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# Real and Virtual Social Ties

## Connections in the Everyday Lives of Seven Ethnic Neighborhoods

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*The relationship between online and offline social ties is studied in seven Los Angeles ethnically marked residential areas. Contrary to visions proposing a zero-sum game between the two, the authors advance a “the more, the more” approach to online social ties. A higher level of belonging to real communities translates into a higher propensity for interaction online. This approach is informed by a social shaping of technology perspective, which proposes that strong anchoring to offline social and cultural groups links cyberspace to people’s local communities. Results of a logistic regression analysis indicate that the chances of making a friend online increase by 7% for each belonging index unit and by 32% for each neighbor known well enough to talk to about a personal problem. Belonging is captured through an index measure, combining eight items concerning objective and subjective involvement in residential community. Ethnic differences are less pronounced than expected. However, Asian respondents, particularly those of Korean descent, are more likely to form online ties than mainstream White respondents. Focus group data suggest that online ties are established with people of the same ethnicity.*

**The emergence of the Internet** as a communication and social interaction tool was initially met with great hopes for revitalizing the faltering sense of community afflicting late-modern societies (Putnam, 2000; Rheingold, 1994). Although this optimistic perspective is still popular, especially in technophile media circles (Katz, 1997), there are fears that the main asset of Internet interaction—virtual social connections between people who never meet in person—could in fact become a social liability. The greatest fear is that online social ties will substitute for offline social bonds; the more we are online, the more we will abandon our neighbors and families, preferring online relationships for their greater degree of freedom (Kraut et al., 1998). Some of the fear is that we will

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engage online not with people but just with the online environment, that is, it is not so much a change of venue, but a change from people to technology (Nie & Erbring, 2000).

These fears might be just as unsubstantiated as the hopes they try to debunk. Starting with the telephone (Fischer, 1992), communication technology has been used for reinforcing preexisting social, political, and cultural patterns (Dutton, 1996; Winner, 1977). More recently, empirical studies taking a social shaping of technology perspective (Ball-Rokeach, Gibbs, Jung, Kim, & Qiu, 2000; Hampton, 2001; Katz & Aspden, 1997; Rainie & Kohut, 2000) have provided substantial evidence that people who connect to the Internet are more likely to use it for cultivating their social and cultural proclivities.

However, the explanatory models offered by this type of research are often insufficiently specified. They only indicate that there is a relationship between being an Internet user and the likelihood of being involved in the real world. Although useful heuristic tools, these models do not address the core question of if and how social relationships in either space (real or virtual) interact.

The present study seeks to fill this gap with findings from a multiyear study of communication technology and sense of community in real and virtual spaces conducted by the Annenberg School for Communication, University of Southern California. Our research indicates that the best predictor of making friends online is the presence of personal ties in real community. The fact that study samples are drawn from seven different ethnically marked neighborhoods in Los Angeles increases the substantive significance of these findings. The relationship between online and offline ties holds after controlling for sociodemographic characteristics (gender, income, age, education) and, most important, for respondent ethnic community/residential area and number of generations respondents' families have been residing in the United States.

Our research also indicates that there are substantial connectivity differences between the Asian study groups and a Caucasian study group closest, in sociocultural terms, to the American mainstream population. The Korean<sup>1</sup> group and, to a lesser extent, the Chinese group included are far more likely to have made a friend online than any of the other groups. We interpret these findings from a sociocultural shaping of technology perspective.

### **ONLINE SOCIABILITY AND THE SOCIOCULTURAL SHAPING OF TECHNOLOGY PARADIGM**

The exponential growth of Internet access in the past decade has transformed several means of communication previously reserved for the corporate and academic elites into mass consumption goods. This has led some observers to speculate about the capacity of computer communication to generate new social formations, freed from place and traditional institutional constraint (Barlow, 1994; Katz, 1997; Mitchell, 1995; Rushkof, 1994).

The Internet and its component technologies (e.g., e-mail, newsgroups, chat facilities, on-demand media, home pages) are sometimes seen as eminently democratic tools of communication because they are relatively cheap compared to the costs of traditional media publishing, and they could facilitate access to public debates (Rheingold, 1994; Schuler, 1996). One of the central themes of this vision is that Internet communication creates *sui generis* social groups, capable of supplementing and, in the long run, replacing interaction in the real world. The thinking is that online social spaces would ease the burden of ascribed identities and allegiances built into our social, ethnic, and physical communities (Poster, 1997; Rheingold, 1994; Watson, 1997).

It did not take long for critics to question this view. To the claims of ease of access are brought counterclaims of a gaping digital divide (Barbrook & Cameron, 1995; Castells, 1996; McConnaughey, Lader, Chin, & Everette, 1998). Other critics point to the fact that identity switching can weaken social responsibility (Seabrook, 1997). Finding that people who spend more than 5 hours a week online report spending less time with friends and family, Nie and Erbring (2000) concluded that the Internet leads to social atomization. Kraut et al. (1998) similarly concluded that those who spend more time online become lonelier and more depressed. Although a useful corrective factor, some of these critiques (Brook & Boal, 1995; Kraut et al., 1998; Nie & Erbring, 2000) presented the negative social effects of the Internet in no less direct or powerful terms than those of the position they scrutinized. Both perspectives overestimate the capacity of technology to change deep-seated social and cultural arrangements and proclivities.

Analysts inspired by a broader sociological perspective focus on the interplay of social, cultural, and technological factors. This social construction of technology view can be synthesized in the proposition that communication technologies are the product of social choices that predate them (Bijker, Hughes, & Pinch, 1987; Dutton, 1996; MacKenzie & Wajcman, 1985). The Internet, like many other modern electronic media, is rooted in social and cultural history, and participation in online groups is linked to powerful sociocultural forces outside the domain of technology *per se* (Baym, 1998; Carey, 1988; Doheny-Farina, 1996; Fernback, 1997; Fischer, 1992; Jones, 1997; Mantovani, 1994; Matei, 1998; Wellman et al., 1996).

Communication scholars dissatisfied with the ideological poverty of early theorizing on the social effects of Internet technologies have tried to offer more dynamic scenarios about the role of computer-mediated communication in society (Ball-Rokeach, Gibbs, Jung, et al., 2000; Baym, 1998; Fernback & Thompson, 1995; Katz & Aspden, 1997; Mantovani, 1994; Parks & Floyd, 1996; Wellman, *in press*). Parks and Floyd (1996) documented the strength and similarity of online and offline personal relationships. The Pew Internet studies suggested that Internet users are increasingly using the medium to maintain and reinforce their existing offline social networks (Howard, Rainie, & Jones, *in press*; Rainie & Kohut, 2000). Howard et al. (*in press*) report that online

experience does not replace other forms of social interaction; instead, it complements and extends them. Controlling for sociodemographic characteristics, they found that people who have been online at least once are more likely to have called a friend or relative yesterday. E-mail was found to be an important communication tool for improving intrafamily communication.

An early 1995 Internet effects study by Katz and Aspden (1997) concluded that experienced Internet users, compared to those less experienced, maintain stronger connections with their friends and families and are more likely to be members of community organizations and to be involved in community affairs. A study by Hampton (2001) conducted in a highly Internet-connected Toronto neighborhood found that Internet-access households compared to unconnected households know three times as many local residents, talk with twice as many, and are more likely to invite their neighbors to their homes than their non-Internet-connected neighbors. Finally, some early cybertown boosters now argue that the technical advantages of the medium can be maximized only in social contexts, including geographic communities, which take full advantage of the social commitments of their users (Rheingold, 1998).

These findings should come as no surprise because studies of old media (e.g., the telephone) have revealed that telecommunication networks have often strengthened local social ties (Fischer, 1992; Pool, 1983). Thus, the social effects of Internet technologies should not be seen as a pure media problem. Computer-mediated communication and communicators should be researched as part of everyday social life (Ball-Rokeach, Gibbs, Gutierrez Hoyt, et al., 2000; Ball-Rokeach, Gibbs, Jung, et al., 2000). Forces similar to those operating in nonnetworked groups—cultural, social, and ethnic—will most probably affect online groups as well (Baym, 1998). Visions about, and value-orientations toward, online and offline spaces are in fact similar because they originate in people's minds, not in cyberspace itself. They are influenced by all those things that have an impact on the way people think: education, social class or status, gender, ethnic background, residential location, and so forth.

The larger theoretical corollary of this proposition is that the social effects of the Internet should be placed in the framework of people's sociostructural connections, including cultural, ethnic, social, and local-physical circumstances. The methodological implication is that real and virtual space cannot be studied in isolation. Because offline ties and values precede online connections historically—both at a social and an individual level—the strength of virtual ties can be expected to reflect those of real ones.

### **HYPOTHESIS AND RESEARCH QUESTION**

The present study investigates the relationship between offline social ties and online social involvement by testing one central hypothesis and by exploring a related research question. The hypothesis advances the proposition that online

and offline social ties are related. The data set utilized includes a wide array of ethnic groups living in an urban setting. Thus, the present study also explores how ethnic-specific social and cultural characteristics mediate the link between online and offline social ties. This concern springs not only from the nature of the data but also from the paucity of research on ethnically diverse environments. To our knowledge, this study is the first quantitative assessment of the way in which specific ethnicities (e.g., Chinese or Korean vs. Asian racial category) incorporate the Internet in their daily lives. Previous studies took an ethnographic, case-study approach (Cisler, 1998; Mitra, 1997; Zurawski, 1996), with rare exceptions taking a comparative approach (Gibbs, Matei, Mandavil, & Yi, 1997).

Offline social anchoring is considered from a sociological perspective. That is, offline social ties are considered under the rubric of belonging, synthesized into an index score, which incorporates both subjective appraisals of neighborliness and actual interaction in real communities (see Method section). This measure is essential in testing the central assertion of this study, that is, that the likelihood of making social ties online is stronger when people have stronger social ties in physical neighborhoods.

*Hypothesis:* The higher the level of belonging to local community, the higher the likelihood of making new personal bonds online.

Our multiethnic study samples live in seven distinct urban-residential areas. Differences in social connection online and offline can be influenced by social contexts and by value orientations reflected in ethnic/residential background. Because there is little research or theoretical work on which to base predictions about such interethnic differences, they are explored through a research question.

*Research Question:* Do residential/ethnic differences mediate the relationships between offline social bonds and online social ties?

## METHOD

### DATA COLLECTION

The data analyzed in this article were provided by the Metamorphosis project. Individual- and group-level information about communication technology and community attachment was collected through a multimethod strategy, including telephone and mail surveys, a media census, focus groups, mental mapping, and structured interviews. The core of the study is a random telephone survey of selected Los Angeles neighborhoods.<sup>2</sup> The ethnicities represented in

the study samples constitute 90% of the Los Angeles county population (Matei, Ball-Rokeach, Wilson, Gibbs, & Gutierrez Hoyt, in press).

The response rate to the telephone survey was low, 31%, calculated by dividing the number of completed interviews by the number of theoretically eligible phone numbers. Despite the fact that the phone interview was relatively long (40 to 45 minutes), the cooperation rate—percentage of eligible respondents contacted who completed the survey—was relatively high, 62%.<sup>3</sup> Although there are sample biases due to the response rate, they appear to be within the normal range for a survey of this complexity (Keeter, Kohut, Groves, & Presser, 2000). The sample overrepresents females, higher income earners, those with higher education, and older residents (Matei et al., in press). Our unusual multilingual data collection procedures include non-English-speaking persons often excluded in survey research. Hence, our study has relatively large numbers of ethnic minorities and new immigrants who live in homogeneous residential areas.

## INSTRUMENTS

The bulk of the data presented in this study were collected through the telephone survey, focus groups, and the mail survey. They were all made accessible to non-English speakers in their native languages (Chinese, both in the Mandarin and Cantonese dialects; Korean; and Spanish). The telephone interviews include measures of (a) participation and level of social interaction in online groups; (b) a sense of belonging to the community or neighborhood, measured by integration with the community or neighborhood; and (c) sociodemographic information (e.g., age, education, income, and generation in the United States).

In addition to participating in the telephone survey, Internet-connected telephone survey respondents and their children were invited to participate in focus groups and a supplementary mail survey ( $N = 115$ ).<sup>4</sup> Focus groups revealed how Internet social relations are integrated into the life of each participant's family and community (Ball-Rokeach, Gibbs, Jung, et al., 2000). The mail survey provided information about the types and scope of social online connections, such as Web sites most frequently visited and their location (country).

## MEASURES

Social involvement in physical communities was measured through a belonging index specifically developed for this study, building on preexisting literature (Chavis & Wandersman, 1990; Hui, 1988; McLeod et al., 1996). This eight-item measure captures subjective and objective attachment/involvement with the neighborhood (Chavis & Wandersman, 1990; Hui, 1988; McLeod et al., 1996).

Four items capture the subjective dimension of belonging to the neighborhood (responses ranged from *strongly agree*, *agree*, *neither agree nor disagree*, *disagree*, to *strongly disagree*): (a) you are interested in knowing what your neighbors are like (55% of respondents *agree* or *strongly agree*), (b) you enjoy meeting and talking with your neighbors (73% of respondents *agree* or *strongly agree*), (c) it is easy to become friends with your neighbors (67% of respondents *agree* or *strongly agree*), (d) your neighbors always borrow things from you and your family (32% of respondents *agree* or *strongly agree*).

Four other items capture the objective dimension of belonging, asking how many of the respondents knew their neighbors well enough to ask for assistance (the respondent can specify any number equal to or greater than 0). The items are (a) keep watch on house or apartment ( $M = 3.5$ ,  $SD = 5.8$ ), (b) ask for a ride ( $M = 3$ ,  $SD = 5.6$ ), (c) talk with them about a personal problem ( $M = 1.4$ ,  $SD = 2.8$ ), and (d) ask for assistance in making a repair ( $M = 1.9$ ,  $SD = 3.4$ ).

The “number of neighbors” items were capped at 10 or more due to skewness. They were further divided by 2 to be brought to the same metric with the *agree/disagree* (subjective) variables. To reduce missing cases in the final belonging index score, all missing cases were replaced with the variable mean. The belonging index was created by summing all eight items. The Cronbach’s alpha test for the eight-item index scalability is a high .78.

South Pasadena/White respondents and Crenshaw/African Americans had the highest mean level of belonging, 19.5 ( $SD = 5.81$ ,  $n = 251$ ) and 20 ( $SD = 6.5$ ,  $n = 252$ ), respectively. The lowest scores are for the Greater Monterey Park/Chinese, 15.7 ( $SD = 3.8$ ,  $n = 321$ ), and Greater Koreatown/Korean respondents, 16 ( $SD = 5.4$ ,  $n = 238$ ). In the rest of the study areas, the mean belonging scores were East Los Angeles/Hispanic-Mexican, 18.8 ( $SD = 5.7$ ,  $n = 250$ ); Westside/White, 17.68 ( $SD = 5.6$ ,  $n = 250$ ); and Pico-Union/Hispanic-Central-American, 16.6 ( $SD = 5$ ,  $n = 250$ ).

Social connectedness online was measured by asking if the respondent had ever met someone online whom they considered a personal friend. Of the 350 respondents eligible to answer this question—that is, those who participate in online activities that include other people—22.3% answered yes. Raw likelihood of making friends online varies widely across ethnic groups. Whereas 44% of the qualified Koreans and 31% of Chinese respondents have made a friend online, only 19% of the Whites from Westside, 16% of the African Americans from Crenshaw, 15% of Pico-Union Hispanics, 13% of South Pasadena Whites, and 7% of East Los Angeles Hispanics respondents did the same.

The mail survey provided information about the scope of new media connections. That is, respondents were asked to indicate the five World Wide Web sites they visited most frequently. Sites were then categorized according to the location of their main target audience: local (Los Angeles), national-ethnic (country of origin), in the United States, and placeless (e.g., addressing a world audience such as Yahoo or Hotmail).



**TABLE 1: Variables Predicting Likelihood of Making a Personal Friend Online**

<i>Independent Variable</i>	<i>B</i>	<i>SE</i>	<i>Wald</i>	<i>p</i>	<i>Exp(B)</i>
Education	0.18	0.12	2.45	.12	1.20
Age	-0.01	0.01	0.43	.51	0.99
Income	-0.10	0.09	1.42	.23	0.90
Gender (male)	0.54	0.30	3.20	.07	1.71
Immigration generation	-0.14	0.13	1.10	.29	0.87
Belonging index	0.06	0.03	4.66	.03	1.07
Koreatown resident	3.21	1.33	5.80	.01	24.69
Crenshaw resident	0.22	0.57	0.15	.70	1.25
East Los Angeles resident	-1.21	0.89	1.84	.17	0.30
Monterey Park resident	0.58	0.58	1.00	.31	1.79
Westside resident	0.13	0.54	0.06	.80	1.14
Pico Union resident	-0.56	0.82	0.46	.50	0.57
Interaction Koreatown residency-belonging	-0.12	0.07	3.07	.08	0.88

NOTE: Model  $df = 321$ ,  $\chi^2 = 31.47$ ,  $p < .01$ .

## ANALYSIS

### DATA SET PREPARATION AND STATISTICAL MODELS DESIGN

Analysis was performed by logistic regression, which is sensitive to our categorical dependent variable—whether the respondent has made a friend online, yes (1) or no (0). Belonging and residential location are treated as main predictor variables. Location was operationalized as a series of dummy variables. All locations were compared to the South Pasadena study area (middle-class White Protestants), as this is considered to be the closest to the American mainstream. Because only one ethnicity was sampled from each area, the location variable also represents ethnicity. Age, income, education, gender, and generation of immigration to the United States were employed as control variables.

### FINDINGS

We hypothesize that belonging to local community increases the likelihood of making friends online. Logistic regression indicates that firmer anchoring to one's neighborhood (i.e., higher belonging score) is associated with greater chances of making personal friends in virtual (online) environments (see Table 1). For each unit increase in belonging, the chances of making a friend online are augmented by 7%,  $B = .06$ ,  $SE = .03$ ,  $Wald = 4.66$ ,  $p < .05$ ,  $exp(B) = 1.07$ .

Thus, the results are consistent with our hypothesis. Above and beyond sociodemographic or area characteristics, there is a clear positive connection between online and offline social ties. This indicates that people's basic community orientation is equally strong online and offline.

*The special case of Korean connections.* The model providing this result, however, required us to introduce among the independent variables an interaction term between being Korean and belonging. This was demanded by the fact that an initial model, using as independent variables only belonging, location, and sociodemographics, failed to provide significant results for belonging or for any of the residential areas/ethnic group variables.<sup>5</sup>

Introducing in the logistic regression equation an interaction term was directed by the observation that Koreatown respondents who have made a friend online score disproportionately low on the belonging scale. Dividing Koreans into three groups, in terms of belonging low, medium, and high,<sup>6</sup> indicates that whereas 56% of those in the bottom category have made a friend online, only 44% of the top category have done the same. This is even more surprising on finding that Koreans living in Koreatown have a 25 times greater chance of making a personal friend online than the mainstream Whites living in South Pasadena (see Table 1).

*Post hoc analysis interpretation.* We suspected that Koreans' irregular behavior in terms of belonging and online social ties is due, at least in part, to the characteristics of the area in which they live rather than to individual-level social inclinations. Koreatown is one of the poorest, most crime-ridden, and most ethnically diverse study areas (Ball-Rokeach, Gibbs, Gutierrez Hoyt, et al., 2000). Lower level of belonging among Koreatown online interactors was believed to be produced by lower assessment of neighborliness, not by lack of personal ties in neighborhood. To explore this alternative, a post hoc logistic regression model was generated using the main predictor instead of belonging as one of its components. This is the item that captures the most intimate neighborhood connections: the number of neighbors known with whom a person can talk about a personal problem. This is highly correlated with the whole index ( $r = .65$ ,  $N = 1,746$ ). The model includes the same control variables and no interaction term. The rationale behind this model was that if the number of strong personal ties in the neighborhood predicts, in absence of any interaction terms, the likelihood of making online friends, then the problem we faced in Koreatown came from the items left out (weak interpersonal links and strength of neighborliness).

The results indicate that the variable "number of neighbors with whom one can talk about a personal problem" predicts more directly (i.e., no interaction terms were used) the likelihood of making friends online. For each extra person known in this way, the chances of making a friend online increase by 32%,  $B = .27$ ,  $SE = .13$ ,  $Wald = 4.45$ ,  $p < .05$ ,  $\exp(B) = 1.32$ ,  $Model\ df = 311$ ,  $\chi^2 = 27.19$ ,  $p < .01$ . Thus, respondents from all groups (including Koreans) are equally likely to form personal ties online when they know a greater number of people in the neighborhood to talk about a personal problem.

*Research question: The role of ethnicity in general.* The logistic regression presented in Table 1 also provides the data necessary to assess the more general

role played by ethnicity in mediating the relationship between online and offline ties. These results were supplemented by information collected through focus group discussions. The findings suggest that the role of ethnicity is weaker than expected. Only for one community out of the seven studied—that of Koreatown Korean residents—did we detect a negative effect on likelihood of making online friends for ethnicity/residential area above and beyond social connection and control variables.

The data indicate, however, that before controlling for basic sociodemographic variables, not only the Korean but also the Chinese study group displays a higher propensity for forming online ties than the White comparison group. We took the difference between the Asian and the White mainstream group to be phenomenological, that is, to be part and parcel of what it means to be a Korean or Chinese immigrant in Los Angeles—for example, relatively low income, but higher educational attainment and thus higher Internet connectivity. In the following discussion, we seek a fuller account of these ethnic differences in online connections by examining our qualitative focus group data and data gathered through the mail survey.

### **KOREAN AND CHINESE ONLINE TIES: FOCUS GROUP INSIGHTS**

A consistent theme that emerged during the focus groups was that online connections link our respondents to people or institutions of similar ethnicity or countries of origin: 36% of the Web sites visited by most of the Korean and 24% visited by Chinese focus group and mail survey participants were in Korea or China, respectively. Except for a few Central American Web sites visited by Latino Internet users from Pico-Union (4% of total), no country of origin (i.e., preceding immigration to the United States) Web sites were visited by the Mexican, Caucasian, or African American respondents.

Focus group discussions also reveal that new online social connections are mostly made within the ethnic group. Korean respondents indicate that they have met or know of friends who have met mostly other Koreans online. A Chinese respondent believes that “making friends on the Internet is like making friends in the real world,”<sup>7</sup> the assumption being that ethnicity plays the same important role. During the discussion, a Korean woman said that she found it difficult to make friends when she first came to the United States. E-mail was for her a natural way to contact Korean friends who live far away. In her own words, through e-mail “it seems like they live close to me.”

Compared to the Asian samples, the Whites seem less cautious when it comes to online interaction with ethnic out-group people. Although expressing reservations toward some Internet encounters, especially those involving their children, some White respondents (Westside and South Pasadena) do show interest in meeting non-Americans online. One respondent from South

Pasadena, for example, declares that she loves making friends from other countries online or participating in French chat rooms. Respondents from the Westside seemed to be relatively more open to business virtual relationships. Yet in general terms, Asian and White respondents converge in using the Internet for reinforcing preexisting social ties. For the White respondents this takes a personal rather than an ethnic twist.

Thus, preexisting social networks organized along ethnic lines support the two Asian groups' propensity for making friends online. These are seen as natural environments for meshing real and online social networks. Chinese and Korean respondents manifest apprehension toward making anonymous or out-group online relationships. A Chinese respondent told a relevant anecdote: "People may cheat you. In Taiwan there was a woman who cheated lots of guys to mail her money by sending out beautiful pictures. But she's actually ugly and fat." Another Chinese respondent is weary of the licentiousness of some online environments. "People can say everything including shameless stuff. I was in a chat room once. There were some shameless guys there. I felt bad about it and never tried chat room again."

The Korean respondents resonate with these opinions. They believe that online relationships outside one's in-group are shallow. One man declared that what turns him away from online relationships with people met randomly on the Internet is that "people talk about happy things, but not about sad things. Sad stories are not usually shared via Internet." A woman continued his thought: "Online friends are just for fun, not for serious relationships." In conclusion, focus group information suggests that Asian respondents have an in-group social orientation when building ties online. These are seen as a continuation of their offline social networks, created largely through ethnic affiliation.

## DISCUSSION AND CONCLUSIONS

This article investigated the relationship between online and offline social ties in an ethnically diverse urban environment. Contrary to visions proposing a zero-sum game, our research advances a "the more, the more" approach to online bonds. Rejecting overly optimistic perspectives (Anderson, Bikson, Law, & Mitchell, 1995; Barlow, 1994; Katz, 1997; Mitchell, 1995; Rushkof, 1994; Sproull & Kiesler, 1991) or those overly pessimistic (Kraut et al., 1998; Nie & Erbring, 2000), we propose that a higher level of belonging to real communities translates into a higher propensity for interaction online. The inclination to form and maintain lasting ties online or offline derives from social and cultural resources and the proclivities of people acting in context of their real communities, rather than from characteristics of the medium. Thus, our findings support the social shaping of technology perspective in that strong anchoring to offline social and cultural groups links cyberspace to rather than separates it from people's local communities. These findings confirm a growing body of

research looking at the online sociability phenomenon (Hampton, 2001; Rainie & Kohut, 2000; Wellman, in press).

Korean residents of Koreatown, however, present a deviant outcome. Controlling for location and sociodemographics, Koreans are also the ones most likely to have friends in cyberspace but less likely to belong to their neighborhood. On the basis of the observed interaction effect between being a Korean Koreatown resident and belonging, we suggest that this reflects residential area, not ethnicity characteristics. Koreatown is culturally and socially fragmented. The overall level of belonging for Koreans in Koreatown, both for Internet users and nonusers, is one of the lowest among our study samples. In addition, most middle-class, educated Koreans are spread throughout wealthier Los Angeles suburbs. Relatively educated Internet-connected Koreans residing in Koreatown may feel isolated from their residential environs, compensating for the social shortcomings of the area by extending their connections to other Koreans in South Korea.

The particularities of the Korean sample point to the limitations and the advantages of our research design. Our data set is limited in that we surveyed only one ethnicity per study area. Thus, a multilevel analysis procedure to more clearly distinguish between ethnic group versus area characteristics effects was not possible. A more conclusive analysis awaits future research in which we sample multiple ethnicities from the same residential area.

Until then, the potential significance and strength of our findings is in the substantial convergence of these case studies. In terms of practical implications, our findings suggest that technology/community building interventions should be dual track. Efforts to build community locally should have payoffs for Internet community—what we have called a magnifying glass effect. People who contribute social capital to their residential places can also be expected to lend their social capital to the online groups they inhabit. Put another way, unless social connections online are supported by preexisting social and cultural networks offline, their long-term prospects are probably not that great. Continued efforts to understand the linkage between the two social spaces can help us to more effectively foster stronger and more viable ties between people in both worlds.

## NOTES

1. Ethnicity is designated in the text by the shortest label available: African American, Chinese, Korean, Mexican or Central American, and White. Obviously, these names reflect the ethnic or racial origin. Thus, these names should be read as Chinese or Korean origin groups or individuals.

2. Westside, White; Greater Crenshaw, African American; East Los Angeles, Mexican American; Pico-Union, Central American; Koreatown, Korean; South Pasadena, White; Monterey Park, Chinese (Allen & Turner, 1997). From each neighborhood, only respondents of the target ethnicity were recruited for the study.

3. The main reason for the low response rate is inability to determine eligibility for 40% of the phone numbers introduced in the sampling frame (due to no response), despite five callbacks. These phone numbers had to be kept in the sampling frame as theoretically eligible and were used in determining the final response rate. A full discussion of the response rate can be found in the Metamorphosis study technical report, available at <http://www.metamorph.org/vault/techreport.zip>.
4. See Web site in Note 3 for description of focus group and mail survey protocols.
5. Belonging:  $B = .04$ ,  $SE = .03$ ,  $Wald = 2.41$ ,  $p = .12$ ,  $\exp(B) = 1.04$ .
6. The medium category includes scores above or below .5 deviations from the mean; low scores below .5 deviations; and high scores above .5 standard deviations.
7. Citations are from the focus group transcripts.

## REFERENCES

- Allen, J. P., & Turner, E. (1997). *The ethnic quilt: Population diversity in Southern California*. Northridge: California State University, Center for Geographical Studies.
- Anderson, R. H., Bikson, T. K., Law, S. A., & Mitchell, B. M. (1995). *Universal access to e-mail: Feasibility and societal implications*. Santa Monica, CA: RAND.
- Ball-Rokeach, S. J., Gibbs, J., Gutierrez Hoyt, E., Jung, J. -Y., Kim, Y. -C., Matei, S., Wilson, M., Yuan, Y., & Zhang, L. (2000). *The challenge of belonging in the 21st century: The case of Los Angeles* (White Paper 1) [Online]. Los Angeles: Annenberg School for Communication, Metamorphosis Project. Available: <http://www.metamorph.org/vault/belonging.html>
- Ball-Rokeach, S. J., Gibbs, J., Jung, J. -Y., Kim, Y. -C., & Qiu, J. (2000). *The globalization of everyday life: Visions and reality* (White Paper 2) [Online]. Los Angeles: Annenberg School for Communication, Metamorphosis Project. Available: <http://www.metamorph.org/vault/globalization.html>
- Barbrook, R., & Cameron, A. (1995). *The Californian ideology* [Online]. Available: <http://www.wmin.ac.uk/media/HRC/ci/calif5.html>
- Barlow, J. P. (1994). *Jack in, young pioneer* [Online]. Available: [http://www.eff.org/pub/Misc/Publications/John\\_Perry\\_Barlow/virtual\\_frontier\\_barlow\\_eff.article](http://www.eff.org/pub/Misc/Publications/John_Perry_Barlow/virtual_frontier_barlow_eff.article)
- Baym, N. (1998). The emergence of online community. In S. Jones (Ed.), *Cybersociety 2.0* (pp. 35-68). Thousand Oaks, CA: Sage.
- Bijker, W. E., Hughes, T. P., & Pinch, T. J. (1987). *The social construction of technological systems: New directions in the sociology and history of technology*. Cambridge, MA: MIT Press.
- Brook, J., & Boal, I. (1995). *Resisting the virtual life: The culture and politics of information*. San Francisco: City Lights.
- Carey, J. (1988). The mythos of the electronic revolution. In J. Carey (Ed.), *Communication as culture* (pp. 113-141). Boston: Unwin Hyman.
- Castells, M. (1996). *The rise of network society*. Cambridge, MA: Blackwell.
- Chavis, D. M., & Wandersman, A. (1990). Sense of community in the urban environment: A catalyst for participation and community development. *American Journal of Community Psychology*, 18(1), 55-79.
- Cisler, S. (1998). Introduction: The Internet and indigenous groups. *Cultural Survival Quarterly* [Online], 21(4). Available: <http://www.cs.org/publications/CSQ/csqinternet.html>
- Doheny-Farina, S. (1996). *The wired neighborhood*. New Haven, CT: Yale University Press.
- Dutton, W. H. (Ed.). (1996). *Information and communication technologies: Visions and realities*. Oxford, UK: Oxford University Press.
- Fernback, J. (1997). The individual within the collective: Virtual ideology and the realization of collective principles. In S. Jones (Ed.), *Virtual culture* (pp. 36-54). Thousand Oaks, CA: Sage.
- Fernback, J., & Thompson, B. (1995). *Virtual communities: Abort, retry, failure?* [Online]. Available: <http://www.well.com/user/hlr/texts/VCCivil.html>

- Fischer, C. (1992). *America calling: A social history of the telephone to 1940*. Berkeley: University of California Press.
- Gibbs, J., Matei, S., Mandavil, A., & Yi, H. (1997, July 10-13). *Expression of local/global identity in personal homepages* [Online]. Paper presented at the Rochester Institute for Technology Communication, Technology, and Cultural Values Conference, Rochester, NY. Available: <http://matei.org/natid/natidreport.rtf>
- Hampton, K. (2001). *Living the wired life in the wired suburb: Netville, glocalization, and civic society*. Unpublished doctoral dissertation, University of Toronto, Canada.
- Howard, P., Rainie, L., & Jones, S. (in press). The Internet in everyday life: The impact of a diffusing technology. *American Behavioral Scientist*.
- Hui, C. H. (1988). Measurement of individualism & collectivism. *Journal of Research in Personality*, 22(1), 17-36.
- Jones, S. (1997). The Internet and its social landscape. In S. Jones (Ed.), *Virtual culture: Identity and communication in cybersociety* (pp. 7-35). Thousand Oaks, CA: Sage.
- Katz, J. (1997, December). The Netizen—Special report. *Hotwired* [Online], 5. Available: <http://www.wired.com/wired/archive/5.12/netizen.html>
- Katz, J., & Aspden, P. (1997). A nation of strangers. *Communications of the ACM*, 40(12), 81-86.
- Keeter, S., Kohut, A., Groves, R. M., & Presser, S. (2000, January). *Consequences of reducing nonresponse in a national telephone survey* [Online]. Available: <http://mason.gmu.edu/~skeeter/nonresponse.zip>
- Kraut, R., Lundmark, V., Patterson, M., Kielsler, S., Mukopadhyay, T., & Scherlis, W. (1998). Internet paradox: A social technology that produces social involvement and psychological well-being? *American Psychologist*, 53(9), 1017-1031.
- MacKenzie, D., & Wajcman, J. (1985). *The social shaping of technology: How the refrigerator got its hum*. Philadelphia: Open University Press.
- Mantovani, G. (1994). Is computer-mediated communication intrinsically apt to enhance democracy in organizations? *Human Relations*, 47(1), 45-62.
- Matei, S. (1998). Virtual community as rhetorical vision and its American roots. In M. Prosser & K. S. Sitaram (Eds.), *Civic discourse: Intercultural, international, and global media* (pp. 45-59). Greenwich, CT: Ablex.
- Matei, S., Ball-Rokeach, S., Wilson, M., Gibbs, J., & Gutierrez Hoyt, E. (in press). Metamorphosis: A field research methodology for studying communication technology and community. *Electronic Journal of Communication/La Revue Electronique de Communication*.
- McConnaughey, J., Lader, W., Chin, R., & Everette, D. (1998). *Falling through the net: Defining the digital divide* [Online]. Washington, DC: U.S. Department of Commerce. Available: <http://www.ntia.doc.gov/ntiahome/fttn99/FTTN.pdf>
- McLeod, J. M., Daily, K., Guo, Z. S., Eveland, W. P., Jr., Bayer, J., Yang, S. C., & Wang, H. (1996). Community integration, local media use, and democratic-processes. *Communication Research*, 23(2), 179-209.
- Mitchell, W. J. (1995). *City of bits: space, place, and the infobahn*. Cambridge, MA: MIT Press.
- Mitra, A. (1997). Virtual communality: Looking for India on the Internet. In S. Jones (Ed.), *Virtual culture: Identity and communication in cybersociety* (pp. 55-79). Thousand Oaks, CA: Sage.
- Nie, N., & Erbring, L. (2000). *Internet and society* (Preliminary report). Palo Alto, CA: Stanford Institute for the Qualitative Study of Society.
- Parks, M. R., & Floyd, K. (1996). Making friends in cyberspace. *Journal of Communication*, 46(1), 80-97.
- Pool, I.D.S. (1983). *Forecasting the telephone: A retrospective technology assessment of the telephone*. Norwood, NJ: Ablex.
- Poster, M. (1997). Cyberdemocracy: Internet and the public sphere. In D. Porter (Ed.), *Internet culture* (pp. 201-218). New York: Routledge.
- Putnam, R. (2000). *Bowling alone*. New York: Simon & Schuster.

- Rainie, L., & Kohut, A. (2000). *Tracking online life: How women use the Internet to cultivate relationships with family and friends* (Internet Life Report 1) [Online]. Washington, DC: Pew Internet and American Life. Available: <http://63.210.24.35/reports/pdfs/Report1.pdf>
- Rheingold, H. (1994). *The virtual community: Homesteading on the electronic frontier* (1st ed.). New York: HarperPerennial.
- Rheingold, H. (1998, September 10). Misunderstanding new media. *Feed Magazine* [Online]. Available: <http://www.feedmag.com/essay/es102lofi.html>
- Rushkof, D. (1994). *Cyberia*. San Francisco: Harper.
- Schuler, D. (1996). *New community networks: Wired for change*. Reading, MA: Addison-Wesley.
- Seabrook, J. (1997). *Deeper*. New York: Simon & Schuster.
- Sproull, L., & Kiesler, S. B. (1991). *Connections: New ways of working in the networked organization*. Cambridge, MA: MIT Press.
- Watson, N. (1997). Why we argue about virtual community: A case study of the Phish.net fan community. In S. G. Jones (Ed.), *Virtual culture* (pp. 102-132). London: Sage.
- Wellman, B. (in press). Physical place and cyber place: The rise of networked individualism. *International Journal of Urban and Regional Research*, 25.
- Wellman, B., Salaff, J., Dimitrova, D., Garton, L., Gulia, M., & Haythornthwaite, C. (1996). Computer networks as social networks: Collaborative work, telework, and virtual community. *Annual Review of Sociology*, 22, 213-239.
- Winner, L. (1977). *Autonomous technology: Technics-out-of-control as a theme in political thought*. Cambridge, MA: MIT Press.
- Zurawski, N. (1996, June 24-28). *Ethnicity and the Internet in a global society* [Online]. Paper presented at the Sixth Annual Conference of the Internet Society, Montreal, Canada. Available: [http://www.isoc.org/inet96/proceedings/e8/e8\\_1.htm](http://www.isoc.org/inet96/proceedings/e8/e8_1.htm)