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The digital divide

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Keynote:

Many have argued that inequalities of access to the Internet in an information-driven society pose a serious social problem and that public investment is needed to solve it. Others contend that the digital divide is a minor concern that will resolve itself without government involvement and spending. The positions we take on this debate depend upon our understanding of how new technologies spread throughout society, whether we think Internet access is a frill or a necessity, and our vision of whether government can and ought to help broaden access.

Entry:

Concerns over the digital divide, and the origins of the term itself, stemmed mainly from studies of who used computers and the Internet that were conducted in the mid-1990s by the U.S. government. This research found dramatic inequalities of access to digital technologies at a time when the Internet was being popularized and the U.S. economy was emerging from recession. The digital divide sparked concerns about whether broad participation in the economic and educational benefits of the information age would be possible. In response, President Bill Clinton's administration, local governments, and private charities invested in efforts to make Internet access widely available in schools, libraries, community centers, and healthcare facilities. Within a few years, critics of this investment argued that the digital divide had never been a large problem and that it had shrunk so quickly that it no longer required public attention.

Although the terms of the debate over the digital divide have changed, the controversy itself remains relevant. As late as 2005, around 1 in 5 Americans had never accessed the Internet or used email.¹ Many people around the world lack access to basic information and communication technologies, so the divide is not simply an American phenomenon, nor is it merely about access to the Internet. In addition, as high-speed broadband Internet service was introduced in the U.S. and other developed countries, inequalities arose between Americans who could afford this enhanced service and those with slower dial-up Internet service. High-speed service became a necessity for making full use of what the Internet had to offer – video, audio, telephony, games, and so on. Because ongoing technological innovation is likely, the debate over unequal access to these technologies will probably always be with us.

The digital divide may be defined as the gap between those who have access to information and communication technologies and use them effectively for educational, economic, civic, and cultural needs, and those who do not. Effective use involves not only the ability to receive information, but also to adapt it to one's needs, and to create and communicate one's own knowledge and views to others. Advocates for equal access see the abilities to send and receive information via new media as necessary conditions for full participation in society. Thus, those who are concerned about inequality tend to call for *digital inclusion* for those who are least likely to have high-speed Internet connections, or any access. These underserved groups include people with less education, lower incomes, African-Americans and Latinos, people with physical disabilities, the elderly, and rural residents.

Given the many factors that shape Internet access, advocates for digital inclusion argue that it requires more than simply providing computers and Internet service. Offered the bare physical resources that allow one to get on the Internet, many people will be unable or unwilling to use it, or to use it to its fullest potential. They also need training in how to use computers and navigate the Internet. They need support from family, friends, and the larger culture in which they live to use a technology that can seem bewildering, threatening, or merely irrelevant to one's way of life. People need relevant content in a language they speak and read. Whether societies should help provide these benefits to their citizens hinges on three issues: new technologies' ability to spread to all members of society, the significance of ensuring that people have equal opportunities to communicate, and the role of government in the information age.

Diffusion and Innovation

Those who minimize the significance of the digital divide contend that disparities work themselves out over time as technologies diffuse throughout the population. The early adopters of the Internet may have been more white, male, affluent, and educated than the norm, but this is less the case now that Internet usage is permeating societies, at least in the developed world. Prices for computers and basic Internet service have fallen dramatically. People can log on for free in public libraries, schools, and even coffee shops. As a generation of youth who have grown up online mature into adults, any meaningful differences in Internet use are likely to disappear.

However, others argue that true digital inclusion requires keeping up with a set of technologies that are in perpetual motion. Advances in hardware used to access the Internet, from mobile phones to personal digital assistants, confer greater benefits on those who can afford to buy the latest devices. Facility with rapidly developing applications, from instant messaging to blogs to wikis, empowers some denizens of cyberspace to express themselves more widely and powerfully than others. New forms of Internet service, including high-speed service and wireless access, allow some to connect faster, more conveniently, and more productively than others. Some of us will always fall behind without support because as some technologies that shape Internet usage are widely adopted others are introduced that transform access anew.

Communication Rights

Critics of efforts to close the digital divide maintain that a market economy requires us to accept some inequality of outcomes in life. As long as a society makes some effort to provide equal opportunity to meet basic human needs, it is not a problem that some will end up earning more than others and therefore be able to afford more luxuries. From this standpoint, people may have fundamental rights to public schooling, basic health care, or national security, but not to most communication technologies and services. Perhaps the poor should pay less for local telephone service so that they can call 911 for help in emergencies, but they do not deserve free or low-cost broadband Internet service subsidized by higher rates on other users. Furthermore, the critics argue, most people who still lack home Internet connections do not want them either because they find the Internet unnecessary or objectionable. For some, being an Internet have-not is a choice.

In contrast, others contend that in a society that relies on information for its life blood, communication technology has become a necessity for equal opportunity and social inclusion. In this view, communication should be considered less like income (where capitalist societies tolerate stark inequalities) and more like education or voting – a fundamental component of a basic standard of living and citizenship. For example, increasingly people are likely to receive their telephone, television, radio, and Internet service via a single broadband connection. Free or low-cost broadband service for the poor has been hailed as a crucial tool for education, a potential economic engine for reviving low-income communities, a means for receiving better medical care and emergency services, increasingly necessary for applying for government services and engaging in effective political participation, and the main medium for twenty-first century news and entertainment. Therefore, some view broadband as a basic public need comparable to utilities such as roads, water, and electricity.

Role of Government

Even if the digital divide is a problem, can government solve it efficiently and effectively? Skeptics accuse programs such as the U.S. e-rate program, which introduced new fees on telephone subscribers' bills and used the money to help fund Internet service in public schools, libraries, and clinics, of being wasteful and unnecessary. Some private efforts to connect low-income villages and neighborhoods around the world have been well-intended failures because they neglected to do more than provide computers and modems to people who had no training or money to maintain the equipment. Some have argued that government should not burden the

telecommunications industry by requiring it to offer service in unprofitable areas.

Telecommunications companies have strongly objected to competition from municipal broadband projects, in which cities build their own high-speed networks in part to offer cheaper service to residents.

However, others see public regulation and investment as necessary for expanding access to information. They note that high speed Internet service is most widely available in countries where governments have taken a greater role in requiring private providers to deploy service to all areas or helped subsidize the building of broadband networks. The U.S. government did little to support broadband deployment in its early years and broadband was therefore less widely available and slower than in many other wealthy countries. Supporters of public involvement in Internet provision argue that telecommunications companies have failed to offer affordable service and have refused to extend their networks to serve unprofitable communities. The federal government's stance was different during the advent of the telephone industry in the late 1800s, when the same problems arose. Regulations compelled telephone companies, many of which held monopoly control over their markets, to serve all communities and to charge lower rates to rural, low-income, and household subscribers so that everyone could be connected via the new medium. Some cities built their own telephone networks to achieve these ends. The voices of those who supported universal service requirements and public networks in the early days of telephony echo in contemporary debates over broadband and the digital divide.

Cross References:

Blogosphere, Politics, and Internet Journalism; Internet and American Life Today; Public Sphere; Regulating the Airwaves: “A Toaster With Pictures” or a Public Service?; User-Created Content and Audience Participation

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Sidebar 1:

What Influences Internet Access?

Availability: Service providers prefer to reach areas that are densely-populated, affluent, and lack competing providers, because these areas are most profitable. Individuals are more likely to use the Internet if it is accessible in their home, school, or a nearby library.

Technology: The reach, complexity, and cost of maintaining computers and Internet service shape access. For example, some Internet service technologies, such as Wireless Fidelity (Wi-Fi) have limited reach or are too expensive to deploy everywhere.

Affordability: Access is shaped by the costs of Internet service, the devices used to receive it, and, in the developing world, electricity.

Government Regulation and Resources: Widespread, affordable provision of service often depends on government permission to lay cables along public streets or to use public airwaves to transmit signals; subsidies and loans to persuade companies to offer service in low-profit areas or to allow individuals to subscribe more cheaply; and laws that encourage freedom of speech.

Training: Instruction in literacy and computer literacy must be available.

Appropriate Content: Culturally relevant content in users' own language is necessary.

Trust: New users need sufficient protection from cybercrime, breaches of privacy and security, and unwanted content (pornographic or violent material).

Social Norms: Globally, many people are discouraged from using the Internet based on gender, ethnicity, and other inequalities. Support from family, friends, or community institutions are often needed to encourage people to use the Internet fully.

Sidebar 2:

Digital Inclusion Projects

There are many examples of efforts to extend the benefits of full Internet access to underserved communities. For example, when the city of Philadelphia commissioned a municipal broadband network, it required the private company that offered Internet service over the city's network to set aside five percent of annual revenues earned in the city to pay for computers and training for low-income families and minority-owned businesses. The city also required that service be offered at a discount to poor families and that free access be available at numerous "hotspots" around Philadelphia. Some nonprofit organizations have gone further by developing web sites that attract underserved groups to use the Internet by offering informational, educational, and job training resources targeted to these groups' interests. For example, One Economy, an organization that provides computers, Internet service, and training in public housing developments, created its own World Wide Web site in English and Spanish called The Beehive, which includes information tailored to low-income people about money, health, jobs, school, news, voting, citizenship, and family issues. The Beehive also offers free email accounts and many local sites focused on users' home cities to connect people to their communities.

¹ Pew Internet & American Life Project, *Home Broadband Adoption 2006*, pewinternet.org/pdfs/PIP_Broadband_trends2006.pdf (accessed July 26, 2006).