

GUEST-EDITORIAL ESSAY

Geographic Perspectives on E-Collaboration Research

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The field of e-collaboration research has provided a context for examining the embeddedness of Information and Communication Technologies (ICTs) in virtually all realms of everyday life. Such routine transactions as managing personal finances, accessing information available on the Internet, using e-communication technologies to participate in geographically distributed tasks, and managing family health are part of the wide array of everyday ICT uses that comprise the intellectual interest of researchers in the field. There is growing scholarly attention to the notion that everyday life across the globe, albeit in different ways, also is being transformed by and is a part of transforming ICT. In circumstances where ICT is not directly available, third parties provide a collaborative conduit for accessing e-commerce and e-communications networks.

We call attention of the community of scholars focused on e-collaborative research to the relevance of geographies that underlie e-collaborative processes, and we call attention to the role that critical geographers are playing in expanding how information and communication technologies are conceptu-

alized. We further explore the relationship between geographic information systems and e-collaboration toward the goal of outlining a series of research questions that would be of interest to both communities of scholars, drawing on the contributions of each scholarly realm.

Critical geographers are increasingly attuned to the societal impacts of ICT. Of particular concern is a unique paradox. ICT seems to exacerbate the gap between the “haves” and “have-nots” within society while concurrently holding promise for reducing the inequities of accessing resources, services, information, and networks through which disparities can be reduced or even eliminated. Many groups seeking empowerment develop strategies for using ICTs, including innovating new e-collaborative models, to address their economic and social marginalization.

Research that provides insight into how geography matters in the realm of ICT and ultimately e-collaboration activities examines the geographic knowledge framework that underlies how the Internet works. It also examines how ICT can shape and be shaped by geographic processes and the societal

ramifications of geographic information technologies as all ICTs become more prevalent at the scale of the individual, household, and community.

Geographers often point to some benchmarks for the formulation of a critique of the societal impacts of geographic information systems (GISs), including the publication of *Ground Truth* (Pickles, 1995), the establishment of the I-19 initiative of the National Center for Geographic Information and Analysis (NCGIA), and several key white paper and article publications calling for attention to the relationship between GIS and social disparity (Schurmann, 2000). We point out that this realm of discourse is recognized as being central by scholars in the broader ICT fields. However, fewer scholars in ICT fields more generally realize that geographers offer a broader perspective on the meaning of accessibility in everyday life and provide a key for theorizing ICT access, and thereby a pathway for socially relevant e-collaborative research.

One of the main reasons why *Ground Truth* was so influential is that it stimulated a burgeoning discourse on GIS and society that introduced a critical response to the growing field of GIS. In broadening the examination of the social implications of GIS, the authors suggested that we should examine the possible social benefits of GIS. They encouraged a view of the “GIScientist” as an advocate who could mitigate the needs of decision makers across a wide array of competing interests. Not surprisingly, this approach led directly to research that examined how to develop GIS through creating partnerships between institutions.

However, Pickles (1995) challenged the assumption that technology provides a means for marginalized communities to

achieve participatory roles in its own governance processes. He did hold out the hopefulness that GIS technology ultimately may provide a basis for democratized decision making through the creation of electronic networks and virtual spaces for counter-hegemonic dialog. This provides one common beginning point for considering the intersection of critical GIS and e-collaboration research efforts.

The authors collectively asserted that transformative relationships between technology and accessibility should be understood better. They stated that access to information forms a critical element of social power relations. They concluded that access to GIS represents empowerment, and conversely, that a lack of access to technology is equated with social and political marginalization. We suggest that e-collaboration specialists provide a useful framework for conceptualizing how individuals may organize through electronic communication in order to accomplish the aim of empowerment that was anticipated by the authors of *Ground Truth*. (For an expanded discussion of e-collaboration research directions, see Kock and Nosek [2005].)

Since the publication of *Ground Truth*, the relationship between access to spatial information and empowerment through developing and using GIS has remained a central theme of critical GIS research (Schurmann, 2000). In fact, accessibility (to information and technology) has come to be seen as a means by which community empowerment is measured. Yet, a persistent limitation of equating empowerment with access is that it leads to an analysis in which knowledge about how to structure spatial information and how to use and develop GIS technology becomes the focus of participa-

tory work with communities. This approach is reflected in participatory and community GIS models (Craig et al., 2002; Elwood & Ghose, 2004). Effectively, this means that while the interests of marginalized groups may be reflected in the technology developed, their ability to actively engage that process may be limited by the knowledge they have of spatial technologies.

We suggest that e-collaboration specialists have framed the relationship between communication and participation in group decision-making processes in more nuanced ways. (See Dasgupta [2003] for an overview of the relevance to civic participation). We envision that some of the participatory challenges created by the GIScientist-as-advocate could be ameliorated through involving e-collaboration specialists in addressing e-communication and e-management approaches for tasking processes inherent to participatory decision making.

We also suggest that GIS as a framework for examining all things technological within the discipline of geography is inadequate for assessing how information and communication technologies reflect, reinforce, and create new geographies of everyday life (Gilbert & Masucci, 2005). We advocate that geographers interested in the social dimensions of geographic information technologies should be cognizant of the developments in e-collaboration fields. In addition, we suggest that researchers in the fields associated with understanding both the processes by which individuals employ e-technologies and the social implications of the use of these processes should become more familiar with the focus on this issue that has emerged during the past decade among critical geographers and GIScientists.

One of the reasons why GIScientists are slow to become informed about the relationship of ICT to empowerment is that we are working to advance as well as to critically examine the effects of geographic information technologies on shaping knowledge. Despite the critique within the field previously outlined, we have not yet fully examined how technology is part of people's everyday lives. The use of information and communication technologies in daily life may or may not reflect how geographers think about spatial information, ask questions about people and places, and examine processes that create disparities among different groups of people in different places at different geographic scales. But within this gap in our knowledge lies the foundation for cross-disciplinary research.

An improved conceptualization of ICT should draw not only from critical geographic frameworks but also from e-collaboration and other fields of study that unpack such themes as the perspectives that different groups and individuals have on the meaning of ICT in their lives, their use of ICT, and their perspectives on the ways in which ICT affects their lives. Among the research themes that could inform such work are perspectives on ICT ethics, self-efficacy and the use of ICT, policies regulating and mitigating ICT at different geographic scales and in different institutional and social contexts, and theoretical frameworks for the examination of ICT (Gilbert & Masucci, 2005).

We pose several research questions that illustrate how critical GIS and ICT research might intersect around the issue of empowerment.

- How do ICTs forward, limit, and transform the geographies of daily life?

- How do people within economically and socially marginalized groups experience ICT, and what are the relationships among their experiences, empowerment, and place?
- How has the management and use of ICT shaped the approaches used by marginalized groups for organizing to achieve economic and social empowerment?
- How can we support the efforts of marginalized groups to use ICT for empowering themselves, given differences in the resources available within different institutions and decision-making processes?

By examining ICT from a perspective of daily life, we begin at a scale that allows us to examine how empowerment is related to ICT. We also can begin to assess how strategies to meet basic human needs shape the management of ICT and the perspectives that marginalized groups may have on the role of ICT in their lives. Research related to the intersection of empowerment and ICT also should examine how marginalized groups think about the role that ICT has in shaping inequality. These issues collectively constitute an approach for critically understanding the so-called digital divide. We suggest that the digital divide is intertwined with the spatiality of daily life or the geographic expression of social and economic inequality.

Critical geographers and e-collaboration specialists have much to contribute to the overall discussion of ICT and society. Our discussion underscores the need to combine ICT and geographic inquiry with methods that allow for an improved conceptualization of how everyday life experiences are related to empowerment. The

implications are that by drawing on this combined effort, we may contribute to greater technological and scientific literacy for society as a whole. In the process, we could be better advocates for the empowerment of marginalized groups whose access to ICT in the future will determine their capacity to navigate the challenges of daily life, the quality of health care and education that they receive, and their level of civic participation.

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