Internet and Community

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Current trends in Internet accessibility and use show that information and communication technologies (ICTs) are becoming increasingly integrated with everyday life (Gackenbach, 2006; Howard & Jones, 2003; Joinson, McKenna, Reips & Postmes, 2007; Wellman & Haythornthwaite, 2002). Broadband, wireless, and mobile computing—combined with social media such as blogging, microblogging, and social networking—provide a vibrant communication and information infrastructure for today's world. Research has often paid attention, separately and alternately, to highly virtual, online-only experiences and to highly local, geographically oriented use for "community development, economic regeneration, democratic renewal and social support" (Loader & Keeble, 2004, p. 1). These different literatures on ICTs and community have developed all but independently of each other, with little cross-referencing. But a growing body of research is now addressing the intersection, crossovers, and synergies between online and offline worlds. People are using the Internet in ways that are driving change in communities—specifically, where and how they are constituted—and creating transformative effects on how we define, attach to, and retain communal identity across online and offline venues. Current views of community are now tempered by activity and associations at the personal, group, and network levels, spanning multiple geographical locations but surprisingly rooted in local action and activity.

Each article in this special issue addresses how ICT use is associated with local, geographically based communities. These studies find that emergent and evolving uses of ICTs reinforce and regenerate geographically based community identities and that the Internet is used to reconnect and reinforce connections to specific locations. The articles fit into the context of a larger sphere of interest in the Internet and community, although they do not cover all aspects of this large and growing area of interest. In broad terms, we find that research on the Internet and community falls into these areas:

- work with communities in the appropriate placement and use of ICTs and the Internet, often with the goal of increasing the educational, career and commercial opportunities for residents in underserved areas (Bishop & Bruce, 2005; Gurstein, 2000; Schuler, 1996);
- surveys addressing wide-scale societal impacts of ICTs on communities, including how the presence or absence of education in and use of ICTs and the Internet creates differing social and economic outcomes across regions, countries, and the world—for example, in studies of the digital divide and the spectrum of digital access (Commission of the European Communities,

2005; National Telecommunications and Information Administration, 2000; Lenhart et al., 2003; Mossberger, Tolbert, & McNeal, 2007; Pew Internet & American Life Project, 2009);

- analysis of emergent phenomena affecting communities, such as new Internet-based configurations of social, educational, economic, and civic activity, as well as synergies between online and offline interaction, including research on
  - ♢ wholly or primarily online communities (Baym, 2000; Kendall 2002, 2009), including those communities emerging around new social media and participatory media practices (e.g., social networking sites: boyd & Ellison, 2007; photo-sharing, blogging, and microblogging: Erickson, 2010 [this issue]; games: Williams et al., 2006; see also Jenkins, 2006),
  - ♢ uses of Internet-based technologies in support of communal identity, action, and learning (online crowds and communities: Haythornthwaite, 2009; Howe, 2006; Rheingold, 2003; ubiquitous learning: Cope & Kalantzis, 2009; civic intelligence: Schuler, 2008; collective efficacy: Hampton, 2010 [this issue]),
  - ♢ reconceptualizations of community (based on online and/or offline social network ties rather than shared geography: Haythornthwaite, 2007b; Wellman, 1979; Wellman et al., 1996; originating online rather than offline: Haythornthwaite, Kazmer, Robins, & Shoemaker, 2000; Matzat, 2010 [this issue]; Rheingold, 2000); and, finally,
- analysis of identity in a mobile, global world, including (a) conflicts among different identity presentations, (b) the maintenance of ethnic, geographic, and online community identity, and (c) the potential and/or shortcomings of technology in the face of physical separation and local interests (Hagar & Haythornthwaite, 2005; Kang, 2009; Kendall, 2007; Lev-On, 2010 [this issue]; Shklovski, Burke, Kraut, & Kiesler, 2010 [this issue]).

The following provides a brief introduction to areas of Internet and community research focused on geographic identity and synergy, followed by a brief introduction to the articles in this issue.

Working With Communities

One branch of research on the Internet and community concentrates on conditions for the local community. The purpose of and approach to much of this work is to intervene and ameliorate conditions for those who (depending on the terminology) are considered to be on the wrong side of the digital divide, suffering from e-exclusion, or at the impoverished end of a digital spectrum (Barzilai-Nahon, 2006; Commission of the European Communities, 2005; Haythornthwaite, 2007a; Loader & Keeble, 2004; Mossberger et al., 2007; National Telecommunications and Information Administration, 2000; Warschauer, 2003).

Surveys of Internet use provide background data for such work, and it has been through such surveys that concepts such as the digital divide have been given meaning.

Statistics on regional, national, and international access to and use of the Internet provide important information for contextualizing local use. Surveys by governments, independent agencies, and businesses (e.g., U.S. census, National Telecommunications and Information Administration, Statistics Canada, European Commission, Eurostat, Commission of the European Communities, Pew Internet & American Life Project) allow comparisons across region and time, helping to make clear what differences exist in ICT use and the information and opportunities such differences provide. Such sources provide the means to follow trends in access across gender, race, region, and socioeconomic class (Howard & Jones, 2003) and between developed and developing countries. Dramatic differences can be revealed. For example, in April 2009 Internet access between women and men in the United States was fairly close (77% of women and 81% of men used the Internet); African Americans were online far less than others (67% of African Americans, 79% of Whites, and 84% of Hispanics); and 92% of young adults (18–29) were online, but only 42% of those older than 65 were online (Pew Internet & American Life Project, 2009). In March 2009, the Internet reached less than 6% of the population in Africa, compared to just over 74% in North America (Internet World Statistics, 2009).

Research and community initiatives that aim to address underserved areas are being brought together under the name *community informatics* (Bishop & Bruce, 2005; de Moor, 2009; Gurstein, 2000; Keeble & Loader, 2001; Williams & Durrance, 2008; see the *Journal of Community Informatics*, http://ci-journal.net/). Community informatics includes deliberate interventions that strive to make a difference in the lives of people living in regions of low-income or low-Internet accessibility (e.g., Hampton, 2010 [this issue]) or for those who tend to be underserved in society and are thus often late to adopt contemporary work and information practices (e.g., older or rural community members; Commission of the European Communities, 2005). Theoretical underpinnings for this work often derive from the ideas of social capital—that is, how the social network of interactions, obligations, trust, and reciprocity among a set of actors create an accessible set of resources for individual and communal support (Kavanaugh & Patterson, 2002; Lin, 2001; Mesch & Talmud, 2010 [this issue]; Pigg & Crank, 2004; Putnam, 2000; Williams & Durrance 2008).

Community informatics work is often directed toward bringing Internet connectivity into underserved regions in the form of free computers and/or Internet access, training in computer use, or the creation of community technology centers in churches, schools, and community centers (Alkalimat & Williams, 2001; Schuler, 1996; Schuler & Day, 2004). Initiatives of this type began in the 1990s with the establishment of community networking initiatives or *freenets*, which provided computer and networked access more widely than what was available at the time via university or business connection. Examples in the United States include the Seattle Community Network (Schuler, 1996), Blacksberg Electronic Village (Cohill & Kavanaugh, 2000; Kavanaugh, Carroll, Rosson, Zin, & Reese, 2005; Silver, 2000), and Prairienet (Bishop & Bruce, 2005). This kind of approach continues today in community technology centers and nonprofit educational programs that promote digital literacy in the use of computers and other

forms of new media (http://ctcnet.org/; Davies, Pinkett, Servon, & Wiley-Schwartz, 2003; Keeble & Loader, 2001). Although top-down initiatives for these communities are still common, a general trend in the community informatics area is to stress the role of participatory action research, which entails working with community members to provide the kinds of initiatives that meet local needs (Bishop & Bruce, 2005; Mcintyre, 2003; Merkel, Clitherow, Farooq, & Xiao, 2005; Stoecker, 2005; Tardieu, 1999). Studies have examined how the introduction of ICTs can create opportunities that strengthen local community—for example, by stimulating collective action or aiding local social or economic conditions (e.g., Alkalimat & Williams, 2001; Hagar & Haythornthwaite, 2005; Hampton, 2010 [this issue]; Haythornthwaite & Hagar, 2005; Mesch & Talmud, 2010 [this issue]; Schuler, 1996; Schuler & Day, 2004).

As needs and technologies change, community informatics initiatives continue to respond to needs in local environments—from once providing free computers and low-cost Internet access to now offering computer training, lobbying for broadband infrastructures, and establishing local wireless networks. Recent work includes attention to policy and community empowerment in decision making (e.g., Kavanaugh, Kim, Perez-Quinones, Schmitz & Isenhour, 2008) and expression of local community identity (Srinivasan, 2006; Wang, 1999). As geographic information systems become increasingly easy to use, community informatics efforts integrate the use of geographic information as a tool for community participation (Kingston, 2007; Rambaldi, Chambers, Mccall, & Fox, 2006). Geographic information systems information is also becoming an important adjunct for analysis of results on ICT use (e.g., Hampton, 2010 [this issue]).

Community informatics also attends to changes in national and international ICT infrastructures that affect the positioning, regulation, and availability of computers and Internet resources. Thus, studies and position papers address issues of telecommunications policy, commercial aspects of broadband providers, and regional access programs. Of relevance to community informatics is how these policies and structures affect Internet accessibility and use in rural or low-income communities where commercial enterprises find that the cost of supplying broadband or wireless facilities outweighs the potential return in sparsely populated and/or low-income areas (e.g., Sandvig, 2008).

Documenting Emergent Phenomena

The rapid development and widespread use of technologies—for communicating and networking, for contributing content, and for storing, sharing, and retrieving files—are making an impact on communities at a pace as great as any planned intervention designed to support local community efforts. Of interest to many studies of the Internet and community are the kinds of ties and relations that make up such communities and how full or partial online interaction transforms, extends, or augments such relations. Early on, the question was whether community could exist online; now the question may be whether it can exist without online. Though still surprising to some,

studies have repeatedly found that close, personal ties can and are maintained online and through new technologies (e.g., Ling & Stald, 2010 [this issue]; Wang & Wellman, 2010 [this issue]) and that synergies between online and offline strengthen rather than weaken relationships and community (e.g., Matzat, 2010 [this issue]). These synergies often produce unexpected effects on and for communities. For example, cell phone use permits Palestinian Israeli young women to carry on secret conversations with their boyfriends (Hijazi-Omari & Ribak, 2008); online connection enables a community to persist while it is interrupted offline or no longer exists geographically (Lev-On, 2010 [this issue]; Shklovski et al., 2010 [this issue]); and geographical information conveyed online can provide coherence for online community (Erickson, 2010 [this issue]).

ICTs create unexpected alliances for social action, with online activity happening in reaction to local conditions. Ronfeldt and Arquilla (2001) identified the idea of *netwars*, where protagonists use network forms of organizing to facilitate action. ICTs and the Internet play a large role in this form of action—for example, in supporting the Zapatista movement in Mexico (Cleaver, 1994, 1999), the Seattle protests during the third World Trade Organization meeting in November/December 1999 (N30 Global Day of Action, 1999), and more recently, the distribution of news of election protests in Iran (e.g., Nasr, 2009). ICTs now play a large role in mobilizing social capital during such action.

ICTs also play an important role during times of crisis. Many examples show how the Internet has become a vital information source for reconnecting during and after disasters, how continued connection bridges temporary or permanent dislocations, and how some communities can be kept alive when people can no longer go home. For example, the Internet became both a social and an action support mechanism for farmers during the U.K. foot-and-mouth disease crisis when travel restrictions were implemented to control the spread of the disease and farmers were consequently confined to their farms (Hagar & Haythornthwaite, 2005). The Internet played an important role during Hurricane Katrina in 2005 as New Orleans residents dispersed to various locations in the United States (Shklovski et al., 2010 [this issue]). In both these cases and in the case of contact during the wildfires in Southern California in 2007 (Shklovski, Palen, & Sutton, 2008), the Internet played an important role as an information conduit, providing peer-to-peer information unavailable from government or news sources.

Similarly, members of an Israeli community used the Internet to organize social action in the face of planned disruption of the community and, later, to maintain an identity after the relocation of their entire community (Lev-On, 2010 [this issue]). Elsewhere, people have used the Internet to maintain and re-create national identity when away from their home nations, as Chinese migrants have been doing in London (Kang, 2009). These examples show how the Internet supports and extends communal social capital, bridging distance around a common cause and solidifying local action and identity through a distributed means of communication. Even though the Internet played an important role in supporting these disrupted communities, many of these accounts show the transitional nature of its use. The articles in this issue by Lev-On and by

Shklovski et al., along with the earlier studies by Hagar (e.g., Hagar & Haythornthwaite, 2005), show that although the Internet serves a vital role during transition, local concerns shape the face of community and communal relations after disaster just as much as Internet options do. Online interaction is initiated in the service of the local community. Whereas community may not move entirely online, online activities can help bridge conditions that disrupt local concerns.

These examples and the many studies of the Internet and community continue to expand our ideas of what community is and where it is held. From the support of local community to empowerment, from local opportunities to global interconnection, we find unexpected and pervasive effects of the Internet on community. Yet, we also find geographically based community and identity penetrating the Internet, reminding us that at all times we are locally based, even if technically mobile.

This Issue

The articles in this issue present research investigations into the intersection of online and offline life, addressing community cohesion, interpersonal ties and connectivity in a mobile and technology-enabled world, and synergies between geographic place and online interaction. Each article provides background on studies by the authors and others, bringing in a much larger scope of work than that possible in this introduction. Studies bring data from a number of areas of the globe, with data drawn from communities in Israel, Denmark and Norway, the Netherlands, Finland, and the United States. These works carry on the research tradition of coming to terms with the synergies afforded by the Internet for supporting and sustaining communities, but they also challenge simple descriptions of online as all good or all bad.

Studies by Mesch and Talmud and by Hampton focus on community cohesion and connectivity. Mesch and Talmud examine the interplay between Internet use and community in a longitudinal survey of two suburban communities in Israel. They find that participation begets participation, but in this study, it is the participation in electronic forums, rather than local or face-to-face forums, that is associated with greater community participation. It is this form of participation that amplifies and adds to place-based community participation. This study provides a lesson for local communities—namely, that attention to an online presence can net local civic benefit.

Hampton compares online communication topics and use across disadvantaged and advantaged communities in the United States and finds that the Internet affords social cohesion and collective action in neighborhoods that might otherwise be considered unlikely sources of collective efficacy. Hampton conjectures that the Internet serves as a contextual leveler between advantaged and disadvantaged communities and thereby provides a platform for local social cohesion and informal social control within a setting of concentrated disadvantage.

Studies by Ling and Stald and by Wang and Wellman continue consideration of community cohesion but with a focus on close, strong interpersonal ties. Ling and Stald focus on the intimate sphere—that is, the set of others with whom we share common

attitudes and who help us confirm our identities and lifestyles. Drawing on data from Denmark and Norway, the authors study the role of the mobile phone among such intimates. Their research adds to our understanding of how people maintain such relationships and how "intimate technology" supports this sphere.

Wang and Wellman address head-on the fear that the Internet is causing Americans to lose their friendship ties. Their study focuses on the formation and maintenance of friendship ties, comparing U.S. data from 2002 with data from 2007. Their study reveals that both offline and online friendship increased over time and with higher Internet use, signifying a growing role for the Internet in friendship maintenance. The Internet now provides not only a new location for starting friendships (online first) but also a means of maintaining ties when co-located friends reside at a distance (after a move).

Studies by Matzat and by Erickson focus on the online end of things. Mazat studied 26 online communities in the Netherlands and provides an interesting mirror to the study by Mesch and Talmud in that he examined how offline relations support online communities. In keeping with Mesch and Talmud, Matzat finds that place-based interaction and embeddedness facilitate online community interactions. Among those communities that had some members interact both online and offline, he found more trust among community members and less free riding in terms of community contribution. As for the place-based communities, this work suggests that participation begets participation whether offline augments online or vice versa.

Erickson compares communication practices on the two microblogging sites Jaiku and Twitter. Here again, the starting place for the research is the online participation. However, qualitative interviews show that similar tools do not necessarily create similar outcomes. Social practices and technical affordances on these two sites create quite different bases for identity. An ability to show connection between posts leads to a Jaiku community more tuned to conversation in which people have a sense of others and so develop mutual feelings of familiarity and trust. By contrast, the Twitter users rely more on geographical references to establish a sense of place. This work shows there are yet more, new, and varied ways that we can expect to find online communication (e.g., photo sharing and microblogging) fostering online cohesion, cohesiveness, and community.

The final two articles tackle the issue of displacement and dislocation in the face of human and natural actions. Lev-On tells the tale of Gush Katif, a set of 21 Israeli settlements in the Gaza Strip whose communities were dismantled during the Israeli withdrawal from the area. His study examines the Katif.net online community, where the dismantled "on-the-ground, brick-and-mortar community" continues to survive in a virtual setting. The study also compares the outcomes and online experiences of communities who relocate in whole to new locations, as opposed to communities whose members relocated separately. This study raises interesting questions about what community means before, during, and after dissolution, and it brings attention to how online interaction mobilizes and sustains a now-dispersed community.

Shklovski, Burke, Kiesler, and Kraut present another longitudinal study of Internet use—in this case, musicians, following their displacement from and return to New

Orleans after Hurricane Katrina. In the early displacement period, the musicians, much like others affected by Hurricane Katrina, relied on cell phones and the Internet for information on family and friends and news unavailable via traditional sources. While dispersed, mobile technologies became important platforms for work and communication among these dislocated musicians, and online spaces played an important role in keeping connection to others and to New Orleans. However, with the return to New Orleans and the rebuilding effort, the strong attachment to the physical place took over; identity again became bound up with presence and interaction in the physical location; and a return to normalcy was enacted through the readoption of earlier means of contact and communication.

These studies share a common focus on the relationship of online communication to the maintenance of communal relationships. They show that online interaction has positive outcomes for place-based communities—from maintenance of interpersonal ties to civic participation to community support during emergencies and dislocations. They also show how online interaction and offline interaction form two parts of a whole support mechanism for community, whether the former occurs as a steady background complement to local life or whether it fills in when local life is disrupted. Together, these works demonstrate a continuous change in how we maintain local community, while emphasizing the importance and significance of our attachments to local places and spaces. They also demonstrate the rich potential for intersections between different theories of communities and ICTs.

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