



A Closer Look at the Digital Divide

"Digital divide" can mean several things, but its initial meaning was that access to the Internet and all the dot-com wonders it brings is being denied to certain sectors of U.S. society. When the divide was first discovered, it was described as "one of [the United States'] leading economic and civil rights issues," the United States needed to "take concrete steps to redress the gap between the information haves and have nots." A leading Web site on the digital divide states that "entire communities are being excluded from opportunities of the digital economy." A closer look at Internet access suggests, however, that the issues of concern for the digital divide may be somewhat different.

The context of this discussion must be placed squarely within the larger question of how the Internet is organized. In its current form, market forces primarily shape the Internet. The Internet is not a centralized activity, its "culture" is inclusive, not exclusive, and it is responsive to market demands. Access to the Internet requires a minimum level of equipment and an affinity for or acceptance of technology. Approaching Internet access as a market-driven activity can highlight the factors that shape it.

Consumer preference is one of these factors. There is some indication that Americans without Internet access lack this access because they have chosen to do something else. The physical requirements do not appear to be a problem. According to figures from the U.S. Census Bureau, 94 percent of U.S. households have telephones. If one can access a phone network, one can access the Internet. One needs a computer, but PCs, new or used, are not expensive, and hardware costs will continue to fall as "Internet appliances" become available. An estimated 98 percent of American homes have a television (in fact, the average home has more than two TVs), and close to 70 percent have cable service, suggesting that most U.S. households could afford Internet access if they wanted it. A television is not yet a PC, but perhaps when convergence is a little further along and televisions are interactive, the digital divide will not be a problem. There are already signs that the divide is a temporary issue—the latest Commerce Department report suggests that Internet access began at high-income levels and is now spreading to lower-income levels.

If more than 90 percent of U.S. homes have access to phones and televisions, and more than two-thirds have access to cable, what keeps people from accessing the Internet? The most likely answer is that they prefer to do something else. Generally, Americans prefer watching television to surfing the Net (the national average in 1998 was roughly 95 hours of television viewing for every hour on the Net). In addition, many people fear the technology; others say (perhaps with reason) that its value is overstated. "Digital divide" underestimates the role of choice in Internet access.

Consumer preference contributes to a digital divide, but the best predictor of whether one obtained Internet access in the Net's early days (especially if we look at July 1999, when the divide was discovered) is socioeconomic status. Basically, the more education one has and the more money one makes, the more likely one was to begin accessing the Internet before others with less education or a lower income. The income breakpoint, at least in 1998-1999, appeared to be around \$50,000—little more than the median U.S. income. Half the households with over \$50,000 in income accessed the Internet regularly compared to less than a third of the households with less than \$50,000 in income. It should not be a surprise that the richer half tends to get access to new technologies and services before the poorer half. An examination of the introduction of wireless telephones would probably show the same divide in the first years (although there was no talk of a "telephonic abyss"), and a similar result could be found for housing, medical care, and education.

To some extent, the divide also reflects how Internet activity is measured. Different measures of the problem produce different results. Internet usage statistics hint at this: although blacks and Hispanics lagged behind whites in access to the Internet in 1998, whites lagged behind what the census calls "other." "Other" includes Asians, and Asians are active participants and leaders in the information technology arena. This has important implications both for understanding the digital divide in the United States and also for considering a global digital divide. The presence of a large, active population

of Asian "digerati," who can transfer their skills and knowledge to Asia (especially China and India), is worth exploring as one possible explanation of the difference in access among countries that share common infrastructure problems.

What does this mean for the digital divide? The digital divide, to some extent, reflects consumer preferences. Additionally, access to the Internet follows the general pattern of access to new services and technologies, which is determined by income and education. The digital divide may simply be a symptom of the larger problems of education and income distribution that society needs to address. The divide is also possibly a statistical artifact in the United States, reflecting how one measures rather than what one measures. New data suggests that the divide may only be a temporary phenomenon, as Internet access is now expanding through the society at all income and education levels-without much help from government. (The spate of 1999 Super Bowl dot-com commercials probably did more to sensitize Americans to the Internet than anything else.)

Globally, lack of access to a robust telecommunications network and power grid in many developing countries is a serious problem in the information age. The question of whether wireless internet applications will become sufficiently robust to allow countries to leapfrog over the lack of infrastructure, as cell phones and satellites let them leap over limited landlines, needs close examination-Swedish telecom giant Erickson is undertaking such an experiment now in Bangladesh.

Discussion of a digital divide in the United States might benefit by looking at the consequences of disparities in access to information instead of the disparities in connectivity and access to technology. Broader issues could also result from the question of Internet access. Although lack of access may be a result of choice, we know from recent polls that ensuring adequate access to the Internet also remains one of the chief reasons many Americans want to "go slow" in moving to "e-government."

These issues suggest that the discussion on the digital divide would benefit from greater attention to international (North/South) Internet access and e-government issues.