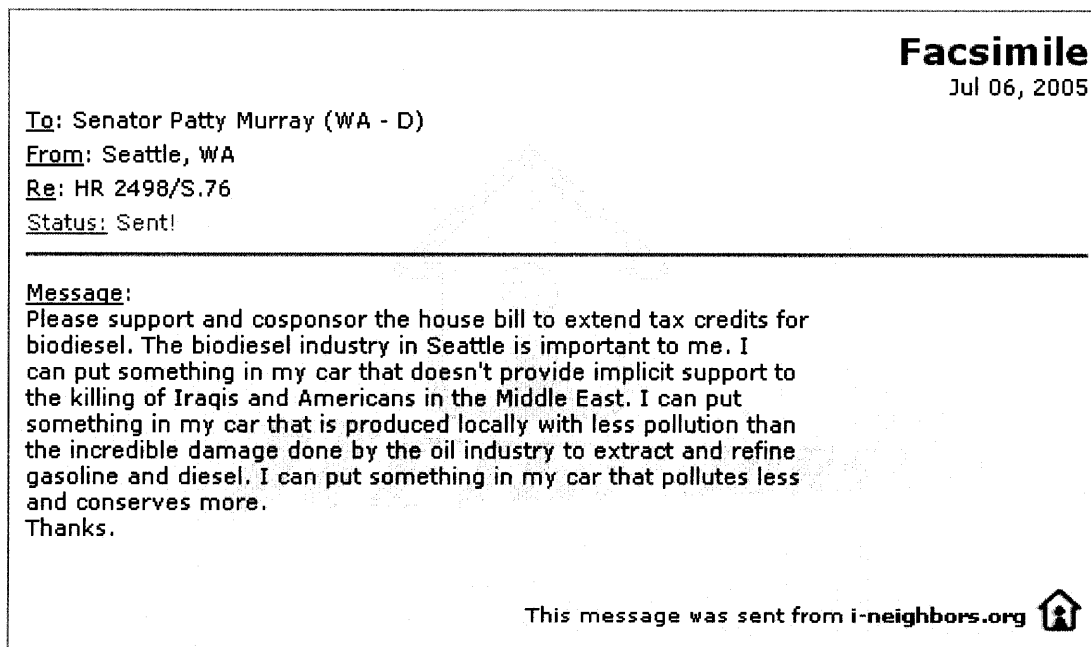
Before sending your fax:

I-Neighbors is a free, non-profit service with limited resources. Do not abuse this service. Irritating elected officials, or flooding officials with faxes only hurts our ability to provide this service to others. Use us often, tell your friends, but please follow these guidelines:

1. **ACT LOCALLY** - Elected officials do not read correspondence sent by individuals from outside their district or constituency. A letter sent to an elected official who does not represent your area will likely not be answered or have a strong impact.
2. **DON'T CUT AND PASTE** - If you are faxing an elected official as part of an organized campaign, do not send the exact same letter as everyone else. To maximize your impact, create a unique and personalized message.
3. **BE COURTEOUS** - It is a violation of the Terms of Use to use this service to sell products or services, express bigotry, racism, hatred, or profanity and to transmit material that is libelous, defamatory, obscene, threatening, abusive or hateful. Irritating elected officials will not help your cause or help I-Neighbors provide this service to others.
4. **ENCOURAGE OTHERS TO BECOME INVOLVED** - The subject line from your fax will be displayed on the I-Neighbors website (required) and we will give you the option to share the full contents of your letter with other users (optional). By sharing, you encourage other people to become involved.
5. **THE SMALL PRINT** - Most of our faxes are sent within one hour and we will notify you when it has been sent. While we rarely experience problems, our database may contain errors, or the fax number may be repeatedly busy. We are not responsible if your fax does not reach the intended recipient and cannot guarantee how long it will take to transmit your fax.

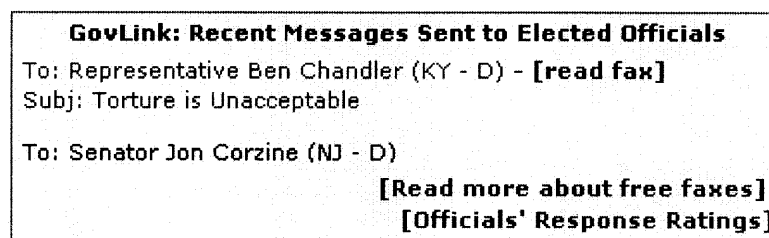
Display of Sent Faxes on I-Neighbors.org

Figure 6: How a fax is displayed on I-Neighbors.org



Each fax sent through I-Neighbors is published on the website. While name and contact information for the sender is never shown, the subject and recipient of every fax is available to the entire I-Neighbors.org community. Users are also given the option of making their entire fax message public (Figure 6).

Figure 7: GovLink scrolling display



On the I-Neighbors home page and on each neighborhood page, there is a scrolling display of the subjects and recipients of recent faxes (Figure 7). From here, users can read publicly available faxes. Within each neighborhood, users can view a list of faxes sent from all users in the same city and state.

Building a Database of Local Officials

Figure 8: The local official data submission page

Representative's Information:

First Name:	<input type="text"/>
Middle Name:	<input type="text"/>
Last Name:	<input type="text"/>
Title/Position:	<input type="text" value="Mayor"/>
State:	<input type="text" value="MA"/>
County:	<input type="text" value="Middlesex"/>
City:	<input type="text" value="Cambridge"/>
Zip Code:	<input type="text"/>
District:	<input type="text"/>
Fax Number:	<input type="text"/>
Phone Number:	<input type="text"/>
Email Address:	<input type="text"/>
Party Affiliation:	<input type="text" value="[Select Party]"/>
Street Address:	<input type="text"/>
Personal Website:	<input type="text"/>
Official City/Town/County Website:	<input type="text"/>

All contact information is verified by a series of users before it is entered in our database. This information may still need to be verified by other users before it goes live on our site. Please remember that it may take some time before this information is reviewed, verified and updated.

GovLink was built with a database of federal and state-level officials, which can't be altered by users. In order to build a large and reliable database of locally-elected officials, GovLink has a feature allowing users to submit contact information for their local officials. Users provide this information, which is placed in a temporary database. Other users are then asked to verify these data. Once an official's contact information is approved by enough users, it is imported to the live database, and users can fax him or her. Site administrators can step in and speed up the process by manually approving data as well. Users are given credit, in the form of "Reward Points", for submitting and verifying accurate data. Conversely, points are subtracted from their account for submitting or verifying incorrect data. The accumulation of Reward

Points is translated into a “Trust Score” on I-Neighbors.org, which is displayed on the neighborhood homepage and in the directory. The number of faxes a user can send per week is dependent on his or her trust level, which increases as he or she submits or approves contact information for local elected officials. A user with the base level Trust Score can send three faxes each week.

Research design

I-Neighbors Usage

In order to answer my question “How will I-Neighbors be used by communities?” and address my two hypotheses below, I have looked at how I-Neighbors has developed.

H: I-Neighbors communities will initially use the features available on the website a great deal. This activity will eventually migrate to the neighborhood mailing list due to the simplicity of sending email.

H: I-Neighbors communities that are larger in size will see more activity per user, as there are positive network externalities associated with neighborhood growth. Each individual member is encouraged to participate by each other member. As membership increases, so does the inclination to be involved in the community.

All behavior on I-Neighbors is recorded, including the use of all features on the I-Neighbors website, all emails sent to individuals through the neighborhood directory or invitation system, and all messages sent to the neighborhood mailing lists. I have identified and studied the behavior of several large and active neighborhoods.

Fax Content Data

To answer my question “How will GovLink be used by individuals?” and address my hypothesis below, I have observed the use of GovLink in the I-Neighbors setting.

H: Targets of collective action will more likely be higher (state or federal) level officials. Again, local level officials will be more focused on individual issues, such as stop lights. Higher level officials have a larger constituency and also deal with larger issues that affect more people, such involvement in a war, which will generate more interest.

All content is stored by the application, such as sender and receiver information, message content of the communication, and the geographic location of the sender. The data submitted on local officials is also stored by the application. I have analyzed these data, looking for themes across the use of GovLink, such as common topics for specific levels of government and collective action.

Survey of Political Participation

To answer my question “Who will be using this technology?” and address the hypotheses below, GovLink users have been sent a Survey of Political Participation.

H: Users of GovLink will tend to be those on the “have” side of the digital divide.

Wealthy, educated, young, white males will represent a disproportionately large part of the sample. This theory is consistent with the literature on the digital divide.

H: Users will primarily be those who are or have been politically active. Most of the users of “GovLink” will be regular voters, who have previously contacted a public official. Some users will have never previously contacted an elected official.

Although most users will be politically active, “GovLink” lowers the communication barrier between government and citizen sufficiently such that some users will use “GovLink” for their first contact with their representatives.

All users who either send a fax or submit contact information for a local official receive this survey. In addition to gathering demographic data and basic Internet use information, this

survey asks users for history of their political involvement and technology use. The goal of this step in my research is to get an idea of what kind of people are using this service. Participants are also required to agree to a consent form before completing this survey. Users are contacted through email. The consent form and survey questions are available in Appendix B: I-Neighbors Survey of Political Participation. Below is the text for the Survey of Political Participation notification email:

Figure 9: Survey of Political Participation email notification

The University of Pennsylvania and I-Neighbors.org are doing a study of political participation. We are interested in how new technologies may or may not affect democracy. This is not a commercial marketing survey, but academic research.

We are asking you to help us with this study by completing a short survey, which will take approximately 5 minutes. Your responses to this survey will be kept strictly confidential. Your name will not be associated with any specific data or appear in any publications or reports.

As a token of our appreciation for participating in this survey, you will be entered into a draw for a gift certificate for Amazon.com.

Please take a moment right now to visit the survey website:

<link>

All users who have sent a fax or submitted data on a local official are placed in a database. Once per week, a script running on the survey server reads through this database, determines who has not completed a survey, and sends them an email notifying them of the survey. One week later, if they have not yet completed a survey, they are sent a reminder email. Only one reminder email is sent

To gather demographic information for discussion of digital divide implications, the following questions are presented to GovLink users:

- Please tell us your gender.
- What ethnic group do you consider yourself to be a part of?
- What is the highest level of education that you have completed?

- Which of the following categories best describes your present occupation?
- What is your marital status?

To measure past political involvement, the following questions are on the Survey of Political Participation:

- In the past year, how many times have you done the following (excluding those times through I-Neighbors.org)?
 - Emailed a government official
 - Phoned a government official
 - Visited a government official
 - Mailed or faxed a letter to a government official
- Below are some different forms of political action that people can take. Please tell me, for each one, whether you have actually done any of these things, whether you might do it or would never, under any circumstances, do it.
 - Signing a petition
 - Joining in boycotts
 - Attending lawful demonstrations
 - Joining unofficial strikes
 - Occupying buildings or factories
- As you may know, around half the public does not vote in presidential elections. How about you – did you vote in the presidential election in 2004 when John Kerry ran against George Bush, or did you skip that one?
- Do you remember for sure whether or not you voted in the most recent state election?
- Do you remember for sure whether or not you voted in the most recent city/town election?

- Generally speaking, do you usually think of yourself as a Democrat, Republican, Independent, or what?

To assess GovLink users' social capital, they are asked if they are involved in nineteen groups and organizations.

Response Survey

To answer my question "How will policy-makers respond?" and test the hypothesis below, users who have sent a fax have been surveyed regarding their communication with their elected official.

H: Users will be more satisfied with the responses from lower (local) level officials. I base this hypothesis on my belief that a mayor is more likely to care about the views of a single voter than a governor or congressman. One factor for this is the much smaller constituency a local official is responsible for, where a single vote matters more. Also, issues on the lower level will most likely be more manageable, such as the need for a stop light, as opposed to the larger issues that higher levels deal with, which may take a much longer time to resolve.

This goal of this step is to measure the quality of response, if any, from the contacted elected official. The survey questions are available in Appendix B. The data collected from these surveys is aggregated and displayed on I-Neighbors.org, allowing users to view the quality of responses given by their elected officials. Users are sent the below email message to notify them of this survey:

Figure 10: Response survey email notification

On <date>, you sent a fax to <representative name> titled <subject>. Are you satisfied with the response you've received?

Please visit this link to answer a few questions about the response you received (If any!). This will take no more than two minutes and your answers will be reported anonymously. We want to hear from you even if you received no response or a great response from <representative name>.

<link>

If you would like to receive a copy of your fax or if you have any other questions, please send an email to help@i-neighbors.org. Thank you for your time.

Users are sent an email notification four weeks after they send each fax. They are also sent a reminder one week after the first email if they do not complete the survey. Furthermore, if there is a survey they have not yet completed, this survey is displayed to them each time they log in to I-Neighbors.org.

To measure when and how well an official responded to a fax, the following questions are presented to all users who send a fax:

- Have you received a response from <representative> or his/her staff regarding this fax?
- You sent your fax on <date sent>. How long did it take for you to receive a response to your fax?
- Which method(s) of communication did <representative> use to respond to your message?
- My communication with this official had a noticeable impact.
 - Strongly disagree, Disagree, Average, Agree, Strongly agree
- This official answered all my questions and/or addressed all the concerns in my letter.
 - Strongly disagree, Disagree, Average, Agree, Strongly agree

World Values Survey 1995-1997

To compare the political participation behavior of GovLink users to other United States citizens, I have used data from the World Values Survey conducted from 1995-1997 (Inglehart 1999). This wave of a worldwide research program was run by The Gallup Organization (Princeton). The principal investigators were George Gallup, Alec Gallup and Max Larsen, The Gallup Organization and Ronald Inglehart, University of Michigan. The phone survey was completed by 1,542 individuals. The specific questions I compared to the Survey of Political Participation are below:

- Below are some different forms of political action that people can take. Please tell me, for each one, whether you have actually done any of these things, whether you might do it or would never, under any circumstances, do it.
 - Signing a petition
 - Joining in boycotts
 - Attending lawful demonstrations
 - Joining unofficial strikes
 - Occupying buildings or factories
- Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?

Social Capital Community Benchmark Survey 2000

To compare social capital data, specifically trust and group membership, between GovLink users and other United States Citizens, I have used data from the Social Capital Community Benchmark Survey conducted in 2000 (Saguaro Seminar 2001). This 26 minute telephone survey was completed by 26,200 individuals in 40 communities and across 29 states nationwide. The survey was designed by the Saguaro Seminar at the Social Capital

Measurement Workshop held at Harvard University in October 1999. The specific questions I have compared to the Survey of Political Participation are below:

- Now I'd like to ask about other kinds of groups and organizations. Answer YES if you have been involved in the past 12 months in any of the following groups
- Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?

Confidentiality and Anonymity

Sharing Fax Content

The recipient and subject line of each sent fax is made public on the I-Neighbors website. Any user can view this information. Before each fax is composed, the user is notified that this information is shared with the I-Neighbors community. Personal contact information is never shown with this content. Immediately after sending of a fax, a user is asked if their message in its entirety can be displayed to the public.

Data Storage

All data for the Survey of Political Participation is kept in a database on a secure server. For security reasons, this particular server is separate from that which runs the I-Neighbors.org website. Access to this server and its data requires a password only known by members of the research team.

Informed Consent

Before completing the Survey of Political Participation, all users are asked to agree to a consent form approved by the University of Pennsylvania Institutional Review Board. This consent form is attached in Appendix B: I-Neighbors Survey of Political Participation. Contact information for the Institutional Review Board is within the Consent Form.

I-Neighbors.org as a Community Tool

This section will discuss how local communities use I-Neighbors.org as a tool to improve their neighborhood. I will explore how I-Neighbors has developed over the past 16 months in terms of membership and neighborhood growth and the use of I-Neighbors features on the website, through the use of individual emails, and in messages sent to neighborhood-wide email lists. A brief case study on a particularly active neighborhood will also be conducted.

The Growth of I-Neighbors

Press and Membership

I-Neighbors.org went live on August 17, 2004. To grow membership, the project relied primarily on word of mouth. Within the first few months after launch, the project was mentioned on numerous web logs and email lists. I-Neighbors was also fortunate to be featured in the press several times, which often resulted in bursts of new member and neighborhood growth. The most significant mention of I-Neighbors was on September 2, 2004 on Slashdot.org. This post led to an incredible boost of over 20,000 visitors over several hours to the I-Neighbors site, surpassing capacity and actually crashing the project's servers. Table 1 below outlines the press history of I-Neighbors.

Table 1: I-Neighbors in the news

Date	News Source	Article Title
Nov. 10, 2005	TheBostonChannel.com	Here's a way to meet your neighbors
Jun. 20, 2005	Time Magazine	50 Coolest Websites of 2005
Mar. 13, 2005	Boston Globe Magazine	Best of the New: Ideas - I-Neighbors.org
Jan. 24, 2005	The Cincinnati Enquirer	Web chatting overtakes the back fence
Jan. 10, 2005	Time Magazine	Crossing the Virtual Street
Nov. 7, 2004	Atlanta Journal Constitution	Web site helps get neighbors together
Oct. 4, 2004	The New York Times	A growing Internet service has attracted a loyal following but, strangely, no rivals.
Sep. 13, 2004	The Toronto Star	World Wide Web links locals: MIT Web forged local links
Sep. 2, 2004	Slashdot.org	I-Neighbors, Not just another social network
Aug. 26, 2004	The New York Times	Who's Knocking at the Door? Check Your E-Mail First
Aug. 26, 2004	MIT News Office	Press Release: New MIT web site encourages neighborliness

I-Neighbors faced very rapid growth initially, primarily due to the Slashdot.org post and an article in the New York Times. Almost 7,000 members registered with I-Neighbors in August and September of 2004, creating almost 3,000 neighborhoods. Growth then settled down quite a bit, averaging a little over 600 new members and 100 new neighborhoods per month from October 2004 to May 2005. In June 2005, I-Neighbors was featured as one of Time Magazine's "50 Coolest Websites of 2005," which spurred a period of increased growth from June through August of that year of over 1200 new members and 250 new neighborhoods per month. I-Neighbors continued to expand over the next three months, but at a slower rate of over 950 new members and 125 new neighborhoods per month. Figure 11 and Figure 12 below display the member and neighborhood growth of I-Neighbors over the 15-month period from August 2004 through November 2005.

Figure 11: Membership growth

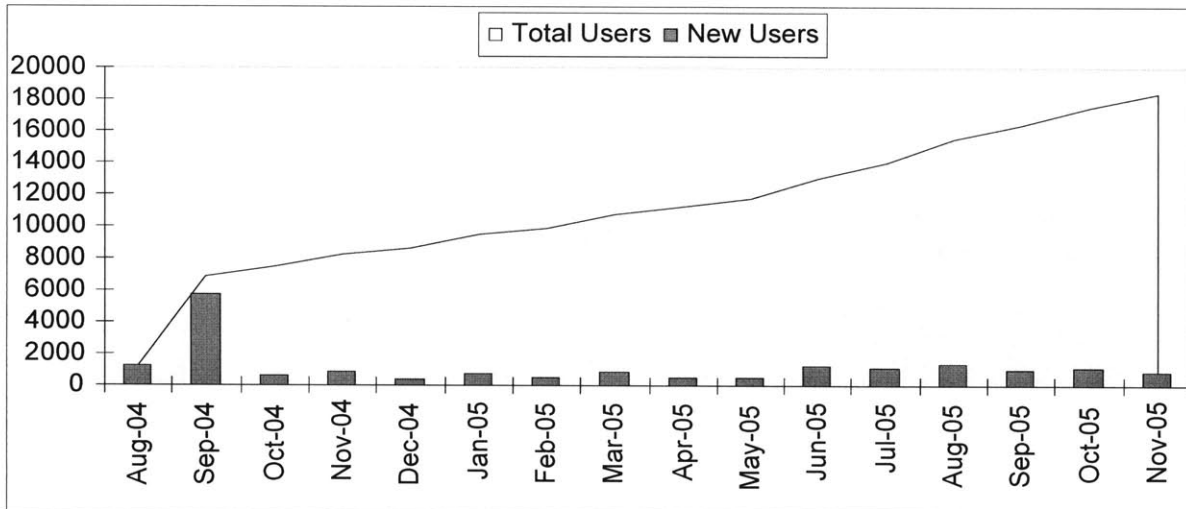
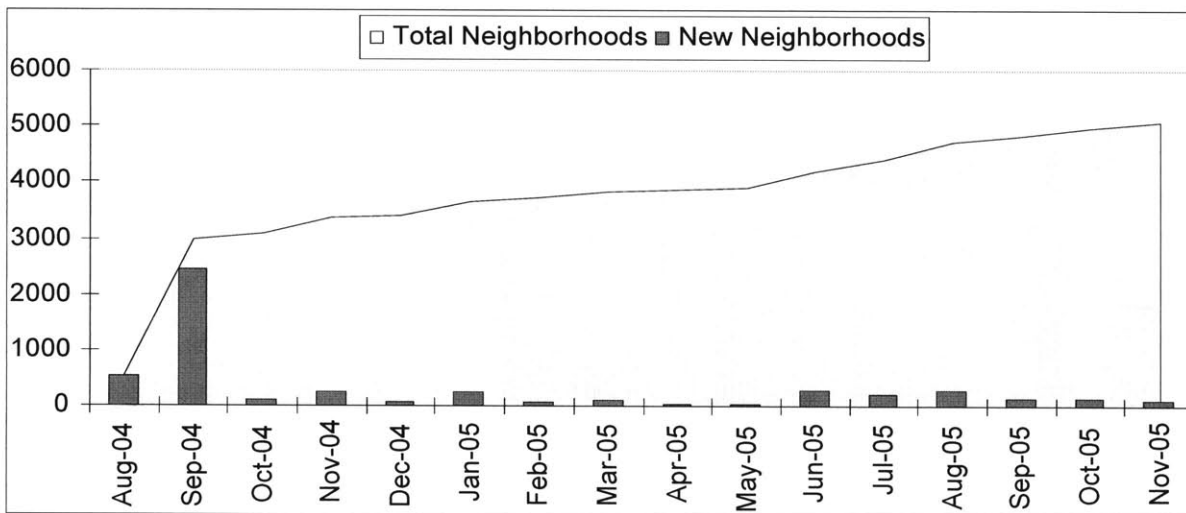


Figure 12: Neighborhood growth



Membership Distribution and Neighborhood Density

One interesting aspect of I-Neighbors development is how different stages of growth have affected neighborhood density, or the average number of members per neighborhood. The two periods of intense growth, the first resulting from launch and the Slashdot.org post (August – September 2004) and the second from the Time Magazine “50 Coolest Websites” article (June – August 2005), both saw a proliferation of new neighborhoods, while the time between and after these two media events were attributed with higher ratios of new users to new neighborhoods per

month, two other major news events also resulted in a drop of this ratio: an article in The Atlanta Journal Constitution in November 2004 and an earlier mention in Time Magazine in January 2005. In the first two months of I-Neighbors, there were 2.3 new users for every neighborhood created, while in the last three months 7.6 new users register for each neighborhood. The highest this ratio has been was in the months of April and May of 2005, where it reached 12.05 and 11.95, respectively.

Figure 13: Neighborhood density and the ratio of new users/new neighborhoods over time

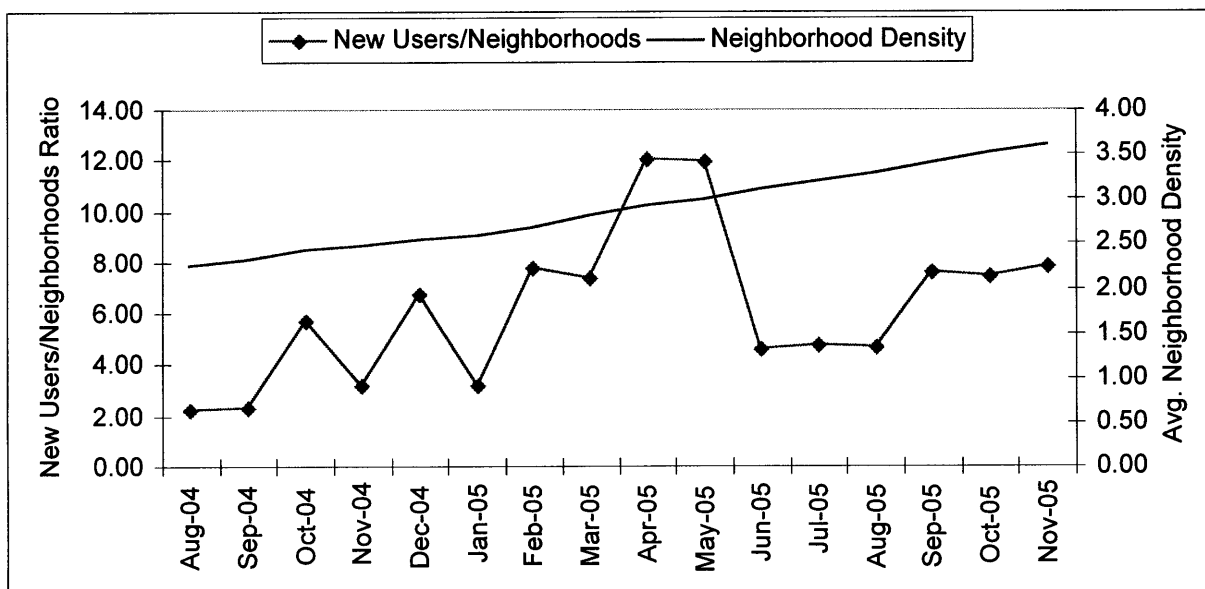


Figure 13 above displays the ratio of new users to new neighborhoods over time and the effect it has had on average neighborhood density. The “50 Coolest Websites” article caused this ratio to drop from 11.95 the previous month to 4.61. I imagine this behavior is due to the fact that when the project appears in the news, it reaches new geographic areas where people have not yet heard of I-neighbors. After these initial seeds are planted, the founders of these new neighborhoods invite their community to join. As more and more locations are populated with I-Neighbors communities, new neighborhood growth slows down as member growth continues. While the ratio of new neighborhoods to new users varies over time, there is an upward trend.

Table 2: Neighborhood membership

	Users	% of Total
Users in no neighborhoods	5671	23.60%
Users in 1 neighborhood	12687	52.80%
Users in 2 neighborhoods	4712	19.61%
Users in 3 neighborhoods	683	2.84%
Users in 4 neighborhoods	145	0.60%
Users in 5+ neighborhoods	131	0.55%
Total Users	24029	

Table 3: Neighborhood size

Neighborhood Size	Neighborhoods	% of Total
0 – 4 members	4155	81.53%
5 – 9 members	675	13.25%
10 – 24 members	217	4.26%
25 – 49 members	40	0.78%
50+ members	9	0.18%
Total Neighborhoods	5096	

The majority (52.80 percent) of I-Neighbors users only belong to one neighborhood, while approximately one out of five (19.61 percent) users registered with a second community. There is a small minority (3.99 percent) of individuals who are members of three or more. Almost 24 percent of those who have signed up for I-Neighbors are not a member of any neighborhood. It is unclear when or how these individuals get lost in the registration process. It is possible they are intimidated by the thought of creating a new neighborhood in their area or they are uncomfortable providing personal information

There is also an overwhelming majority of small neighborhoods. Over 80 percent of neighborhoods have less than 5 members, 85 of these communities do not have any members at all. Neighborhoods with 5-9 members consist of 13.25 percent of all neighborhoods. Only the small minority of neighborhoods have any substantial size. Barely over five percent of neighborhoods have 10 or more members. It is in these larger communities where most of the I-Neighbors activity takes place, on the website and through email.

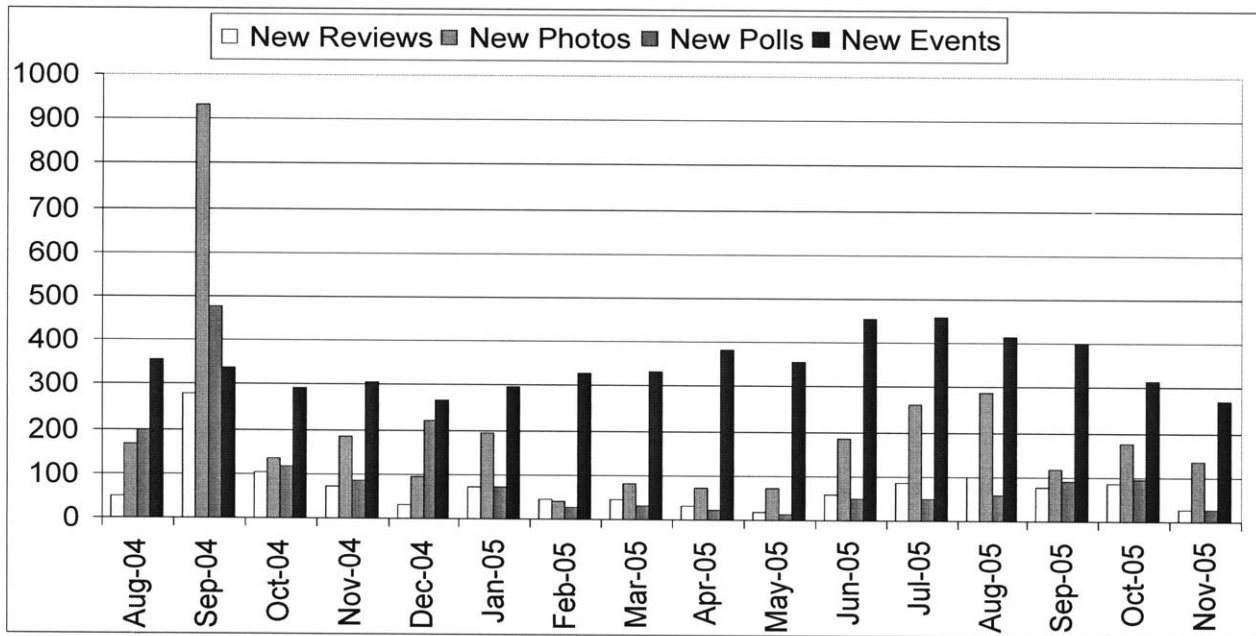
Use of I-Neighbors.org Features

I-Neighbors Website Tools

The I-Neighbors website offers its users many features typical of online communities. The use of these tools has varied over time, as can be seen in Figure 14 below. With the exception of September 2004, the events calendar has been the most widely used of these

features, with neighborhood photographs a distant second. The two peaks in usage coincide with the two major periods of user and neighborhood growth – August through September 2004 and June through August 2005. This also relates to the previous discussion about neighborhood density and the ratio of new users to new neighborhoods over time. As new neighborhoods are created, early members may be inclined to provide content with the intent of building momentum and attracting their neighbors to join their online community.

Figure 14: Use of I-Neighbors web features

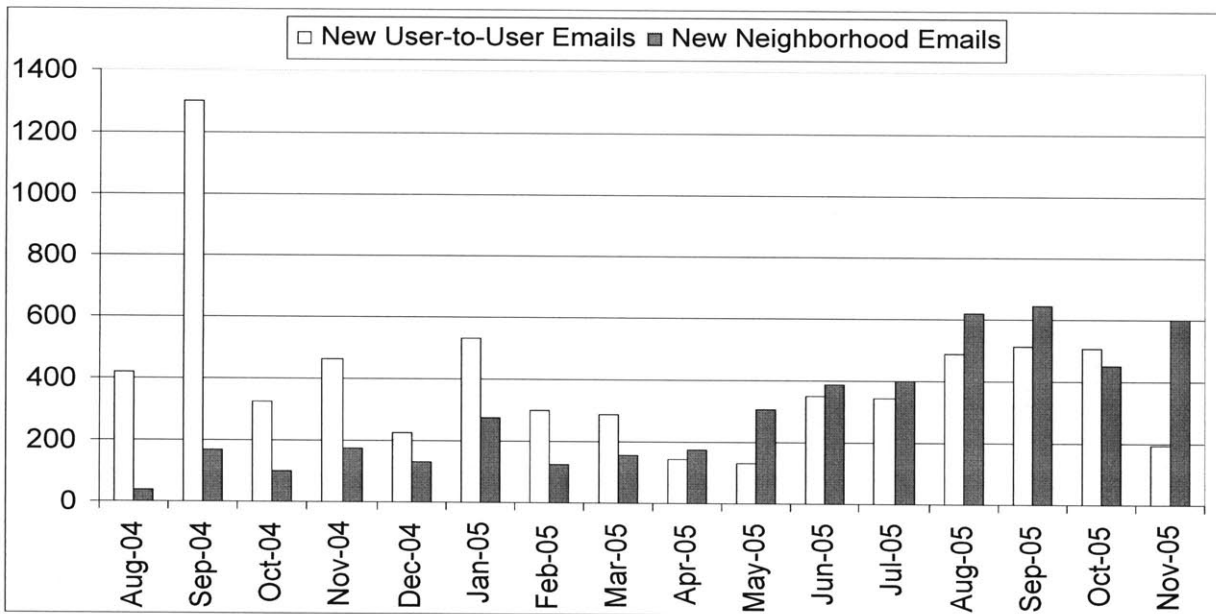


Email Tools

In addition to the features discussed above, there are two methods through which users can send email to each other through I-Neighbors. First, users can send email to other individuals by using a web form on I-Neighbors. These can be personal messages for other current users or invitations to join I-Neighbors sent to perspective members. Figure 15 below shows the use of these emails over time, including a burst of these messages at the launch of the site. A little over half of all user-to-user emails (51.2%) were invitations to join I-Neighbors sent from current users. Invitations to potential member and messages to current users are grouped

together here because they both indicate similar concepts. Whether this is an invitation to join the online community or to enter in a discussion using the online community, both show the desire of one individual to communicate electronically with his or her neighbor.

Figure 15: Email use on I-Neighbors



The second method for I-Neighbors users to contact each other is by using the neighborhood email lists. Users can post to a list by using their own email client or through a web interface on I-Neighbors.org. Figure 15 above displays how use of these lists has grown over the past 15 months, and how it has surpassed user-to-user email activity in recent months. The most active neighborhood email list, with 967 emails since February 2005, consists of 29 members. Users have sent 95 messages to other individual members of this California community. The neighborhood with the most user-to-user email sent 141 messages and has 59 users. This neighborhood in the Southern United States also frequently uses its mailing list, sending 432 messages since November 2004. Below is an excerpt from a message sent to a neighborhood list in October 2005.

Figure 16: Excerpt from a neighborhood email list

“Congratulations! 7 e-mails from John, 1 from Samuel, 4 from Margaret and 2 from Jane. This to me is what this web-site is all about. E-mailing to the list shouldn't be any different than stepping outside your unit and having a conversation with a neighbor. It would be nice (and maybe helpful) if others on this web-site would toss their two cents into the mix once in awhile.”

Traffic on these lists is an important metric for measuring neighborhood health. In a Maryland neighborhood, the list was receiving so much traffic that users decided to register an additional I-Neighbors community for their area. One of these was to be used for important emails, while the other was for more general emails. Neighbors were encouraged to join the former for more serious community discussions and the latter was of a more voluntary nature. While 79 messages were sent to the “important” list, 441 emails were sent to the list for community announcements over 14 and 13 months, respectively.

Feature Use by Neighborhood Size

The use of I-Neighbors features is different dependent on neighborhood size. Table 4 below displays the usage statistics for neighborhoods based on membership. I calculated the average use of each feature per neighborhood, user, and month for both email methods and each of the website features. I am most concerned with the activity per user, as it is intuitive that the per month and per neighborhood values would increase with membership as there are more people to contribute. A difference in the per user value would indicate that there are network externalities associated with I-Neighbors. In other words, the more people join, the more each individual user is encouraged to participate.

The most compelling information is that regarding use of the email system, both through the mailing lists and user-to-user emails. There is an increase in the email traffic per user between size categories from 0.1 messages per user for neighborhoods with 10-24 members, to 0.7 and 3.4 for neighborhoods with 25-49 and 50+ members, respectively. User-to-user emails

also increase with neighborhood size. This would indicate that as neighborhoods grow, each individual user is likely to contribute even more to the community dialogue.

Use of website features does not lead to any strong conclusions. Only polls follow the same upward trend of use per user. The lack of a relationship between size and use of the website may indicate that it is only used when a neighborhood is initially starting up, as mentioned earlier. Photos, events, and reviews may be used (intentionally or unintentionally) to simply attract new members to the mailing lists, where more important activity takes place.

Table 4: Feature usage by neighborhood size

Members	10-24	25-49¹	50+²
Number of neighborhoods	216	38	9
Total neighborhood emails			
	350	938	2128
Avg. per neighborhood	1.6	24.68	236.4
Avg. per user	0.1	0.73	3.4
Avg. per month	0.1	2.01	18.0
Total user-to-user emails			
	1301	995	612
Avg. per neighborhood	6.0	26.2	68.0
Avg. per user	0.4	0.8	1.0
Avg. per month	0.5	2.1	5.2
Total Polls			
	230	324	261
Avg. per neighborhood	1.1	8.5	29.0
Avg. per user	0.1	0.3	0.4
Avg. per month	0.1	0.7	2.2
Total Events			
	1198	1182	277
Avg. per neighborhood	5.6	31.1	30.8
Avg. per user	0.4	0.9	0.4
Avg. per month	0.42	2.5	2.3
Total Photos			
	508	495	91
Avg. per neighborhood	2.35	13.0	10.1
Avg. per user	0.17	0.4	0.1
Avg. per month	0.18	1.1	0.8
Total Reviews			
	183	162	21
Avg. per neighborhood	0.85	4.3	2.3
Avg. per user	0.06	0.1	0.0
Avg. per month	0.06	0.3	0.2

Suntown: A Short Case Study

There is one I-Neighbors community, I will call it Suntown, which is responsible for over 20 percent of all email list traffic on I-Neighbors. Over 10 months, Suntown has sent almost one thousand messages to each other through this list and an additional 95 emails user-to-user. With

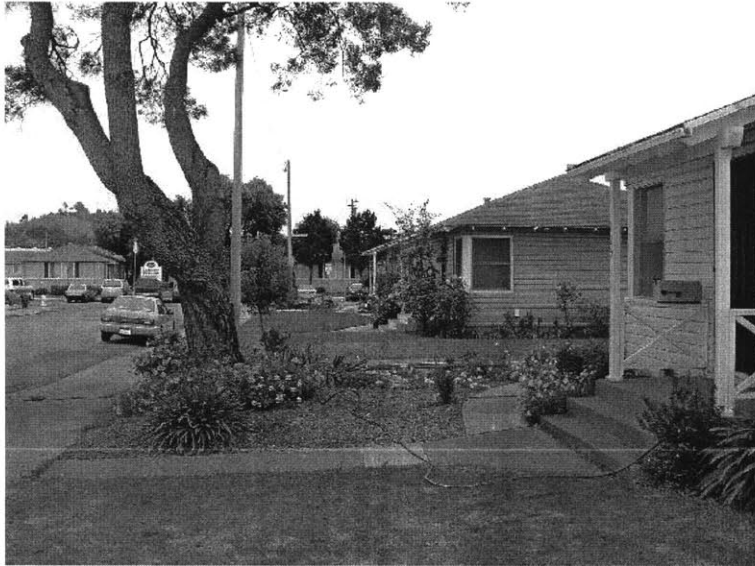
¹ The Suntown neighborhood was left out of this dataset because it is an extreme outlier in this group. Its 967 mailing list messages were the most by over 600 for this category. Additionally, only three other neighborhoods in this group had more user-to-user messages. This neighborhood will be discussed in detail below.

² I omitted the neighborhood for Massachusetts Institute of Technology because I was a member of this neighborhood and, sent the only email message to the mailing list, and provided the only content (photos, reviews, events, and polls) on the website.

29 members, this is not near the largest neighborhood, and yet they have used I-neighbors services so much. According to a description provided by the neighborhood founder, Suntown is an urban housing cooperative in California, which consists of 450 homes and an administration building on a 30-acre area owned by Suntown Homes Corporation. Members of the co-op elect a Board of Directors to operate neighborhood development. It is also an historical site associated with a national park. Users of Suntown are told that they must register with their real name and address or face removal.

Data from the United States Census (United States Census Bureau 2000) gives us a more detailed picture of this neighborhood. The census block in which Suntown is located has a total population of 7,596 individuals within an area of 9.41 square miles. This is a very diverse area, with 28.45 percent of respondents claiming to be White, 33.91 percent Black, 5.25 percent Asian, and 4.56 percent to be two or more races. A majority (50.39 percent) also indicate they are Hispanic or Latino. Median household income in 1999 was \$30,389 although 31.04 percent were below the poverty level. The median age of residents was 26. Only 28.7 percent of residents 25 years or older graduated from high school, 9.6 percent received an associates or bachelor's degree, and 2.7 percent earned a graduate or professional school degree.

Figure 17: A picture of Suntown



Of the features available on the website, Suntown users have posted 358 events, 22 photos, 16 reviews, and 4 polls. These services are impressively used with the intent of bringing people together and building local democracy. The events calendar has Crime Watch and Suntown Board meetings twice a month, as well as regular senior luncheons, seminars, Pilates classes, and reminders of street sweeping. There have been six fax messages sent to elected officials from this neighborhood since June 2005, concerning issues such as mail delivery to Suntown, the right to filibuster, and aid for Sudanese refugees. Poll questions, shown below in Figure 18, show a desire for community members to seek the opinion of others.

Figure 18: Suntown poll questions

- The big buzz at the April board of directors meeting was regarding the order in which the inspections of units were being done. Of the following choices, how do you think the corporation should go about inspecting units? - Apr 21, 2005
- Should Suntown make a stand and hire a security guard for \$125 to take digital pictures when the Fourth of July gets out of hand, since the Richmond Police would not respond last year? No Suntown citizens need be hurt in the making of this movie. - Jun 09, 2005
- What do you think about the board using the corporation funds to profit from the resell of members units? Do you get any money from the sale of deceased members' property? - Jun 11, 2005
- Should Suntown Homes Corporation disclose information to its members, at least to the minimum required of other mutual benefit corporations which operate housing developments? - Aug 08, 2005

Use of I-Neighbors by members of Suntown was spurred by several topics on the neighborhood mailing list. The first of which was a discussion of how the development corporation was investing profits in the community. The second was concern over the effects of surrounding municipality's redevelopment plan. The month both of these issues were brought to the mailing list resulted in 46 messages posted on the neighborhood mailing list, up from three the previous month. Traffic then ballooned to 197, 341, 134, and 212 messages in the following months. Suntown residents have used this list to discuss many different topics including crime, the welcoming of new neighbors, book clubs, coin collecting, organizing neighborhood movie nights, and property taxes.

Figure 19: An email sent to the Suntown mailing list

"I would like to congratulate the person or persons who started i-neighbors.org. This is like having our own blog site. Just terrific. If you have a beef you can air it here and perhaps not have to go to the Board to deal with your beef. You can just say Hi if you want. Hi!"

The Suntown mailing list has also been used as a political stage. One notable situation was the community's discussion of questionable practices of the Suntown Board of Directors. A resident, who publicly criticized the Board for their decision to remove certain trees from the area (including one on her property), was told privately by an anonymous Board member that if

she quieted down about the issue, she would be able to keep her own tree. A whistle-blower on the Board, who called himself “1 of 11” to signify that he was a dissenting voice on this eleven-member group and was not the one who attempted to quiet the tree-lover, corroborated this story on the email list, calling the Board a “dictatorship” and witnessing “members skipping meetings, and scheduled meetings abandoned for lack of a quorum”. These two individuals then developed a pamphlet describing the Board’s practices and distributed it to each member of the community.

Figure 20: An email sent to the Suntown mailing list

“Thanks to all of you for researching these things and commenting on them from your own experience. [S]ince we are the government... then ultimately the blame, and the POWER, lie with us. What you are building here is exactly the type of information-sharing network that rebuilds governmental processes.”

Other members of the Board either did not belong to the I-Neighbors community, or did and have not been participants on the mailing list, so it is not possible to determine their response to this criticism. It is also unclear what the results of this discussion were, as Board Meeting minutes were not sent to the list. Other political issues discussed on the neighborhood mailing list were the building of fences in the community, the potential increase of co-op membership fees, housing unit costs, and the nomination of neighbors to the Board of Directors.

The use of I-Neighbors has encouraged an incredible amount of political activity in Suntown. The members of this online community invest a lot of time in this system, ultimately with the goal of improving their local neighborhood. One unique characteristic of Suntown that may be reason for this behavior is the fact that it is a housing cooperative. People may move to this area knowing that this is an involved community and there may already be an expectation of communication between neighbors.

This neighborhood also has several members who are very vocal. For example, 137 of the messages sent to the Suntown mailing list were sent by the “1 of 11” dissenter, accounting for 14.6 percent of total neighborhood traffic. One other member is responsible for 279 mailing

list messages, or 28.9 percent of traffic. While these active voices make up a good portion of list traffic, between 9 and 18 users have posted to the mailing list each month since July 2005, indicating a diversity of voices.

Discussion

Neighborhood Growth

The significant relationship between neighborhood size and email use suggests that there are positive network externalities associated with I-Neighbors. As more people become involved, current members are further encouraged to participate. This is a very interesting finding, as it indicates that once a neighborhood builds up a small critical mass, they will continue to build momentum and sustain activity. With more members, a single email sent to a neighborhood list will inspire more responses. These responses will in turn encourage more discussion. Each member of the community benefits more and more as the neighborhood grows. This community involvement, primarily shown here in the form of neighborhood-wide emails, is very promising.

Additionally, data from the “E-Neighbors” study (a pilot study of I-Neighbors) shows that lurkers, or those who are part of an online community but do not actively participate, are those who benefit most from these communities. These individuals tend to build more social ties and learn more from the information that flows through the community (Hampton 2005). Therefore, as neighborhoods grow in size, the benefit to the individual lurker increases as well. Even if neighborhood size increases and activity levels do not, there are still members of the community who are benefiting.

As I-Neighbors.org continues to grow, its impact on local communities will increase. Individual neighborhoods are attracting more members and becoming denser, which will drive

use of I-Neighbors features and interaction between neighbors. It does take some time for neighborhoods to catch on, as no neighborhoods less than 10 months old have more than 50 members or 100 messages sent to the mailing list. However, there are several new neighborhoods with potential to become quite large and active.

Another noteworthy statistic is the increase in new members per new neighborhood. This trend is resulting in an increase of neighborhood density as well. It is important that density increases over time due to the fact that community activity, most notably over the neighborhood mailing lists, increases with membership. It is a sign that neighborhoods are growing stronger and more sustainable. The larger a particular neighborhood, the more likely it is to be active.

Thriving I-Neighbors Communities

There have been a number of lost opportunities in the numerous users who belong to no neighborhood and the vast majority of neighborhoods with little or no activity. However there are many examples of large, thriving communities. These neighborhoods show that I-Neighbors can be used to enhance communication between members of a community and encourage local political participation. Suntown, for one, receives an incredible amount of email, much of which pertains to political matters. So much so that I am surprised people have not abandoned the neighborhood mailing list. This neighborhood has supplemented their real world activity with I-Neighbors services with such success. The email below attests to this, as one member of the community explains how he now able to keep on top of neighborhood issues because of I-Neighbors.

Figure 21: An email sent to the Suntown mailing list

Good morning to all! How nice it is to see members of this web-site start to open dialogue with each other. I hope more members will take advantage of their opportunity to have their say. I for one don't attend the monthly meetings and to call a BOD³ at their

³ A member of the Suntown Board of Directors.

home seems to me to be intrusive.

It is hard to imagine this level of community dialogue and political participation could occur without the use of electronic communication. The 29 members of this neighborhood have sent hundreds of messages to each other, creating a virtual and continuous town hall meeting. Numerous topics are discussed by a diverse group of residents. People new to the community and those who have lived there for years are encouraged to contribute. Those who have previously been or are currently members of the local government also share their input on a regular basis.

Members of this and other large communities have successfully used technology to enhance their community involvement and political participation. Neighbors discuss local issues through the mailing list and user-to-user emails, which has informed citizens in these areas and further encouraged this civic engagement. The challenge going forward is twofold. There must be an effort first to sustain these active neighborhoods through improving I-Neighbors. Second is the goal of growing the number of large and vibrant neighborhoods either from currently dead I-Neighbors communities or new areas.

Use of Neighborhood Website Features

In larger neighborhoods, the mailing list replaces website features. The purpose of these features, to gather public opinion and notify neighbors of upcoming events and other useful information, does eventually migrate to the mailing lists. This is shown by the large number of email messages sent to neighborhood lists regarding topics that could be presented on the website. This leads to the conclusion that the most crucial technology for increasing community involvement is the email list. Online features are essentially bells and whistles needed to attract users to the neighborhood mailing list. Once discussion on this list gains momentum, the website becomes unnecessary.

Digital Divide Implications

Although I have not gathered demographic data for all I-Neighbors communities, the Suntown example shows that a racially and socioeconomically diverse community can benefit greatly from new media tools. This majority-minority area is by far the most active I-Neighbors community. The website and email features are used for a number of purposes, from political action to friendship building. While I am not certain that the users of I-Neighbors from Suntown are representative of their surrounding demographics, the initial indicators are very promising.

GovLink: Connecting Citizens with Elected Officials

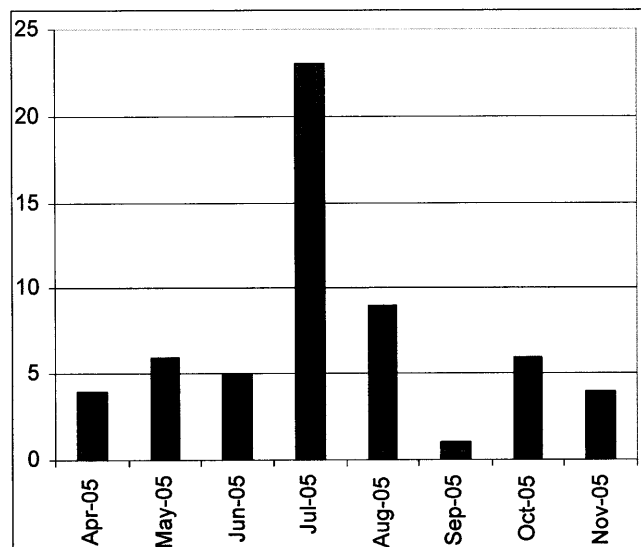
Use of GovLink

GovLink was released in beta form in April 2005. In July 2005, an email was sent to all I-Neighbors members officially announcing the GovLink feature. A small banner with a rotating text advertisement for GovLink was also added to each neighborhood home page and the end of all messages sent to neighborhood mailing lists. (Details of these announcements can be found in Appendix A: GovLink Announcement.)

Fax Message Characteristics

A total of 58 faxes were sent to United States government officials through GovLink over eight months. Figure 22 below shows how these faxes were distributed over the months since release. There was a burst of usage after the July announcement, as nine users sent 23 messages in this month accounting for almost 40 percent of total traffic. August also saw a large amount of faxes with nine, but use of GovLink decreased over the remaining months of my analysis.

Figure 22: Faxes sent per month⁴



In order to answer my research questions “How will GovLink be used by individuals?” and “What topics will be most common?” I analyzed the characteristics of the faxes sent through GovLink [Table 5 and Table 6]. Users showed an interest in a variety of different topics, the most popular of which were international issues and energy and the environment, with eight faxes each. There were also several personal messages sent to officials. For example, one user sent a recently elected senator a message of congratulations, while another individual thanked his mayor for making his home town a cool place to live.

Faxes were sent to elected officials on all levels of government. Most recipients were on the federal level, with 27 messages going to Senators, nine to members of the House, six to President George Bush, and two to Vice President Dick Cheney. Democrats received 32 faxes, which is a majority at 55.2 percent, and Republicans were sent 21 faxes (36.2 percent). Four of the five faxes sent to officials with no political preference were addressed to local officials.

⁴ Note: Users have sent two faxes to Canadian officials through GovLink. However, I am restricting my analysis to those users in the United States due to the larger and more manageable sample.

Table 5: Fax topics [n=58]

Topics	f	%
Civil rights	6	10.3
Consumer rights	2	3.5
Development	2	3.5
Energy/environment	8	13.8
Health	4	6.9
International	8	13.8
Judicial	7	12.1
Other	1	1.7
Personal	6	10.3
Poverty	1	1.7
Safety/security	3	5.2
Social security	4	6.9
Taxes	6	10.3

Table 6: Fax recipients [n=58]

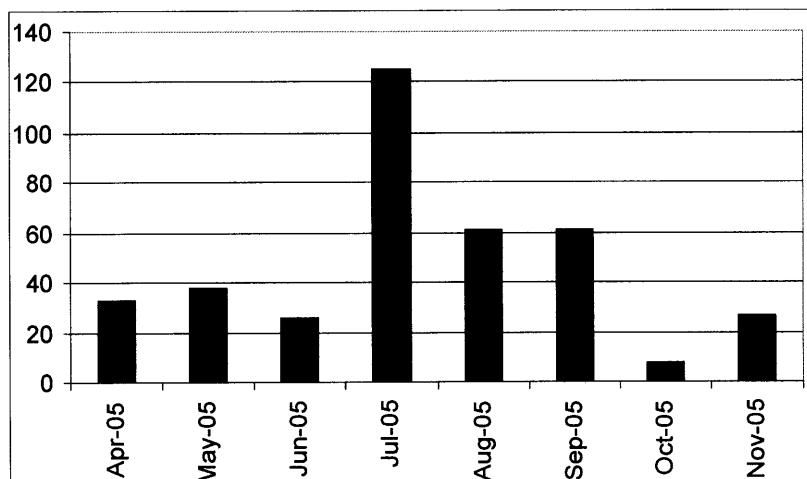
Recipient Party	f	%
Democrat	32	55.2
Republican	21	36.2
None Specified	5	8.6

Recipient Position	f	%
Governor	3	5.2
Local Official	9	15.5
Federal Executive Branch	8	13.8
Federal House	9	15.5
Federal Senate	27	46.6
State Senate	2	3.5

Local Officials

Over 375 entries for local officials were submitted by 86 users. Figure 23 below shows the distribution of these entries. Similar to faxing behavior, there were a large number of local officials entered into the GovLink system in July after the announcement and soon after activity tapered off.

Figure 23: Local officials submitted per month



GovLink users submitted a variety of different local officials. Table 7 below displays the various positions of local officials. The two largest groups of positions were City/Town Councilors and Mayors, with 115 and 69 respectively. City/town officials accounted for 66.2

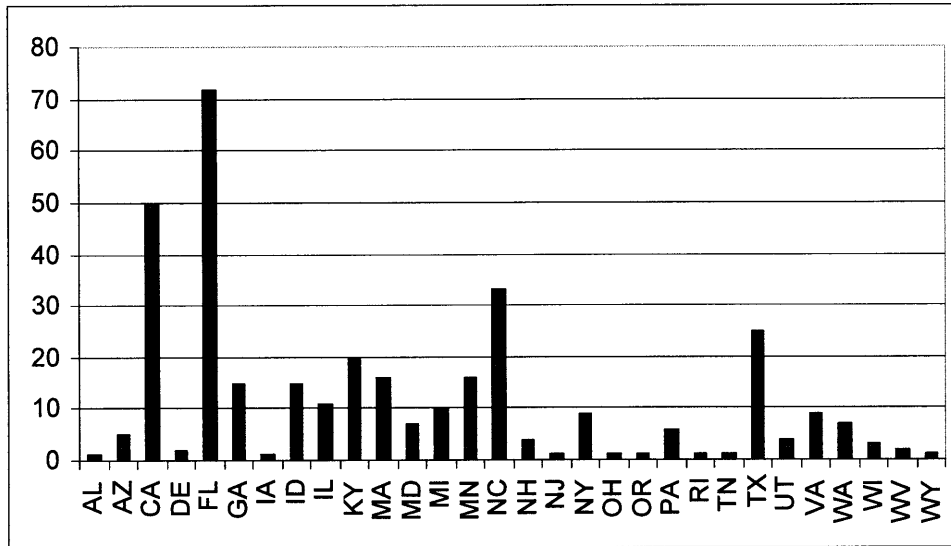
percent of officials, 8.0 percent were members of the board of education, and 13.5 percent of submitted officials were from the county level [Table 7]. Users did not provide a political affiliation for the vast majority (296) of local officials. Of the rest, 34 were Democrats, 17 Republicans, and 2 Independents.

Table 7: Local officials by position [n=349]

Title	f	%
Mayor	69	19.8
Vice-Mayor	17	4.9
City/Town Manager	23	6.6
Chair, City/Town Council	7	2.0
City/Town Councilor	115	33.0
Total Town:	231	66.2
Chair, Board of Education	7	2.0
Vice-Chair, Board of Education	4	1.1
Board of Education	17	4.9
Total BOE:	28	8.0
Chair, County Board of Commissioners	10	2.9
Vice-Chair, County Board of Commissioners	3	0.9
County Board of Commissioners	29	8.3
County Manager	5	1.4
Total County:	47	13.5
Other Elected Official	43	12.3

Many regions of the United States were represented, as users entered contact information for government officials in 30 states, the most of which were in Florida (72 entries), California (50), North Carolina (33), Texas (25), and Kentucky (20) [Figure 24].

Figure 24: Local officials by state [n=349]



GovLink Users

Demographic Information

One of my major hypotheses was that Users of GovLink will tend to be those on the “have” side of the digital divide. Wealthy, educated, young, white males will represent a disproportionately large part of the sample. To test this hypothesis, the Survey of Political Participation was used to gather background information on those users who were sending faxes and submitting contact information for local officials. Of the 107 individuals who were asked via email to complete the survey, 56 (48.7 percent) did so. Of these 56 respondents, 12 had sent a fax.

Table 8 below displays demographic information for all 56 respondents, a majority of which are male (67.9 percent), white (78.6 percent), and married (67.9 percent). Most respondents had graduated college (81.3 percent) and are employed full time (80.4 percent). A large percentage of respondents also completed a graduate or professional degree (25 percent). The average respondent was 40 years of age.

Table 8: Respondent demographic information

Gender [n=56]	f	%
Male	38	67.9
Female	18	32.1

Marital Status [n=56]	f	%
Never married	7	12.5
Not married, living with partner	7	12.5
Married, living with spouse	38	67.9
Married, not living with spouse	1	1.8
Divorced	3	5.4
Widowed	0	0

Education [n=56]	f	%
Did not complete high school	0	0
High school diploma (including GED)	2	3.6
Attended college but did not complete degree	9	16.1
2 years Associate's degree	3	5.4
4 years Bachelor's degree	19	33.9
Some graduate training	9	16.1
Graduate or professional degree	14	25.0

Ethnicity [n=56]	f	%
African-American / Black	2	3.6
Caucasian / White	44	78.6
East Asian	0	0
Latino / Hispanic	1	1.8
Middle Eastern	1	1.8
Native American	0	0
Pacific Islander	0	0
South Asian	1	1.8
Mixed	3	5.4
Other	4	7.1

Occupation [n=56]	f	%
Full time employed or self employed	45	80.4
Part time employed or self employed	4	7.1
Unemployed, looking for work	3	5.4
Unemployed, not looking for work	0	0
Student	1	1.8
Homemaker	2	3.6
Retired	1	1.8
Disabled	0	0

Respondents hail from 14 different states, the most from California (11 users) and Ohio (8 users) [Table 9]. They have lived at their current residence for an average of 5.3 years. Many respondents are new to their location, as almost 20 percent have only been settled for less than one year and an additional 40 percent have been so for less than five years [Table 10].

Table 9: States represented by users [n=56]

State	f	%
CA	11	19.0%
DE	1	1.7%
FL	3	5.2%
GA	3	5.2%
IL	5	8.6%
KY	4	6.9%
MA	4	6.9%
MI	3	5.2%
MN	1	1.7%
NJ	7	12.1%
NY	1	1.7%
OH	8	13.8%
PA	1	1.7%
WA	6	10.3%

Table 10: Years at current residence [n=56]

Years	f	%
<1	11	19.6
1-4	22	39.3
5-9	10	17.9
10-14	11	19.6
15+	2	3.6
Maximum	21	
Mean	5.29	
Median	5	

Political Involvement

Another major hypothesis was that users will primarily be those who are or have been politically active. Most of the users of GovLink will be regular voters, who have previously contacted a public official. A number of questions were asked as part of the Survey of Political Participation in order to gauge their previous political involvement. The first of these questions was “In the past year, how many times have you done the following (excluding those times through I-Neighbors.org)?” [Table 11]. On average, respondents contacted their representatives more than once every two months. Most of this contact came through email. While over 60 percent of respondents have contacted officials through email, fewer had interacted with an official through telephone (30.4 percent), visit (21.4 percent), or mail (35.7 percent).

There were some respondents who have been less politically active over the past year, as 26.8 percent had not contacted a government official through any of these methods. Of these 15 respondents 53.3 percent were male, 80 percent worked full time, and 33.3 percent had completed a college degree. This is a diverse set of individuals, which is 60 percent white and consists of members of five ethnic or racial groups. All of these respondents have submitted contact information for a local official, but none have sent a fax using GovLink.

Table 11: Respondent contact with government officials [n=56]

Activity	Mean	Median
Emailed a government official	3.1	2
Phoned a government official	1.0	0
Visited a government official	0.7	0
Mailed or faxed a letter to a government official	1.3	0
Total contact with officials	6.1	3

Surveyed individuals were also asked if they have done, might do, or would never do certain political activity. Table 12 below displays GovLink respondents’ history and willingness regarding each action. Also displayed below is data from the same question for respondents of the World Values Surveys conducted in the United States from 1995-1997 (Inglehart 1999). A

greater percentage of GovLink respondents have done each activity, and a lower portion would never do each activity.

Table 12: Respondent political activity [n=56]

Activity	Respondents	Have Done (%)	Might Do (%)	Would Never Do (%)
Signing a petition	GovLink	91.1	8.9	0.0
	WVS	72.6	19.1	8.4
Joining in boycotts	GovLink	91.1	8.9	0.0
	WVS	19.0	43.9	37.1
Attending lawful demonstrations	GovLink	39.3	53.6	7.1
	WVS	15.9	43.4	40.7
Joining unofficial strikes	GovLink	8.9	53.6	37.5
	WVS	3.6	27.1	69.3
Occupying buildings or factories	GovLink	3.6	35.7	60.7
	WVS	1.6	15.4	82.9

When asked “Generally speaking, do you usually think of yourself as a Democrat, Republican, Independent, or what?”, 48.2 percent claimed to be a Democrat, 16.1 percent claimed to be a Republican, and 35.7 percent had no preference. Almost 90 percent of respondents voted in the last presidential election, which is higher than the national average of 64 percent (Faler 2005). This same amount participated in the last state election, while 75 percent voted in the last city or town election. When asked if involved in a public interest group, political action group, or party committee, 42.9 percent responded affirmatively.

Trust and Community Involvement

GovLink users were asked to whether or not they had been involved in a number of groups within the past 12 months. Of a potential 19 groups, including labor unions, civil rights groups, and sports clubs, the mean level of involvement was 4.7 groups per person (the median was five groups) [Figure 25 and Figure 26]. The groups with the lowest participation rate (8.9 percent of users were involved in this type of group) were “clubs or organizations for senior

citizens or older people”, while the highest participation rate (64.3 percent) was for a “neighborhood association, like a block association, a homeowner or tenant association, or a crime watch group.” This group type might have the highest participation rate because people may have included their participation in I-Neighbors.org as a neighborhood association. I-Neighbors users might also be self-selecting, in that they are attracted to the service because it can serve as such an association. Finally, I-Neighbors.org might be creating neighborhood associations.

Figure 25: Group membership I

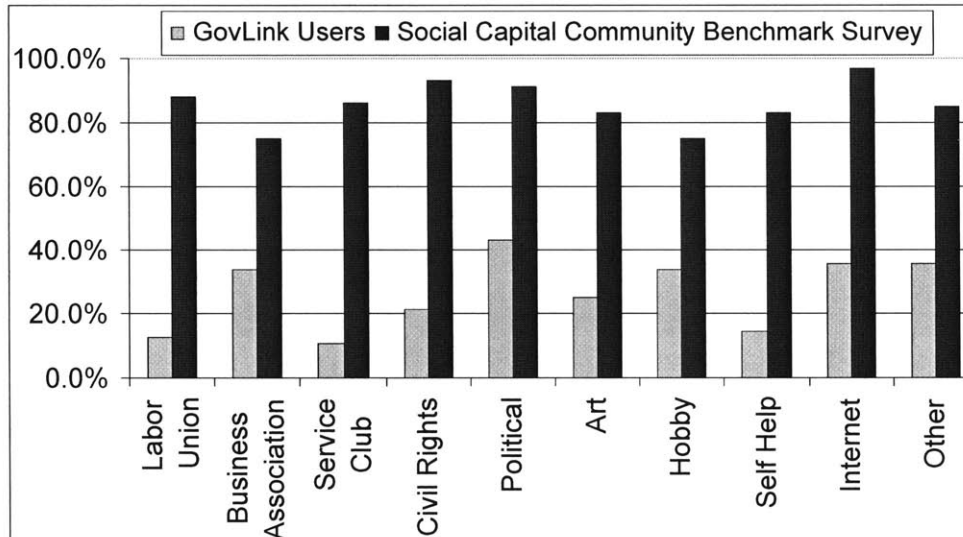
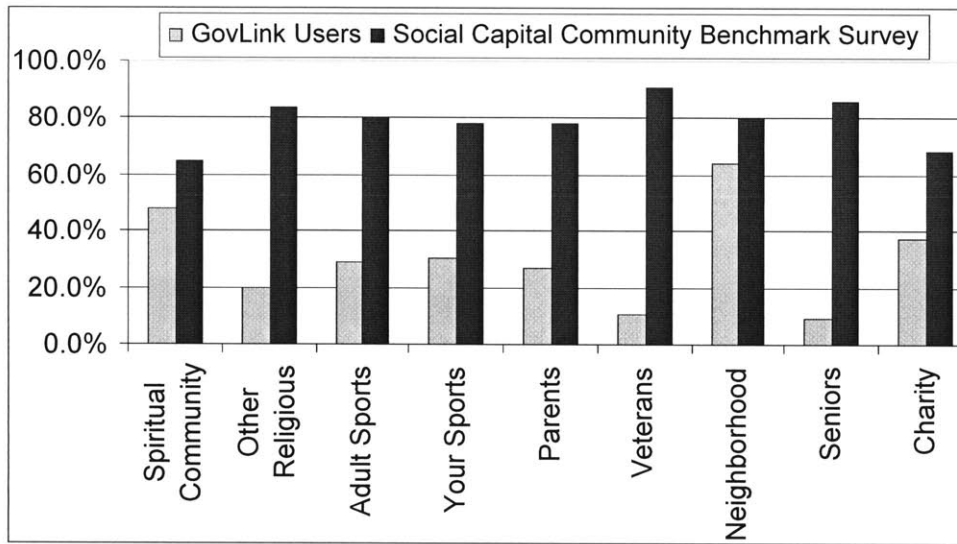


Figure 26: Group membership II



Participation rates for the same groups and organizations were part of the Social Capital Community Benchmark Survey, conducted nationally in 2000 (Saguaro Seminar 2001). For all categories, GovLink respondents participated at lower rates. The largest gap was for veterans' groups, where 91.0 percent of Benchmark respondents but only 10.7 percent of GovLink respondents claimed to be involved. The smallest margin (64.3 percent for GovLink and 80.0 percent for Benchmark) was for neighborhood associations.

Table 13: Trust in others

	Survey	Most people can be trusted (%)	Need to be careful (%)	Don't Know (%)
Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?	GovLink	57.1	37.5	5.4
	WVS	35.6	64.4	0.0
	SCCBS	47.0	46.0	7.0

The Survey of Political Participation also aimed to determine how GovLink users viewed and trusted other individuals [Table 13]. When asked "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?" 57.1 percent of GovLink respondents said they could trust others and 37.5 percent said they needed to be careful. When the same question was posed in the World Values Surveys conducted in the

United States from 1995-1997 (Inglehart 1999), only 35.6 percent of respondents said they trust others, while a majority (64.4 percent) said they needed to be careful. The Social Capital Community Benchmark Survey (Saguaro Seminar 2001) found that 47 percent said they trusted others and 46 percent said they needed to be careful.

Discussion

GovLink Users are Politically Involved

For the most part, GovLink users are already quite politically involved. They have contacted their government officials a number of times in the past year and are much more willing to participate in political activity than those in the general public, as shown by comparison to the World Values Survey (Inglehart 1999). Particularly worth noting is their willingness to partake in more extreme political statements, such as joining unofficial strikes or occupying buildings or factories, which might result in incarceration. Only 15.4 percent of World Values Survey respondents said they were willing to do the latter, while more than twice that (35.7 percent) of GovLink respondents were willing to do so. Also, all of those who had sent a fax had already contacted a government official in the past 12 months. Respondents' almost 90 percent participation in federal elections is also much higher than the voter turnout of 64 percent in the 2004 federal election (Faler 2005). A majority of respondents also affiliated themselves with a political party.

GovLink Users and the Community

GovLink users are far more trusting of others than their fellow Americans, as shown by comparisons to both the World Values (Inglehart 1999) and Social Capital Benchmark (Saguaro Seminar 2001) Surveys. Only the GovLink survey had a majority (57.1 percent) of respondents say that they could trust most people, compared to a 35.6 percent and 47 percent minority in the

other two surveys respectively. While this is not a direct measure of trust in the government, this more positive view of others may be partly responsible for GovLink users' above average willingness to participate in the political process. Since they are more trusting, they may have a stronger belief that their voice will be heard by their elected officials. This is in line with research conducted by Grimsley (2003), which showed that trust and the belief of influence will drive citizens to participate.

The fact that participation in voluntary groups and organizations is so far below that shown in Social Capital Community Benchmark Survey (Saguaro Seminar 2001) is somewhat surprising considering their above average trust in others and political involvement. Particularly interesting is the difference in participation rates for neighborhood associations (15.7 percent), political groups (48.1 percent), and Internet groups (61.3 percent). I would expect these numbers to be higher for GovLink users because I-Neighbors is an Internet-based neighborhood association.

It is possible that most of the political activity conducted by GovLink users is done individually. None of the fax messages indicated that the sender was acting on behalf of a group, and most seemed to be regarding personal concerns rather than those raised by an official group. This may be an indication that those who are willing to take the initiative to communicate with an elected official are independently-minded individuals who tend to do things on their own.

Putnam (2000) says that people are less involved with others, which can be seen through the decline in local group membership. This lack of interest in neighborhood-based groups leads to lowered social capital, which in turn reduces political capital. Data gathered by the I-Neighbors Survey of Political Participation presents contrasting evidence. While these respondents have lower group participation rates than other United States citizens, they are actually more likely to have a history of political participation and more are willing to take even

extreme political action. This indicates that there is a difference between social capital generated through community involvement and that built through political involvement. Although people are less likely to be involved in voluntary groups, this in itself is not a cause for an unwillingness to participate in the political process. It is also possible that I-Neighbors and GovLink are generating social capital.

Digital Divide Implications

The majority of GovLink users were white, married, college educated, and full time employed men. Of the 21.4 percent of respondents who are not white, half are male, and 74 percent work full time. These 12 individuals are also well educated, as 83.3 percent have completed a college degree and 33.3 percent have earned a graduate degree. Non-white respondents are involved in fewer groups, have had less contact with government officials, and are less politically active than white respondents.

However, this minority is somewhat familiar to the political process. A larger percentage of non-white users have sent a fax (25.0 percent sent a fax) compared to white respondents (20.5 percent sent a fax). Half of minority respondents have contacted an elected official in the past year, including one user who has done so 35 times. Their voting participation rate of 83.3 percent for the last federal election, 91.7 percent for the last state election, and 66.7 percent for the last local election also indicate an above-average interest in politics. Only one of these individuals has not signed a petition, boycotted a product, participated in a lawful demonstration, joined an unofficial strike, or occupied a building. Over 40 percent are also active in a political group.

While no strangers to the political process, it is encouraging to see such a large percentage of members of minority groups using GovLink. This indicates that at least some in the minority community are able to access and utilize information technology tools used for

community and political participation. Although, considering the history of above average political participation shown by non-white respondents, these individuals may be minorities within their ethnic groups. Still, it is encouraging to see members of these groups participating in the political discourse.

Submitting Contact Information for Local Officials

The submission of contact information for local officials is interesting because GovLink provides a database of federal and state-level officials, which users can not alter, but there are thousands of local officials. This is a form of political participation because submitting an official is an indication that a user wants to personally contact their government or encourage his or her fellow citizens to do so. Only eight of the 86 users who entered data for their officials ended up sending a fax. It is unclear whether or not the remaining majority will eventually contact their local officials. Users are notified via email once their entry has been approved by the system, which rules out the possibility that they submitted the information and never thought of it again. However, there may be some contact between citizens and officials through email or telephone that is not recorded by the GovLink system due to the fact that many of the entered officials do not have fax numbers. There are 110 local officials who have no fax number in our records. The GovLink system requires that either a fax number or email address be provided for each submitted record.

Response Survey

One of my major research questions was “How will policy-makers respond?” I also had more specific questions: “Will policy-makers reply to electronic communication?” and “Will policy be influenced by participation?” My hypothesis was as follows:

Users will be more satisfied with the responses from lower (local) level officials. I base this hypothesis on my belief that a mayor is more likely to care about the views of a single voter

than a governor or congressman. One factor for this is the much smaller constituency a local official is responsible for, where a single vote matters more. Also, issues on the lower level will most likely be more manageable, such as the need for a stop light, as opposed to the larger issues that higher levels deal with, which may take a much longer time to resolve.

In order to test this hypothesis, a survey was to be completed by users for each of the 58 faxes sent. This survey consisted of several questions, including the following⁵:

1. Have you received a response from <representative> or his/her staff regarding this fax?
2. How long did it take for you to receive a response to your fax?
3. Which method(s) of communication did <representative> use to respond to your message?
4. My communication with this official had a noticeable impact.
Strongly disagree
Disagree
Average
Agree
Strongly agree
5. This official answered all my questions and/or addressed all the concerns in my letter.
Strongly disagree
Disagree
Average
Agree
Strongly agree

Only a negligible amount (less than 10) of response surveys were completed. Of these completed surveys, only two users reported a response from their officials. One of these responses was received within a week and the other took more than three but less than four weeks. Both respondents agreed with the statement “My communication with this official had a noticeable impact” and strongly disagreed with the statement “This official answered all my questions and/or addressed all the concerns in my letter.”

⁵ The complete survey can be found in Appendix C: Response Survey

This lack of any sizeable amount of data does not allow for any strong conclusions about the quality of responses from elected officials. The completion of a response survey is in essence another form of political participation, since its content is eventually to be shared with the community. This content is essentially an evaluation of an elected official.

These evaluations of elected officials were to be a significant aspect of I-Neighbors and this research. The intention was that the public display of these evaluations of individual legislators would encourage government officials to respond better to their constituents and offer some measure of accountability. Furthermore, it was intended to inspire citizens to assess how their own representatives would respond to their concerns and generate community dialogue concerning their officials' responsiveness. Eventually, all citizens would be able to obtain some value from this information.

The idea that this evaluation will make its way to the public sphere may discourage some from completing a response survey. Users may be frightened by this, and believe that negative consequences may result if they publicly criticize their officials. This fear may be relieved once a larger number of evaluations are completed, as users might find some anonymity in a crowd.

This lack of respondents may indicate a low level of commitment on behalf of GovLink users. These individuals are willing to send a message to their officials voicing their concerns about a particular issue, but may leave it at that. Once their initial worry is satisfied by sending a message to their government, their interest in this issue may fade, and with it the desire to tell others of the result of their experience.

Conclusions

I-Neighbors Users

If GovLink users are representative of the I-Neighbors community as a whole, there are implications for the ability of information technologies to build community and encourage political participation for neighborhoods of varying make-ups. Respondents to the GovLink survey tended to be on the “have” side of the digital divide: white, married, college educated, and full time employed men. They also had a history of political involvement. This is consistent with the literature on the digital divide and supports my hypothesis about the nature of communities affected by new media.

The demographic makeup of Suntown, however, provides some evidence that an area that does not fit the typical profile for “haves” can successfully use new media to improve community relations. Less than 30 percent of this neighborhood is white or has graduated from high school, almost one of every ten citizens earned an associates or bachelors degree, and over 30 percent of individuals are below the poverty level. This socioeconomically diverse community is by far the most active neighborhood, with almost one thousand messages sent to the mailing list and 100 emails sent user-to-user, suggesting that an area need not be wealthy or white to benefit from the use of new media.

Community Discussion of Political Issues

Sent faxes were displayed on neighborhood home pages with the expectation that their content would encourage discussion within communities about political issues. Neighbors would learn of the concerns held by those around them and be encouraged to initiate a dialogue on the neighborhood or individual level or communicate with their elected official regarding the same matter. Faxes were also shared on the town, state, and national levels with the hope that this

dialogue would spread across communities. Conversations between neighbors and elected officials would create a more informed public and further encourage individuals to participate in the political process.

There is no evidence that this behavior occurred on I-Neighbors. The discussion of fax messages sent through GovLink has not been seen on neighborhood mailing lists, user-to-user email conversations, or other I-Neighbors tools. Nor has there been discussion of the submission of contact information for local officials. One possible reason for the lack of dialogue is the small number of faxes that have been sent, particularly in those communities where there is a healthy amount of traffic on the mailing list or user-to-user emails. Only a small number of these large and active neighborhoods have users who have sent a fax. For example, the Suntown neighborhood, which boasts the most communication between users, has only seen three faxes sent from the neighborhood.

An absence of evidence, however, does not confirm that dialogue of this nature is not happening within these communities outside of the I-Neighbors context. It is possible that neighbors are chatting about these issues over the phone or in person. There is evidence of this behavior from the Netville study (Hampton 2003). As use of GovLink increases and the number of large and active neighborhoods grows, discussion of faxes sent and local officials submitted will eventually appear on neighborhood lists, particularly around politically-significant events, such as elections. This dialogue will further encourage users to become politically active and contact their neighbors and government officials.

Collective Action

One expectation was that members of political groups would use GovLink to communicate en masse with their elected officials. This behavior could manifest itself in the form of many faxes regarding the same issue being sent from an individual neighborhood or the

same topic being brought up in a coordinated manner by many users from diverse geographic locations. So far, GovLink has not been used as a tool for collective action defined in this manner. All users have sent faxes as individuals and on a wide array of topics. I believe the lack of collective action is related to the issue of neighborhood discussion of political issues. Once GovLink becomes more popular in the I-Neighbors community, groups will begin to use it as a tool through which the goals of many individuals can be coordinated.

There is, however, some evidence of collective action on the neighborhood mailing lists. This is most clearly seen in the Suntown community, where I-Neighbors features are used as a tool to organize political action on the local level. Members of this neighborhood have used the mailing list to discuss strategies, gather input, and mobilize support for community-wide political action. The list has also been used by whistle-blowers and others to make political announcements. Furthermore, the neighborhood polls and events calendar have been used to gather public opinion on community issues and announce political events.

I-Neighbors and Social Capital

There is no clear evidence whether or not I-Neighbors simply attracts more trusting individuals or through the use of I-Neighbors and GovLink, users become more trusting in others. The same can be said for social capital. I-Neighbors might be attracting people with lots of social capital or it may be creating social capital by connecting neighbors with each other and with government officials. However, the low group membership rates of GovLink users would indicate that these individuals came to I-Neighbors with low social capital. This would suggest that I-Neighbors is actually creating trust between users and building social capital. The emails between neighbors and the ability to contact government officials are paying dividends by creating a more trusting, knowledgeable, and involved citizenry.

Challenges for I-Neighbors and GovLink

One interesting finding is that after 16 months of service, there is only a small minority of large and active neighborhoods. While it is not surprising that only a few communities have embraced I-Neighbors in this manner, I would like to think that new media could have a larger impact of improving social capital on a wider geographic scale. What can be learned from the active neighborhoods are some requirements for initiating this and sustaining community dialogue. To start an active neighborhood, an initial spark is needed to establish communication between neighbors. This can be a political issue, concern about crime, a lost cat, an invitation to a neighborhood party, or a simple “Hello.” One important factor for maintaining this dialogue is to have a small group of very active individuals. In the Suntown neighborhood, there were two members who were responsible for over 40 percent of the traffic on the mailing list. These active users keep the conversation going and drive others to participate. This analysis is consistent with research on threshold models conducted by Granovetter (1978), which suggest that the more an individual sees others contributing to a community, the more likely they are to do so as well.

Informing users of GovLink and encouraging them to use it to contact their officials is also a challenge. While an official announcement was sent to all I-Neighbors users and GovLink was mentioned on neighborhood home pages and in all mailing list emails, as shown in Appendix A: GovLink Announcements and Advertisements, some users are still unclear of the purpose of GovLink. There have been emails sent to neighborhood mailing lists wondering if anyone had advice on how to contact their elected official. GovLink also did not receive the same reception by the press that I-Neighbors did. As I-Neighbors continues to grow, users will become more aware of GovLink, and the potential it has as a tool for individuals and groups.

New Media's Influence on Community Involvement and Political Participation

Figure 27: An email sent to a neighborhood mailing list

Keep in mind that you can always contact a neighbor through the i-neighbors website if you are leaving town and need someone to watch your house, take in your mail, etc...just go to the Directory section and click on the link next to their name to e-mail them.

I-Neighbors has shown that new media can be used to encourage community involvement. There are a number of neighborhoods that benefit a great deal from I-Neighbors in a manner not possible without the website and email tools. It is difficult to imagine the level of neighborhood dialogue in places such as Suntown existing without information technologies. The members of this community have essentially created a perpetual town hall meeting, where many topics are discussed by numerous individuals. While it is unknown whether or not the actions of these individuals resulted in positive neighborhood change, it is indisputable that they are much better equipped to deal with local issues.

Users of I-Neighbors are also getting to know their neighbors better and building trust within their communities as they interact through this electronic medium. The willingness and desire of neighbors to help each other with personal matters is shown in messages asking neighbors to help look for lost dogs, set up play groups for young children, arrange social functions, and find the proper recipient for incorrectly-delivered mail. Although this behavior could result from telephone calls, paper flyers, and face-to-face meetings, the speed and scale with which this happens on I-Neighbors is truly impressive. Clearly these communities are made stronger through the use of information technologies.

It is less clear whether or not these technologies encourage individuals to contact their elected officials. All of those who did so using GovLink had previously contacted a government representative at least once in the past year. These users are also much more experienced in political activity and more willing to participate in more extreme behavior. Furthermore, those who have used GovLink tend to be on the "have" side of the digital divide. While this is not all

that surprising, it would be promising to see those who have little history of political involvement encouraged to become so due to the availability of an easy to use tool such as GovLink. It would also be promising to see those who come from typically disenfranchised backgrounds empowered to participate through such a tool. There is also unwillingness on the part of those who have sent messages to their elected officials to report back to the community on the results of their attempt at starting dialogue. There may be a fear of some consequence for taking this additional political action, which is essentially a public evaluation of their representative.

Maybe the reason GovLink has not picked up is a perception that fax technology is outdated. Email could be the method citizens prefer to use to contact their officials. It is familiar and simple to use. Conversely, faxing might not be a rich enough media. It is possible that the only way to effectively get in touch with a government official is to use the telephone or go to their office.

Policy and Development Implications

With the promise shown by new media to encourage and strengthen neighborhood involvement and political participation, it is important to discuss how implications for community development policy. This research indicates that the technology with the most profound impact is email, most likely because of its familiarity and ease of use. Web based features, such as polls, events, reviews, and neighborhood photographs are useful in attracting people to the service, but as these online communities mature, activity migrates to the email list.

These results suggest that investment in technology for neighborhood development need not be a burdensome financial adventure for many communities. There are several free services available allowing groups of individuals to create mailing lists, such as I-Neighbors. Email allows for quick and easy dialogue involving numerous individuals and topics. I-Neighbors has

shown that citizens are more interested in local issues and are more willing to discuss them. The infrastructure developing this level of community dialogue is already established.

However, the digital divide still presents the issue of a lack of universal access to computers with Internet access and the skills to use them. Communities facing this issue have the most to gain from investment in public-use Internet. This thesis further justifies these ventures, whether they manifest themselves as shared terminals in libraries or community centers, computer use training in schools, or more involved projects such as city-wide wireless access.

Appendix A: GovLink Announcements and Advertisements

Helpful Hints on I-Neighbors Website

- Contact your elected officials using GovLink
- Fax your elected officials using GovLink
- Send a free fax to your elected officials using GovLink
- Help us build the biggest database of elected officials.
- Help grow our database of elected officials.
- Enter your local government into our database of elected officials.
- Send a free fax to your elected officials using GovLink.
- Fax your elected officials using GovLink.

Banners at the Bottom of Email List Messages

- Problems in your community? Let your elected officials know. GovLink at www.i-neighbors.org
- Send free faxes to local or federal elected officials. GovLink at www.i-neighbors.org

Announcement Email Sent to All Users

Dear <name>,

As a member of i-neighbors.org, you can now communicate directly with elected officials through your neighborhood website. You can share your message with other [i-neighbors](http://i-neighbors.org) members and can even report back to [i-neighbors](http://i-neighbors.org) about the speed and quality of an official's response.

Why?

The GovLink tool is another way to help your community become safer, better informed, and better equipped to deal with local issues. Use GovLink to raise awareness of local issues and to get your friends and neighbors involved.

Concerned about local crime? Traffic or planning issues in your community? Send a message to your Mayor or local council.

Support a new federal law? Voice your concerns to your representatives.

Want to organize your neighbors around an issue? Share your letter with other [i-neighbors](http://i-neighbors.org) users and email your neighborhood email list to get others involved.

How?

Sign into your account at i-neighbors.org and click on "GovLink". Within GovLink you can write a message to elected officials at all levels of government. To maximize the attention your

message receives, we fax your message directly to your representative's office - like all i-neighbors services, its free!

Want to know more?

<http://i-neighbors.org/faq.php#govlink>

Want to help?

While we already have a large database with contact information for many elected officials, our database is far from complete. Do we have contact info for your local officials? Any member of i-neighbors can contribute new contact information or help us check the accuracy of information submitted by other users.

Appendix B: I-Neighbors Survey of Political Participation

Consent Form

Informed Consent

I-Neighbors Survey of Political Participation

About This Survey

This is a study of how new technologies may or may not affect political participation. This is not a commercial marketing survey, but scholarly research to be used in academic publications such as journals, conferences, and books. You have been asked to participate in this survey because you recently used the Website i-neighbors.org to send a fax message to a government official. The questions on this survey are about your use of various technologies and your past participation in political and community activities. The survey will take approximately 5 minutes to complete.

Your participation is valued and we promise complete confidentiality. As a token of our appreciation for participating in this survey, you will be entered into a draw for a gift certificate worth \$20. One gift certificates redeemable at Amazon.com will be awarded each month.

Because this study deals with, among other things, voting behaviors, persons under 18 years of age cannot participate in this survey.

Benefits of Participating

There are no direct benefits to participating in this survey. However, by participating in this study you will be assisting scientific research and contributing to a better understanding of how new technologies affect political participation.

Confidentiality

Your privacy will be protected to the maximum extent allowable by law. Your responses to this survey will be kept strictly confidential. Your name will not be associated with any specific data or appear in any publication, or reports.

Risks of Participating

The risks to you as a participant are minimal. However, some participants may experience psychological distress or discomfort, such as boredom or embarrassment. If you are uncomfortable answering any questions in this survey, you may choose not to respond to those questions.

If you have questions about your rights and welfare as a volunteer in the research study please contact the Office of Regulatory Affairs at the University of Pennsylvania at 215-898-2614. If you have questions about this study please contact Prof. Hampton at khampton@asc.upenn.edu or by phone at 215-746-5724.

<u>Principal Investigator</u> Dr. Keith Hampton Annenberg School for Communication University of Pennsylvania 3620 Walnut Street Philadelphia, PA 19104-6220	<u>Institutional Review Board</u> University of Pennsylvania The Office of Regulatory Affairs 133 S. 36th Street Mezzanine Level Philadelphia, PA 19104-3246 Mail Code 3246
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By clicking on “Agree” at the bottom of this page you are agreeing to participate in this study. Your participation in this research is completely voluntary and you may withdraw consent for participation at any time without penalty.

One-Time Survey Questions

1. Please tell us your gender.
Male Female
2. In what year were you born?
3. What ethnic group do you consider yourself to be a part of?
African-American / Black
Caucasian / White
East Asian
Latino / Hispanic
Middle Eastern
Native American
Pacific Islander
South Asian
Mixed
Other
4. What is the highest level of education that you have completed?
Did not complete high school
High school diploma (including GED)
Attended college but did not complete degree
2 years Associate's degree
4 years Bachelor's degree
Some graduate training
Graduate or professional degree
5. Which of the following categories best describes your present occupation?
Full time employed or self employed
Part time employed or self employed
Unemployed, looking for work
Unemployed, not looking for work
Student
Homemaker

Retired
Disabled

6. What is your marital status?
 Never married
 Not married, living with partner
 Married, living with spouse
 Married, not living with spouse
 Divorced
 Widowed

7. If any, how many children, age 17 or younger, live in your household? _____

8. Your ZIP/postal code: _____

9. How long have you lived at your present address?
 Years: _____ Months: _____

10. In the past year, how many times have you done the following (excluding those times through I-Neighbors.org)?

Emailed a government official	1 2 3 4 5 6 7 8 9 10 +
Phoned a government official	1 2 3 4 5 6 7 8 9 10 +
Visited a government official	1 2 3 4 5 6 7 8 9 10 +
Mailed or faxed a letter to a government official	1 2 3 4 5 6 7 8 9 10 +

11. Yesterday was Tuesday, how much time did you spend on each of the following activities?

	No Time	30 Minutes	# of Hours
Watching TV			1 2 3 4 5 6 7 8 9 10 11 12 12+
Talking on a cellular phone			1 2 3 4 5 6 7 8 9 10 11 12 12+
Talking on a regular phone			1 2 3 4 5 6 7 8 9 10 11 12 12+
Using a computer			1 2 3 4 5 6 7 8 9 10 11 12 12+
Using email			1 2 3 4 5 6 7 8 9 10 11 12 12+
Using Internet instant messaging (e.g. Yahoo! Messenger, ICQ, MSN Messenger, AIM, etc.)			1 2 3 4 5 6 7 8 9 10 11 12 12+
Using the Internet other than email and instant messaging (e.g. surfing the web)			1 2 3 4 5 6 7 8 9 10 11 12 12+

12. Now I'd like to ask about other kinds of groups and organizations. Answer YES if you have been involved in the past 12 months in any of the following groups:

	YES	NO	DON'T KNOW
A local church, synagogue, or other religious or spiritual community			
Any other organization affiliated with religion, such as the Knights of Columbus or B'nai B'rith, or a bible study group			

An adult sports club or league, or an outdoor activity club			
A youth organization like sports leagues, the scouts, 4-H clubs, and Boys & Girls Clubs			
A youth parents' association, like the PTA or PTO, or other school support of service groups			
A veteran's group			
A neighborhood association, like a block association, a homeowner or tenant association, or a crime watch group			
Clubs or organizations for senior citizens or older people			
A charity or social welfare organization that provides services in such fields as health or service to the needy			
A labor union			
A professional, trade, farm or business association			
Service clubs or fraternal organizations such as the Lions or Kiwanis or a local women's club or a college fraternity or sorority			
Ethnic, nationality, or civil rights organizations			
Other public interest groups, political action groups, or party committees			
A literary, art, discussion or study group or a musical, dancing, or singing group			
Any other hobby, investment, or garden clubs or societies			
A support group or self-help program with specific illnesses, disabilities, problems, or addictions, or for their families			
Any group that meets only over the Internet			
Any other kinds of clubs or organizations			

13. Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?

Most people can be trusted Need to be careful Don't Know

14. Do you think most people would try and take advantage of you if they got a chance, or would they try to be fair?

Would take advantage Would try to be fair Don't Know

15. Below are some different forms of political action that people can take. Please tell me, for each one, whether you have actually done any of these things, whether you might do it or would never, under any circumstances, do it.

	Have Done	Might Do	Would Never Do
Signing a petition			
Joining in boycotts			
Attending lawful demonstrations			
Joining unofficial strikes			
Occupying buildings or factories			

16. As you may know, around half the public does not vote in presidential elections. How about you – did you vote in the presidential election in 2004 when John Kerry ran against George Bush, or did you skip that one?

Yes, Voted No, skipped that one Was not eligible Don't Know

17. Do you remember for sure whether or not you voted in the most recent state election?

Voted Did not Vote Ineligible Don't Know

18. Do you remember for sure whether or not you voted in the most recent city/town election?

Voted Did not Vote Ineligible Don't Know

19. Generally speaking, do you usually think of yourself as a Democrat, Republican, Independent, or what?

Democrat Republican Independent Other No preference

20. Looking over the following list of occupations, place a check next to any occupation in which someone you know works. Consider anyone that you know well enough to talk to. If you know more than one person in an occupation check all that apply.

	YES	NO	DON'T KNOW
Judge			
Police Officer			
Insurance Agent			
Mail Carrier			
Plumber			
Garage Mechanic			
Restaurant Waiter			
Janitor			
Teacher			
Nurse			
Carpenter			
Sales Manager			
Human Resource Manager			
Social Worker			
Computer Programmer			
Secretary			
Security Guard			
Garbage Collector			
Owner of a large business (several hundred employees)			
Owner of a small business (less than 5 employees)			
Building Contractor			
Electrician			
Farmer			
Lawyer			
Architect			
Engineer			

Appendix C: Response Survey

The response survey will consist of the following questions:

6. Have you received a response from Senator John Kerry (MA - D) or his/her staff regarding this fax?
Yes
No

(Note: If a user chooses “No” for question 1, he/she is not shown questions 2-5 and is directed towards 6.)

7. You sent your fax on Apr 13, 2005. How long did it take for you to receive a response to your fax?
Less than 1 week
More than 1, but less than 2 weeks
More than 2, but less than 3 weeks
More than 3, but less than 4 weeks
More than 4 Weeks
8. Which method(s) of communication did Senator John Kerry (MA - D) use to respond to your message? (Check all/any that apply)
Telephone
Email
Postal Mail
Personal Visit
Fax
Other
9. My communication with this official had a noticeable impact.
Strongly disagree
Disagree
Average
Agree
Strongly agree
10. This official answered all my questions and/or addressed all the concerns in my letter.
Strongly disagree
Disagree
Average
Agree
Strongly agree
11. What prompted you to send a fax through I-Neighbors? (Check any/all that apply)
Discussion with family
Discussion with friends

- A group of which you are a member (not including I-Neighbors)
- A group of which you are not a member
- A concern raised within your neighborhood
- A personal concern
- A fax from another user on the I-Neighbors website
- Email from another I-Neighbors user
- A news story on television
- A news story on the radio
- An article in the newspaper
- Something I read on a weblog (blog)
- Something I heard on a podcast
- Something I found while surfing the web
- Through other Internet news source

12. If I-Neighbors did not offer a free faxing service, would you have still contacted this representative?
- Yes
 - No
 - Maybe

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