

# Remapping the Digital Divide

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A phrase with great urgency a few years ago, “the digital divide” now is on the sidelines. As the federal government renewed its commitment to marketplace solutions in telecommunications and information technology issues under the Bush administration, the idea of a digital divide faced criticism from FCC Chairman Powell for being an ill-advised version of the “Mercedes divide” in the United States: Some people can afford expensive luxury cars, others cannot, but that is the American way. The notion of a severe divide also was challenged by an array of studies documenting the rising pace of computer and Internet use and connectivity: The statistics seem to be moving in the right direction, so why worry? Numerous programs founded in the late 1990s by the federal government (NTIA’s Technology Opportunity Program, the Department of Education’s Community Technology Centers programs, Housing and Urban Development’s Neighborhood Networks Program) have been slashed. They were intended to aid technology deployment to disadvantaged populations or remote regions and to spread the reach of the Internet to more publicly available locations in order to serve people who do not have home equipment of their own, or who could not afford an Internet connection. The phrase “digital opportunity” replaced the divide, putting a blandly positive spin on all things computer related. As the very idea of inequity is eliminated from the social policy vocabulary in favor of marketplace reasoning, the concept of a divide being played out on the latest technology front may slip away from public scrutiny. This issue of *The Information Society* is an effort to reassert some of the new definitions of the digital divide, and to explore its shape and operations in more nuanced ways.

The brief history of the digital divide illustrates symbolic, practical, and opportunistic responses to the confusing prospect presented by mass use of computers and the Internet. The confusion relies on the ready acceptance that the computer is the gateway to membership in the Information Society and the workforce of the future, and that it also renders society more democratic, even in the face of no substantial change to our existing social structure attributable to computerization. One broadband proponent

of this vision, for example, writes “I and others believe our goal is to create a knowledge-based democracy. In the Knowledge Democracy, every person and every organization will have the skills, the information tools, and the network access to have a prosperous life and to contribute to the health and wealth of their communities” (Cohill, 2002, p. 1). The centrality of the computer and the Internet to countless national and international economic pronouncements underscores these technologies’ implicit promises and begins to explain why so many individuals, organizations, policymakers, and businesses adopted the mantra equating computer use with economic development and improved social conditions.

However, technologies never exist in isolation. Social, political, and economic environments condition the scope of imagination that assigns technology certain roles in our lives, as well as its use, acceptance, integration, and utility. With computers in well over half the homes of the United States and some form of household Internet connectivity achieving similar status, these technologies have become mass media, penetrated with common expectations that at once acknowledge a utopian and egalitarian vision of free, open communication among all users and the life-changing capabilities of going online, but at the same time acknowledge the dominance of businesses in providing Internet content and controlling basic network infrastructure, especially in the United States. However, the focus on technologies as discrete systems and their users as isolated individuals masks some of the contradictory ideas that routinely accompany information technology policy and programs. How can an egalitarian system of communication flourish in privately controlled “space”? How can technology alone make such monumental changes in one’s life? Such premises have caused little discomfort precisely because of the coalescence of the symbolic, practical, and opportunistic positions regarding the digital divide.

The digital divide has been a symbolic banner for politicians and corporate largesse insofar as it substituted for more direct action against inequalities of income, education, and race. Microsoft’s Bill Gates and Dell Computer’s Michael Dell both instituted programs that granted

computers and software to libraries and other institutions that could enhance access opportunities, especially those for youth. A range of tax incentives and government grants offered more chances for schools, libraries, and community organizations to provide access to equipment. Such vigorous activity symbolized attention to poor, remote, or needy communities, even if attention to actually training people to use computers or create content—actions far more difficult and costlier than providing equipment—was absent. In a telling essay, one critic observed, “The current political interest in the Digital Divide is an attempt to reverse the damage to race relations caused by welfare reform and by the retreat from affirmative action” (Attewell, 2000, p. 1). Behind the neutral face of technology, policy responses could sidestep the more obvious and intractable difficulties caught up in longstanding social inequalities and mount simple programs that could provide access to equipment. The implication was that equipment access would fundamentally alter peoples’ life circumstances and leapfrog structural inequalities, symbolically a very attractive proposition.

The practical response to the digital divide established national, state, and local programs to get more equipment and connections to a broad set of institutions. In this country, community technology centers joined libraries and schools in establishing ambitious grant-writing efforts in order to obtain computers and to underwrite the costs of Internet connectivity. Community-based organizations and public institutions successfully established hundreds of public access sites around the country, and the same approach has been followed in many other countries. The contribution of improved computer literacy to job development achieved through access to equipment and training became a primary argument motivating these efforts. However, the emphasis on equipment and the acceptance of the presumed need for computer training have continued to lack robust research vindication. Indeed, as early as 1986 a large study from the National Commission for Employment Policy concluded that most workers learn relevant computers skills while working on the job, rather than from computer literacy classes apart from the work environment. Additionally, many of these pragmatic efforts neglected to evaluate their investments, resulting in great uncertainty regarding outcomes and project processes.

The computer and network equipment and services vendors exercised an opportunistic response to the digital divide. Selling more computers, getting more people to use the Internet, broadening the aid efforts created by the policy community all directly benefit these vendors. Hence, many companies or their lobbying organizations endorsed and pushed for public programs that would create more funds to purchase equipment and services. In the wake of the dot-com slump, efforts by coalitions of such companies continued or even escalated. For example, in 2002 and

2003 their attention turned to calling for nationwide broadband connectivity, as they backed federal legislative efforts that would stimulate the building of new networks, whether or not such investment would serve needy or isolated constituencies. By supporting businesses that purchase their equipment in efforts to “bridge the digital divide,” these vendors staked out self-serving positions from which they could urge that the digital divide be addressed while ignoring the actual efficacy of business approaches to doing so. The political agenda-setting process supports and indeed encourages such opportunism.

The essays in this issue explore various locations of the digital divide and seek to remap its contours. They include research that brings international perspectives to bear on the divide, as well as work that acknowledges the limitations imposed by incumbent industries, conflicting state policies, and anemic models regarding use of computers and the Internet within a social setting. They go well beyond issues of access, and challenge the symbolic, opportunistic, and even the practical ways we have addressed the digital divide to date. As a collection, their attention to political, social, and economic contexts allows us to see the digital divide as far more than access to equipment.

Anthony Wilhelm’s wide-ranging essay addresses the policy arena and makes the point that the existing infrastructure is a great accomplishment but does not go far enough in cultivating the human capacity, providing relevant content, and establishing socially beneficial applications. Wilhelm advocates for broader spread of the most innovative uses of computer and Internet systems and highlights some of the subtle, positive externalities that accrue to information technology diffusion. He calls attention to the numerous stand-alone programs that were created to bridge the digital divide and advocates closer links between, for example, educational and telecommunications policy. That particular link is long overdue, given the rhetoric asserting that a telecommunications base is fundamental to educational achievement.

Kyle Nicholas’s essay illustrates some of the ways that location-based inequalities have been ignored by conventional policy measures interested in closing the digital divide. He offers a case study focused on one state, Texas, and some of its most remote regions. Pointing out the exceptions to telecommunications competition policy that are common to rural regions, and the infrastructure impediments created by remoteness, Nicholas explains rural-metro differences in basic network connectivity. He finds that even basic Internet access is anything but straightforward in some rural areas. The reasons for rural and remote areas losing out on some of the benefits of computers and the Internet have to do with long-standing protections accorded rural telephone companies and state policies that protect incumbents’ toll revenues. The clash of social goals, on the one hand, to promote Internet connectivity,

and on the other hand, to shield rural telecommunications providers from competitive threats, creates a development pattern that exacerbates rural disadvantages.

Mark Warschauer unbundles some of the empirical difficulties in contemporary conceptualizations of the digital divide in his essay "Dissecting the 'Digital Divide': A Case Study in Egypt." Using a social shaping of technology perspective, Warschauer's work on a national technology program in Egypt illustrates the limitations of a one-dimensional vision of how technologies can improve life. His 3-year longitudinal case study offers ample evidence of the ways that positioning technology as a "magic bullet" for development fell far short. In observing that "technology has been thrust on top of a dysfunctional system, rather than used to help transform that system," Warschauer's findings echo the liabilities of a symbolic, equipment-centered approach to using computers and the Internet as the study concludes that the existing social system in Egypt undermined the best possible uses of information technology in the schools.

In another empirical examination of digital divide bridging efforts, the essay by Dara O'Neil and Paul Baker comments on the pragmatic issues faced by organizations attempting to mount community-based access and training programs. With the proliferation of community-based technology efforts, understanding how such projects unfold, what difficulties they face, how they either exploit technological opportunities or fall victim to them, and how organizational settings function become important to flesh out holistic understandings of how to tackle inequities in information technology opportunities. Their research underscores how a participatory development approach to establishing a program can create a superior environment for change.

The final essay by Jan Van Dijk and Ken Hacker sensitively probes access issues related to the digital divide by using data on computer adoption in the United States as well as the Netherlands. Their analysis demonstrates the gradual and relative differences among populations using information technologies, and rejects out of hand the notion that simply providing access to equipment will change anything in people's lives. They present an elaborated, dynamic, and complicated definition of access, and propose that different types of access be seen sequentially. Concluding that the straightforward technological solutions epitomized by most programs addressing the digital divide ignore deeper issues regarding skills and usage, the authors highlight the operations of cultural capital in information technologies. They urge policymakers to address structural inequalities that influence how tools such as computers and the Internet are used.

The research presented here is intended to stretch some of our ideas about the digital divide, and to suggest a research agenda for future work. That agenda not only prioritizes international and cross-cultural findings, but also is sensitized to the roles of political systems, existing structural inequalities, and organization- and community-level practices. We are at a critical moment for reassessing the digital divide and for adopting new courses of action that can explain how information technologies' powers can best be used by and integrated into society.

## REFERENCES

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