

Community Networking and Locally-Based Social Ties in Two Suburban Localities

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Concerns have been expressed that Internet use may affect social participation and involvement in the local community. Internet use can be viewed as a time-consuming activity, and it may come at the expense of face-to-face activities. The time people devote to using the Internet might replace time spent on neighborly relations and community involvement. However, the use of computer-mediated communication in geographically-based communities might also increase face-to-face communication and even solve some of the problems associated with decreasing participation and involvement in the local community. The purpose of this study was to explore the relationship between membership in a geographically-based mailing list and locally-based social ties. A web-based survey of subscribers to two suburban mailing lists in Israel was conducted to investigate the relationship between membership in a mailing list and neighborhood social ties, social ties in the extended community, and the movement from online to face-to-face relationships. It was found that although membership on the mailing list did not affect the extent of neighborhood interactions, it increased the number of individuals a participant knew in the community. Online relationships with members of the local community proved likely to change into face-to-face relationships. The results imply that community networking increases social involvement and participation not in the immediate neighborhood but in the extended community and serves to complement traditional channels of communication.

Community networking refers to the process by which computer-supported communication serves the local geographic community and responds to the needs of that community (O'Neil, 2001). Since the proliferation of computer use and Internet connections, interest has grown in the potential role of computer-mediated communication in the development of social ties among members of geographically-based communities. Some scholars have expressed concerns that Internet use might decrease community participation and involvement. Internet use can be viewed as a type of time-consuming leisure activity that could come at the expense of other face-to-face activities (Kling, 1996; Kraut et al., 1998). The time devoted by people to the Internet might replace time spent on neighborly relations and community involvement (Kraut et al., 1998; Nie and Erbring, 2000). Studies

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exploring the relationship between Internet use and membership in religious and leisure organizations and participation in social gatherings found that Internet users belonged to more leisure organizations and to no fewer community organizations than non-Internet users (Katz and Aspden, 1997). On the other hand, preliminary findings of the Homenet project show that high use of the Internet was associated with a decline in family communication and the size of one's social circle, as well as with loneliness (Kraut et al., 1998). In another study, heavier users reported a decline in socializing, media use, shopping, and other activities (Nie and Erbring, 2000).

Others believe that the use of computer-mediated communication in geographically-based communities has the potential to support and develop face-to-face community relations and perhaps solve the problems associated with decreased community participation (Hampton and Wellman, 1999). First, community networks provide opportunities for political participation. At the very least, individuals might use geographically-based computer-supported communication to express their opinions on local issues as well as to organize collectively (O'Neil, 2001; Tonn, Zambarano, and Moore, 2001). Second, community networking may become a source of information on social, cultural, and political activities. The dissemination of information provides an opportunity for residents to become involved in local activities (Tonn, Zambarano, and Moore, 2001). Third, community networking may provide opportunities for the formation of local social ties. Extensive locally-based social ties were found to be associated with the residents' ability to organize and mobilize resources to improve their communities (Logan and Spitze, 1994), to implement crime-watch programs (Sampson and Groves, 1989), and to fend off attempts aimed at changing the social and physical nature of the area (Mesch, 1996).

Studies have begun to examine the relationship between community networking and social involvement, and the Internet appears to sustain the bonds in a community by complementing rather than replacing other channels of interaction. Little is known about the role and function of community networking in non-English-speaking countries. This study is based on a research project in which we surveyed active subscribers and performed a content analysis of messages posted on two mailing lists operating in two suburbs in Israel (Ramat Beit-Shemesh and Modiin). The research addressed the following questions:

- What uses do residents make of the mailing lists?
- Does membership on a geographically-based mailing list encourage social integration and civic involvement in the neighborhood and in the local suburb?
- Do online relationships established on the mailing list become face-to-face relationships?

LITERATURE REVIEW

Since its inception, the Internet has become a global network connecting individuals all over the world. Through electronic mail, newsgroups, IRC, ICQ, and other technologies, individuals are communicating, creating new social relationships, and exchanging resources, such as information, knowledge, and social support (Wellman and Gulia, 1998; Wellman et al., 1996). As the percentage of Internet users in the population grows, there is concern about the social effect of its use. A number of potentially negative outcomes of Internet exposure have been suggested, such as addiction (Brenner, 1997; Griffiths, 1999), social

isolation (Kraut et al., 1998), and lack of involvement in pro-social behavior (Funk and Buchman, 1996).

In this study we focused on the formation of locally-based social ties. A local geographically-based computer-supported network is more likely to contribute to the formation of community ties than is a geographically-dispersed virtual community. As noted earlier, community networking refers to the ways that locally-based computer networks serve and support the needs of a geographically-based community. According to Etzioni and Etzioni (1999), community building has several prerequisites. The formation of a community requires access, which is the ability to reach and communicate with others. Community networking provides the ability to establish contact with more people, both face to face and online. Although community networking provides access to a larger number of individuals than face-to-face communication, it also has the potential to benefit from the transformation of online contacts into face-to-face meetings in community social activities. Moreover, the formation of a community requires a high level of in-depth and wide-ranging knowledge of others. Online communication provides opportunities to share personal information, discuss personal issues, and unfold life histories.

The geographically-based nature of community networking provides more than mere knowledge about others. It can also provide the opportunity to compose broad and inclusive images of others, to ensure that the communication is accurate, and to develop a sense of other people's reliability. Etzioni and Etzioni (1999) argue that the proper combination of both face-to-face communication and computer-mediated communication promises to meet more of the prerequisites of a community than each of them could separately.

Community networking can contribute to community building in a number of ways (O'Neil, 2001). It can enhance citizens' participation in local politics as it disseminates information, allowing members of the local community to share knowledge and enhance their understanding of local issues (Hague and Loader, 1999). It can increase social capital as geographically-based electronic networks promote civic engagement and interaction between citizens. Issues critical for the development of the local community, such as solidarity, altruism, loyalty, and reciprocity, may be developed. In support of this argument, the evaluation of the Blacksburg Electronic Village showed that community networking expanded existing social networks, civic engagement, and community involvement (Kavanaugh, 1999). A potential outcome is empowerment of individuals. As residents of the local community become more involved in local issues, interact, and expand their social networks, they might gain understanding, win control over personal, social, and political issues, and take action to improve their life situations.

The Internet has several structural characteristics that can help overcome difficulties in civic organization. First, it is free from the constraints of space. Participants no longer have to meet in a particular place to share ideas and communicate. This feature makes possible the participation of individuals who, due to work schedules and family commitments, could not participate before. Second, the Internet is free from constraints of time. Large numbers of individuals can easily participate, and discussions are able to continue during interludes between face-to-face meetings. Finally, the Internet lowers the costs of participation. Participants can reduce the high costs of coordination, and instead of rearranging their schedules to attend a group meeting, they can read messages at their convenience (Klein, 1999).

The foregoing discussion suggests that to increase involvement in the local community, community networks must do more than just provide information about town-hall

meetings and the office hours of relevant community organizations. A case study of a geographically-based mailing list found that community residents expressed interest in services related to their children's education and also exchanged general community information. Residents also showed interest in communicating with neighbors and friends (Blanchard and Horan, 1998).

Neighborhood interactions are an important component of the local community. Although neighborly ties are not necessarily strong, physical access makes it easier for people to deliver services even when a relationship is not close. Neighbors exchange small services, such as babysitting and driving children to activities. The importance of neighbors as a source of social support is due to their proximity, which increases the frequency of contacts. Although they do not provide social support that cannot be obtained from others, they are still the most frequent contact for the individual (Wellman and Leighton, 1979).

The most common perspective used to explain local social relationships is the systemic model of community social organization. According to this model, the local community is best defined as a system of friendships, formal and informal social ties rooted in family life and ongoing socialization processes (Kasarda and Janowitz, 1974). An individual's involvement in the local community is voluntary and limited to the degree to which it meets his or her needs. For example, the threat of crime can undermine the perception of security and cause a decrease in property values. In such a case, the individual will withdraw, if not physically, then socially and emotionally, from the local community (Hunter, 1978). According to the systemic model of community social organization, the critical variables that explain the development of social ties in the local neighborhood are the individual's social investments in the place (such as length of residence) and the individual's position in the life cycle (Sampson, 1988).

Length of residence has been noted as central to the development of locally-based social ties. The development of local social ties is a time-related process. The longer an individual lives in a neighborhood, the more likely he or she is to know more neighbors and to develop close social ties with them (Sampson, 1988).

Families with young children have strong interests in the neighborhood as young children are limited in their early stages of socialization to their immediate geographical environment. They play and socialize with their neighbors and usually attend school in the neighborhood. At a very early age, neighbors join the family as important agents of socialization. This centrality in the socialization process increases the investment in the community of families with young children and nurtures local attachment. Age is also related to local social ties. As individuals grow older, their geographical mobility decreases and they become more interested in the neighborhood (Schwirian and Schwirian, 1993).

A limitation of the systemic model of community social organization is that it does not deal with the role of extracommunity relations. Social change in modern societies has increased the geographical mobility of individuals and liberated the individual from locally-based social ties (Wellman and Leighton, 1979). Transportation and communication technologies allow residents to expand their social connections beyond a limited geographic area.

To overcome this limitation, Guest (2000) devised the community-mediated model. Like the systemic model of community social organization, this model emphasizes the importance of social ties. According to this model, the social ties of the individual should be analyzed at separate spatial levels: local (neighborhood) ties and extralocal ties. These

social ties can be either close-expressive or distant-instrumental. According to this view, the individual's social network is a combination of four kinds of ties: local expressive, local instrumental, extralocal expressive, and extralocal instrumental. Technology enables the individual to enhance nonlocal relationships, so this model will predict that extensive community networking will be related to distant and nonlocal connections, those not at the immediate neighborhood level.

Studies on changes in the strength and nature of social ties among urban residents have shown that over time there has been a decline in locally-based social ties and a trend toward more extralocal ties. Using data for 22 years from the GSS (General Social Surveys), Guest and Wierzbicki (1999) reported a decline in the importance of social ties on the basis of neighborhood and, conversely, a growth in the importance of nonneighborhood ties. This prediction differs from the findings of the research conducted in Netville, a Toronto suburban development that was equipped with a high-speed communication network as part of its design (Hampton and Wellman, 2002). That study showed that the Internet supported a variety of social ties, both strong and weak, which could be instrumental, emotional, or social. Relationships were rarely maintained through computer-mediated communication alone but were sustained by a combination of online and offline interactions. The findings showed that despite the ability of the Internet to serve as a global communication technology, much online activity took place between people who lived (or worked) near each other (Hampton and Wellman, 1999).

The extensive use of the Internet enhanced neighborhood interactions. Wired residents were more likely than nonwired ones to know more neighbors and to socialize with them more often (Hampton and Wellman, 1999). Apparently, a locally-based mailing list serves as a facilitator of information exchange, communication, and social support. Individuals tended to associate with others who were socially similar, and when opportunities for social interaction arose, they were more likely to form local social ties and to be involved in the local neighborhood (Hampton, 2002).

However, being wired did not affect contact with and support of friends and relatives who did not live in the neighborhood. With gender, age, education, and length of residence controlled for, no differences were found in terms of contacts with network members (not neighbors) living within 50 km (Hampton and Wellman, 2001). The authors concluded that being wired did not affect social contact with nonneighborhood network members because the contact continued by established means of communication, such as the telephone and face-to-face meetings. Being wired increased contact with long-distance network members living beyond 50 km.

Furthermore, the use of computer-mediated communication fosters a process of "glocalization" of social ties. This term, a combination of globalization and localization, is applied to describe the process involved in the adaptation of products and services specifically to each locality and culture. According to Robertson (1995), glocalization describes the effects of local conditions on global pressures. Hampton and Wellman (1999) adopt the concept of glocalization, and argue that despite the ability of the Internet to serve as a global communication technology, the expectation is that much online communication is directed to friends living nearby and to kin and friends living far away. At the local level, the mailing list becomes a shared space in which neighbors exchange information and support. At a remote distance, social contact by conventional means (telephone, face-to-face meetings) becomes more expensive in time and money than email connection. When social ties live in the mid-range, much of the contact with these network members continues

by established means of communication such as telephone (Hampton and Wellman, 2002).

Other studies provide empirical evidence that the use of mailing lists can facilitate the formation and support the activity of citizen associations at the local level. Citizen associations use the Internet to locate and attract individuals and groups, provide a forum for open discussion on plans of action, disseminate information about group events and activities, and provide an opportunity for community participation and the expression of a wide range of ideas (Klein, 1999).

In sum, the literature review suggests that community networking has the potential for increasing the participation and involvement of residents in their community. Note that the majority of studies were conducted in externally-induced community networks, where the initiative was supported by governmental and/or nonprofit organizations. The goal of the present study was to explore the main uses of the geographically-based mailing list and the extent to which membership on the mailing list was related to the formation of social ties, both in the neighborhood and in the suburb at large. Our study contributes to the growing literature on community networking in that it relies on the investigation of two mailing lists that were created and maintained by the initiative of local residents.

THE RESEARCH SETTING

Israel is a pluralistic society divided according to ethnic and religious social status. Studies have shown that in this country the urban neighborhood is a meaningful space for residents. A high proportion of residents define the neighborhood as a territory that is a basis for the development of neighborly relations of reciprocal help and support. This definition does not vary by neighborhood socioeconomic or family status (Schnell and Goldhaber, 2001). Social involvement with neighbors has proved to be high: about two-thirds of respondents reported knowing their neighbors by their first names, 20 percent went out with them for dinner or social gatherings, and half said that their relations with their neighbors were close enough to invite them to family celebrations such as bar mitzvahs and weddings (Mesch and Manor, 1998). Close neighborly relationships have been shown not to differ according to ethnicity, either: Israeli Jews and Israeli Arabs reported on average the same number of friends living in the neighborhood (Mesch and Manor, 2001). From these studies, social relations in Israel appear to be a central characteristic of all neighborhoods. This seems to differ from North America, where more than a quarter of respondents never spend time with their neighbors and social ties with neighbors have declined over time (Guest and Wierzbicki, 1999). This strong social orientation of residents to locally-based relationships makes Israel an interesting site to explore the effects of computer-mediated communication on local and extralocal social ties.

Ramat Beit-Shemesh and Modiin are both relatively new communities built in the last 10 years, located in the Jerusalem periphery. The population of Ramat Beit-Shemesh is homogeneous, composed mainly of recent immigrants from English-speaking countries who maintain an orthodox religious lifestyle and have families with young children. The Modiin population likewise includes families with young children, and they conduct secular or religious lifestyles. The mailing lists in both places were established around 1995, at the initiative of a few residents, without the help or involvement of any external agency,

including the local government. Both produce 20 messages a day on average. Their purposes were defined as: sharing information among residents, providing information to prospective residents on the location of facilities in the suburb, and supporting local businesses and community services. Messages in both lists are posted in English.

To learn more about the lists we conducted a content analysis of 1,190 messages on both lists posted by 401 different users during a random, sampled month. Messages varied and could be divided into six dimensions. On both lists about 30 percent of them dealt with consumption issues like information on local businesses (by owners and shoppers), garage sales, and even consumers' complaints. Around 17 percent of the messages dealt with community meetings, courses, and other activities at the community center. Twelve percent sought or offered information on professional help: doctors, dentists, tutors, child-care assistance, and domestic repair services. In both lists about 11 percent of the messages concerned educational issues. The subject of about 19 percent of the messages was mutual help among local residents, such as lifts, carpools, and lost and found. The Beit Shemesh list was more oriented to the provision of actual help, such as lending domestic instruments and even physical help for families in need, economically or otherwise (newborn babies, health problems, etc.).

Another interesting dimension was messages posted to state opinions on community or local issues. This form of message was a central characteristic of the Beit Shemesh list, reflected in 21 percent of the messages. A large portion of this correspondence was around a mall soon to be opened in the area, which was to operate on Saturdays and have nonkosher restaurants. The religious residents of Beit Shemesh used the list as a communication and coordination tool in their collective consumer protest against the mall management.

Another issue explored in the content analysis was the interactivity of the mailing lists. About 25 percent of the messages posted were in response to previous correspondence, both as direct replies to specific messages or in response to a discussion on the list. The percentages of reply messages differed depending on the topic. When the theme of a message was views on local issues, 46 percent of them were replies to previous messages. When the subject was consumption issue, 27 percent of the messages were replies to previous messages. On other topics, less than 14 percent were replies to previous messages. The high activity of the lists and the fact that both were established, developed, and maintained by residents without the intervention of the government or of nonprofit or for-profit organizations made them an interesting site for an investigation.

METHODS

Data for this study were collected by a survey of mailing list users. A website containing the survey questionnaire was built through the services of a commercial company specializing in web-based surveys. A message announcing the survey was posted on the mailing list and a link to the website of the survey was provided. The first request for survey participation was posted by the webmasters of the mailing list and two reminders from the principal investigators were posted on the mailing list at 10-day intervals.

The total population of the study was estimated with the help of the mailing lists' webmasters and from the list of email addresses that posted messages during a randomly selected month. According to these two estimates, the total potential population for the

survey was 400. Following the two reminders, 153 surveys were completed, a response rate of 38 percent. The response rate for this study was consistent with the average response rate in email surveys (Sheehan, 2001). The survey included items measuring respondents' sociodemographic background, types of Internet use, number of neighborhood and community-based social ties, types of mailing list, and how many of the contacts initiated through the mailing list became face to face.

A number of dependent variables were used in this study. *Neighborhood interactions* was a composite measure of six items asking about the number of neighbors the respondent knew by their first names, invited to family events, helped with household tasks, discussed child-rearing issues with, discussed personal issues with, and socialized with. By a factor analysis technique (varimax rotation) all the items loaded on a single factor with an internal reliability of $\alpha = 0.86$ and were combined to form a single composite measure.

Another dependent variable was acquaintances in the locality, which was measured as the *number of residents whom the individual knew in the locality*. Respondents were asked about the number of individuals who lived in their locality (outside their neighborhood) whom they met by chance on the street or at the supermarket, school, workplace, synagogue, through friends, via the community center, and via the mailing list. By a factor analysis technique (varimax rotation) all the items loaded on a single factor with an internal reliability of $\alpha = 0.74$ and were combined to form a single composite measure.

An important variable in the study was the extent *to which online relationships had shifted to face-to-face relationships*. Individuals were asked how many people they had met through the mailing list whom they later phoned, invited to their homes, and sent an email to, and how many of the people they had met through the mailing list had later phoned them, invited them to their homes, or sent them a personal email. In the multivariate analysis, the items were coded as dummy variables with 1 indicating one or more and 0 indicating none.

According to the systemic model of community social organization, locally-based social ties are the result of social and economic investments in local communities. We applied a number of independent variables to measure this concept. Age, education, number of children, and length of residence in the locality were measured as continuous variables. Marital status was measured as a dummy variable with 1 indicating that the respondent was married and 0 indicating otherwise.

Finally, the extent of membership on the mailing list was measured. Individuals were asked how long they had been on the list. This item was measured as a continuous variable. Another item in the survey asked respondents about the frequency with which they sent messages or replied to emails posted on the mailing list. Possible responses were "daily," "weekly," "monthly," "less than once a month," "seldom," and "never." This measure was entered into the analysis as a continuous variable. Another variable was the types of mailing list used. Individuals were asked to indicate whether they had used the list for a variety of purposes, and the possible responses were "yes" and "no." In the preliminary inspection of messages posted in a random month we found that they could be classified into 14 different categories. In the survey we examined the list of 14 different items that were given and found that they represented four different dimensions: information seeking, household aid, shopping and consumption, and expressing one's opinion. The items from each dimension were combined into a single measure and were entered into the multivariate analysis.

FINDINGS

The survey respondents were 38.24 years old on average, and the majority of them were currently married (88 percent) with an average of 2.34 children living at home. The sample population represented a highly educated segment of the population. They reported on average 16.5 years of education, which is 3.2 years higher than that of the average Israeli population. Around a quarter of the respondents had been members of the mailing list for up to one year, a third for one to two years, and another third for three to four years. Only 13.8 percent had been members of the list for more than four years.

The first issue that we investigated was the main uses of the mailing list.

Table 1 presents the distribution of the community mailing list uses. The list is seen to have been used for four purposes: information seeking on social and cultural activities in the community, searching for domestic help, tips on shopping and consumption, and expressing opinions on local issues. The most frequent use was information seeking, and the most frequent type of information sought, reported by 74.3 percent of respondents, concerned local cultural events. Seeking information on lectures and seminars in the nearby area was reported by 67.8 percent of the respondents. The mailing list was also a medium used for gathering information on activities held in community centers, as 68.4 percent of the respondents reported.

Using the list to acquire household help was also important. The most frequent use of the list was for locating professionals who did small repairs, such as plumbers and electricians. Half the respondents used the list to locate professional medical aid, 44.1 percent to organize carpools and rides, and 38.8 percent to find childcare.

Another use of the list was to find information on shopping and consumption. More than half the respondents (54.6 percent) used the list to post information on items they wanted to buy or sell. That is, slightly more than half the respondents used the list for direct commercial contacts among themselves. Finally, a central use of the list was fulfilling

TABLE 1. Distribution of Respondents' Mailing List Types of Use

<i>Information Seeking</i>	
Information on community center activities	68.4%
Information on synagogue activities (such as activities during holidays and Bible classes)	59.9%
Information on cultural events	74.3%
Information on lectures and seminars	67.8%
<i>Household Help/Aid</i>	
Arranging rides and carpools	44.1%
Childcare (babysitting)	38.8%
Locating doctors and dentists	50.0%
Help at home (cleaning, gardening)	41.4%
Repairmen, plumbers, electricians	76.3%
<i>Shopping and Consumption</i>	
Apartment to buy or rent	25.7%
Tips on sales	62.5%
Goods to buy or sell	54.6%
<i>Opinion</i>	
Community issues	42.8%
Neighborhood issues	42.8%
<i>N = 152</i>	

TABLE 2. Percentage of People One Knows in the Suburb

How Many People Who Live in the Town Did You Meet	None	1-3	4-6	More than 6
By chance (on the street, on the bus, in the supermarket)?	19.7	20.4	13.2	46.7
Through the educational institutions your children attend?	30.9	13.2	5.9	44.1
Through the list?	31.6	23.0	21.7	23.8
At your workplace?	35.5	27.6	10.5	26.3
In synagogue?	28.9	3.9	4.6	62.5
Through friends and neighbors?	8.6	9.9	14.5	67.1
At the community center or at classes?	57.2	13.8	9.2	19.8
<i>N</i> = 152				

civic duties. More than 40 percent of residents took advantage of the list to express their opinion on neighborhood and community issues.

To what extent did membership on the mailing list expand the social ties of the individual? Table 2 presents the average number of individuals that the respondent met in different local contexts.

The results show that traditional forms of meeting new acquaintances were still relevant even for this sample of mailing-list users. The most frequent way to meet residents was through informal local acquaintance, such as encounters on the street, on the bus, and at the supermarket; this was reported by 80 percent of our respondents. In addition, almost 70 percent of them reported meeting other residents through informal meetings at educational institutions that their children attended and at synagogue. Only 42.8 percent met other individuals residing in the community through community centers or evening classes. Bearing this in mind, note that 68.4 percent of respondents met other individuals through the list. The mailing list proved not only to provide a new way to meet residents of one's town, but also was actually one of the most frequent ways used for this purpose as well as being almost as prevalent as the traditional ways such as school or casual, informal meeting places.

The question now was the extent that these acquaintances remained "virtual" or changed to face-to-face relationships. Accordingly, we asked our respondents: "How many of the individuals you initially met through the list have you met face-to-face in a different community context?"

There is evidence that contacts that started on the mailing list shifted to other community contexts. Although 48 percent of respondents reported that they never met people they had gotten to know from the mailing list in person, 52 percent reported meeting at least one list member in another community context. In addition, almost a third of the latter respondents reported meeting personally more than three people they had initially met through the list in other community contexts, such as at the synagogue, the community center, or at their children's school.

We were also interested in learning to what extent ties that had started through computer-supported communication shifted to other communication channels. A relatively high percentage of respondents reported using the phone to communicate with other individuals they had first met through the mailing list. Only 28.3 percent reported that they had not phoned those individuals. Yet 35.5 percent reported they had received a phone call from someone on the list. Personal email was used as well. About two-thirds of respondents reported both receiving and sending personal emails to and from individuals

TABLE 3. Social Ties Transference

The Following Questions Pertain to People You Initially Met Through the List	None	1-3	4-6	More than 6
With how many of the people you met through the list did you talk face to face in synagogue, at the community center, or at your children's school or kindergarten?	48.0	20.4	15.1	16.4
How many of the people you met through the list have you phoned?	28.3	37.5	22.4	11.9
How many of the people you met through the list have you invited to your home?	65.8	18.4	9.9	6.0
How many of the people you met through the list have you emailed personally, not via the list?	32.9	28.3	14.5	24.4
How many of the people you met through the list have phoned you?	35.5	35.5	17.1	11.5
How many people you met through the list have invited you to their home?	64.5	23.0	7.9	5.6
How many people you met through the list have contacted you via personal email (not through the list)?	34.2	31.6	15.8	18.4

N = 104

they had initially met through the list. Being invited to others' homes or inviting others to their homes probably represents a higher degree of intimacy than using the phone or sending a personal email. Almost a third of our respondents reported that they had invited or had been invited to the homes of people they met initially through the community mailing list. The findings indicate that the mailing list certainly supported the development of acquaintanceships and that electronic communication shifted to other channels, including use of email and phone calls, and even mutual home visits.

MULTIVARIATE ANALYSIS

We next conducted a multivariate analysis in order to explore the extent to which membership on the mailing list was related to social ties. We wished to learn whether mailing-list participation and use had an effect on locally-based ties, independent of the effects of other variables, such as demographic characteristics and length of residence in the community.

First we examined how far membership on the mailing list was related to neighborhood interactions. Table 4 presents the results of a regression analysis predicting neighborhood interactions. According to the results, the only significant variables related to neighborhood-based social ties were measures representing the systemic model of community social organization. The longer the residence, the more the individual was likely to be involved in neighborhood relations. This result implies that time is a crucial variable for the formation of local relationships. In addition, one's stage in life was important. Families with young children were more likely to be involved in neighborhood relations. Measures of mailing-list activity, such as frequency of initiating messages on the list and frequency of list use, were not found statistically significant. In other words, active membership on the mailing list did not increase the number of neighborhood-based social ties.

The next interesting question was whether membership on the mailing list was related to the number of individuals a member knew in town. Wellman and Hampton (1999)

TABLE 4. OLS Regression Predicting Neighborhood Interactions

	B	SE	Beta
Gender	0.01	0.16	0.00
Age	-0.01	0.01	-0.10
Education	0.03	0.03	0.06
Family status (married = 1)	0.42*	0.24	0.14
Children under 18	0.18**	0.05	0.29
Length of residence	0.27**	0.10	0.24
Frequency of initiating messages on the list	0.03	0.05	0.05
Length of list membership	0.03	0.07	0.04
Using the list for information purposes	0.65	0.42	0.12
Using the list for help	0.08	0.22	0.03
Using the list for consumption purposes	0.14	0.20	0.06
Using the list to state an opinion	0.17	0.16	0.09
Constant	-2.68**	0.79	
R^2	0.31		
N	152		
F	4.75**		

* $p < 0.10$; ** $p < 0.05$.

presented the hypothesis that belonging to locally-based lists can exert a varied effect on social ties according to distance. Given our finding that membership on the mailing list had no effect on neighborhood local social ties, we investigated to what extent it expanded social ties beyond the neighborhood, namely, in the wider but still local suburb.

Table 5 presents the results of an OLS regression model predicting the number of people whom the respondent knew in his or her town. In the first model only demographic variables were included. As shown, variables related to the systemic model of social organization were statistically significant in predicting acquaintances. A respondent's marital

TABLE 5. Regression Model Predicting Number of People One Knows in the Town

	Model 1			Model 2		
	B	SE	Beta	B	SE	Beta
Gender	0.26*	0.15	0.13	0.31*	0.16	0.15
Age	0.00	0.01	0.04	0.01	0.01	0.06
Education	0.09*	0.03	0.21	0.08*	0.03	0.18
Family status (married = 1)	0.57*	0.24	0.19	0.68**	0.24	0.22
Children under 18	0.12*	0.05	0.19	0.10*	0.05	0.16
Length of residence	0.07*	0.10	0.06	0.02	0.10	0.01
Frequency of initiating messages on the list				0.12*	0.05	0.17
Length of list membership				0.10	0.07	0.12
Using the list for information purposes				0.78*	0.42	0.14
Using the list to find help				0.10	0.22	0.04
Using the list for consumption purposes				0.21	0.20	0.08
Using the list to state an opinion				0.20	0.16	0.10
Constant	-2.78**	0.69		-4.57**	0.79	
R^2	0.175			0.31		
R^2 change				0.133**		
N	152			1521		
F	4.99**			4.725**		

* $p < 0.10$; ** $p < 0.05$.

status and number of children were positively related to the number of individuals he or she knew in town. Married respondents and parents of young children reported a higher number of social ties in the extended community than single individuals and married couples without young children. Length of residence was positively related as well. The longer the residence in the community, the more people the individual reported knowing in town. In addition, the higher the level of education, the more individuals the respondent knew. In the next step, we added measures of list participation and use. The more active the individual was on the mailing list, the more individuals he or she knew in town. Respondents who used the list for seeking information reported more social ties in the community. Other uses, such as for finding home help, consumption, and the expression of one's opinion on local issues, were not related to the number of people one knew in the community.

In the next step we wanted to predict the characteristics of individuals more likely to shift from electronic communication to face-to-face communication.

Table 6 presents the results of three logistic regressions predicting the extent to which individuals who met on the list moved to other channels of communication, such as phone

TABLE 6. Logistic Regression Analysis Predicting the Likelihood of Movement of Ties from Mailing List to Other Channels of Communication

Variable	Phoned You		Invited You Home		Emailed You Privately	
	Parameter Estimate (SE)	Odds Ratio	Parameter Estimate (SE)	Odds Ratio	Parameter Estimate	Odds Ratio
Age	-0.061** (0.030)	0.941	-0.008 (0.025)	0.992	-0.068** (0.029)	0.935
Gender	0.357 (0.474)	1.430	0.012 (0.404)	1.012	0.273 (0.450)	1.313
Marital status (1 = married)	-1.726* (0.972)	0.178	-0.705 (0.719)	0.494	-0.918 (0.832)	0.399
Number of children	0.179 (0.173)	1.196	0.092 (0.156)	1.097	0.344** (0.176)	1.411
Length of residence	0.352 (0.254)	1.422	-0.466* (0.290)	0.627	0.019 (0.339)	1.0119
Length of membership on the list	0.680* (0.258)	1.973	0.430* (0.227)	1.537	0.162 (0.232)	1.175
Neighborhood interactions	0.669* (0.317)	1.952	0.180 (0.236)	1.198	0.455* (0.220)	1.576
Frequency of initiating messages on the list	0.027 (0.176)	1.973	0.290* (0.160)	1.748	0.161 (0.164)	1.851
Information use	1.826* (0.750)	0.161	-0.039 (0.600)	0.962	-0.683 (0.597)	0.505
Help use	1.860* (0.623)	0.425	0.928* (0.570)	2.529	1.335** (0.553)	3.802
Consumption use	0.153 (0.688)	1.165	-0.923 (0.634)	0.397	0.304 (0.629)	1.355
Opinion use	1.000** (0.533)	2.718	0.690* (0.430)	1.994	0.940** (0.514)	2.561
-2 log likelihood	117.646		155.565		127.993	
Cox & Snell pseudo R ²	0.335		0.169		0.267	
N	137		137		137	

* $p < 0.10$; ** $p < 0.05$.

calls, personal meetings at their homes, and email. The goal of this analysis was to explore what individual characteristics were related to the likelihood of a shift of social ties from the list to other personal channels of communication.

There are a number of salient findings. First, the length of membership on the list was related to the likelihood that social ties initiated on it would shift to personal communications. The longer the individual had been a member on the list, the greater the likelihood that other list members would invite him or her to their homes and would phone the member. In addition, certain types of list uses were related to the shift of social ties from electronic to other channels. Individuals who used the list to seek help in household tasks were more likely to get phone calls, personal emails, and invitations from residents they met through the list. Individuals who used the list to express their opinion on local and community issues were more likely to be approached by phone and personal email, and to be invited to other people's homes.

DISCUSSION

In the two communities we examined, the mailing list proved to play a role in improving the social integration of individuals in the extended community, but not in the residential neighborhood. Although the mailing list seemed neither to improve nor harm social relations in the local neighborhood, it clearly supported and facilitated contacts with members of the community at large. One of the most important uses of the mailing lists was information seeking within the community. The most frequent uses were gathering information on community center activities, synagogue activities, and cultural events. Knowledge of these events increased the likelihood of participation and provided opportunities for face-to-face meetings, exchange of ideas, and participation in local issues.

Civic participation in local issues has been described as a major community problem. Dual-career families with young children have limited free time, and this restricts their ability to express their opinions on local issues. Community networking appears to provide new opportunities for citizen participation and involvement in community issues. Our study has yielded some evidence that the local mailing lists enhance residents' participation in politics. Close to 40 percent of our survey participants reported that they used the mailing list to express their opinions on community and neighborhood issues. Furthermore, our study showed evidence that mailing-list members were receptive to opinions on local and community issues.

Residents who used the mailing lists to express their opinions were more likely to be contacted by other residents and more likely to receive phone calls, to be invited to visit, and to be sent private emails by other residents. In this sense, the mailing lists can be viewed as a new opportunity for community building and broadening the extent of residents' involvement in local issues, as the mailing list allows them to be involved citizens in their spare time.

In terms of social involvement in the community, the results showed that the mailing list did not replace traditional channels of forming and developing locally-based social relationships. The most frequent places to meet new people were still casual encounters on the street, on the bus, and at the supermarket, as well as at synagogue and educational institutions. But it is apparent that the mailing list did play an important role, not by replacing, but by complementing, other community contexts. Around 68 percent of

the respondents reported that they met people who lived in town through the mailing list.

Our results demonstrate again that the early division between “virtual” and “nonvirtual” communities does not exist, at least as regards geographically-based mailing lists (or other forms of locally-based online communication). Almost two-thirds of the respondents phoned or were phoned by individuals they had met through the list, and one-third reported that they had invited people or had been invited to the homes of people they first met that way. The results indicate a clear shift from online to face-to-face relationships, an indication that the mailing lists complement but do not replace other channels of communication.

The question whether the mailing list is a channel of social integration in a locality can be answered under some limitations. The extent and type of participation on the mailing list was not related to social relations in the local neighborhood. Relations with close neighbors were still explained by the individual’s social and economic investment in the locality. However, the extent and type of membership on the mailing list was positively correlated with relations in the extended suburb.

Our findings differ from those of the Netville research cited earlier (Hampton and Wellman, 2001) and from the concept of glocalization devised by Wellman et al. (1996). According to these, extensive use of the Internet in general and of community networking in particular should enhance personal communications at the immediate neighborhood level as well as distant (out-of-town) communication. Hampton (2002) argues that North American neighborhoods lack institutional opportunities and common neighborhood spaces that facilitate social contact among neighbors. The mailing list builds the community because it provides the opportunity for local social interaction, which facilitates community involvement and a sense of territoriality. The situation seems to differ in Israel as social involvement with neighbors is high and residents define the neighborhood as a territory that is the basis for the development of neighborly relations of reciprocal help and support (Schnell and Goldhaber, 2001; Mesch and Manor, 1998).

Our findings appear to support the community-mediated model, which holds that social ties can be either close-expressive or distant-instrumental. According to this view, technology enables the individual to enhance nonlocal relationships, so this model predicts that extensive community networking use will be associated with distant and nonlocal connections, those not at the immediate neighborhood level. In terms of the “mediated-community” model, our findings indicate that the mailing list supports the development of extraneighborhood ties, which, according to this model, are critical for the local neighborhood’s capacity to be integrated into the larger community. Furthermore, some of these ties are not only extracommunity instrumental but become extracommunity expressive. About a third of our respondents reported that individuals who were first met on the list invited them home, and one of the predictors of being invited to another’s home was using the list to seek help.

At the same time, our findings have certain limitations. The relationship of mailing-list use, activity conducted on it, and knowing people in town is correlative rather than causal. Given the cross-sectional nature of this study, we cannot argue that active membership on the mailing list expands local ties. Also, individuals closely involved in ties with other town residents may be more likely to use the mailing list. Our findings provide evidence that active membership on the mailing list did not reduce the member’s number of ties in

the town. Future studies may benefit from a longitudinal design to clarify the direction of this relationship.

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