Internet access and use in context

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Introduction

Over the past five years, thousands of articles have appeared in academic journals about new media, the internet and the web. The topics range from identity expression in online communities to how new media may affect political participation and voter turnout. The range of questions is both overwhelming and exciting. At the core of all these explorations lies a more basic question, however: Who uses new media and – equally important – who does not? It is an important baseline measure for putting into the appropriate context all other studies of new media use.

The split between the 'haves' and 'have-nots' of new media use has most often been referred to using the term the 'digital divide'. The expression aims to signify the gap between those who have access to and use digital technologies, and those who do not. The topic has captured much attention in the popular media, in academic circles and the policy world alike. According to the Social Science Citation Index and the Humanities Citation Index, over 150 articles have appeared in academic journals on the topic of the 'digital divide'. Moreover, the proportion of all internet and web related articles that deal with the 'digital divide' has gone up one percentage point each year in the past five years,suggesting an increasing interest in and importance of this issue.

Here, I have chosen to discuss three books in this area of inquiry. They cover the topic at different levels and focus on different dimensions of access and use but they all contribute to a basic understanding of who uses digital technologies, who does not, and what may be the social implications of these initial patterns. In *Social Consequences of Internet Use* (Katz and Rice, 2002), James E. Katz and Ronald E. Rice – both professors of communication – describe the state of internet use and non-use in the U.S. context primarily concentrating on access, social involvement and social

interaction. Pippa Norris, in her book *Digital Divide*, mainly draws on quantitative data to look at cross-national differences in internet use (Norris, 2001). She also pays particular attention to the role of new media in civic engagement, reflecting her background as a political scientist. Mark Warschauer's main contribution in *Technology and Social Inclusion* is to our understanding of how digital media is diffusing to populations in lesser-developed nations and the barriers to such diffusion (Warschauer, 2003). He pays particular attention to the larger context of literacy and the role of education in effective digital media use signaling his background as a professor of education.

A look at these three books provides much information about internet access and use in the United States and globally. An overarching theme of the three volumes is that access and use of new media is embedded in various social processes and does not evolve in isolation from existing social institutions. In this article, I discuss in some detail the particular focus of these books and how they contribute to our understanding of who is using new media, who is not, and what this implies for the social consequences of digital technology use. I end the piece by highlighting ways in which the research agenda should move forward as we attempt to gain a better understanding of how differentiated internet access and use may influence various populations.

INTERNET USE IN THE UNITED STATES

In their analyses, Katz and Rice rely on several surveys conducted between 1995 and 2001. Theirs was the first national survey based on a random sample of the American population focusing specifically on internet use and its social implications. The authors' goal is to show that neither utopic nor dystopic visions of the internet – or any other technology for that matter – can be substantiated. The book sets out by offering a comprehensive review of earlier work that claimed that there were negative effects of internet use on social wellbeing. The authors look at multivariate relationships of demographic and other factors to untangle the reasons for people's internet use and its effects on sociability.

Beyond looking at basic access and use statistics, Katz and Rice focus on one particular aspect of internet use: social involvement and social interaction. They find that, rather than reducing social interactions, people's internet use often supplements their existing communications leading to new forms of social capital. They also explore the implications of new media use on political participation. Data suggest, for example, that only a small portion of internet users sought political information on candidate websites during the 2000 presidential elections, and the proportion of users seeking political information in general was just a small slice of the online population, little increase since the 1996 elections. Moreover, users tended

to turn to traditional news media sources even on the web. Such findings lead the authors to conclude that the internet's affects on political engagement is not revolutionary, rather, it is incremental.

An unusual but welcomed aspect of the volume is that it also devotes some attention to what the authors call 'internet dropouts'; people who at one point used the internet but have since ceased to do so. A short chapter is devoted to this topic with findings suggesting that younger people, the less affluent and the less educated are more likely to stop using the internet than others. Recognizing significant dropout rates is important because it sheds some additional light on diffusion patterns. When we look at statistics about whether internet use on the whole has increased, we usually do not have information about new users versus dropouts. Simply looking at internet user figures over time, one may conclude that internet use has leveled off and no new people are going online. However, the real story may be that there are numerous new users but that they are replacing in numbers those who have stopped using the internet, making it seem as though there is no shift in the online population. An important next step is to understand why it is that users decide to go offline – a question dealt with only briefly in the book – and whether these reasons are likely to have long-term effects on what types of people will make up the internet user population in the coming years.

INTERNATIONAL COMPARISONS OF INTERNET USE

It is difficult to compare internet use cross-nationally because reliable, large-scale, comparable data are hard to find. Despite this challenge, Norris manages to pull together quite a bit of information about internet use statistics globally. She presents figures not only for internet use but other media use as well, and does so drawing on historical data in addition to recent statistics. She, like Katz and Rice, rejects both ardently optimistic, pessimistic and skeptical views of digital technologies' social implications.

Norris starts out with a look at the global spread of internet use comparing it to the diffusion of other communication media over time. She does an excellent job of gathering the available data on the topic. She presents helpful graphs and runs multiple regression analyses to disentangle the effects of particular variables on levels of internet use in a country. Not surprisingly, she finds that the wealthiest nations have the largest user base and existing inequalities in media use across nations are replicated with respect to digital technologies.

Taking advantage of more refined data available for the United States and 15 European Union countries, she explores inequality in use of the internet within these nations, finding that younger people, men, the highly educated and highly affluent are more likely to be online. An important next step in her analyses is that she compares inequalities in new media use to

inequalities in use of other communication technologies. She finds that the 'digital divide' in internet use is not a new divide; rather, diffusion patterns mirror existing inequalities in use of communication technologies.

A particular focus of this book is the role of the internet in civic engagement and political participation. As with the question of the internet's implications for society at large, here too the author cautions against extreme optimism or pessimism. Norris devotes a separate chapter each to discussing governments' use of information technology, parliaments online, the presence of political parties on the web, and news organizations' use of new media. She then reviews data on political opinions and internet use focusing on the US and 15 EU countries.

Overall, she finds that although most mainstream political organizations have embraced the use of new media for communicating their messages, they have not done so in innovative ways that would lead to new opportunities for interacting with constituents. She also argues that there is no sign of the internet mobilizing those who are not already engaged in political activities. However, she does suggest that digital technologies have the potential to give voice to smaller organizations and groups that would otherwise have too many barriers to gain a critical mass.

INTERNET USERS IN LESSER-DEVELOPED COUNTRIES

In *Technology and Social Inclusion*, Mark Warschauer proposes that access to the internet is much more than a technological question. Although he discusses in detail the importance of the physical infrastructure necessary for internet use and how this varies, he spends a substantial section of the book considering the role of literacy, education and various community organizations in achieving meaningful access across wider populations.

Like Norris, the author draws on data from a myriad of sources (p. 41) to showcase statistics about international internet use rates, the use of other media globally, and human capital measures such as literacy rates. He reminds us that literacy rates are very low in some areas of the world (e.g. 50–60% in some developing countries and even as low as 30% in others). Such data make it clear that under current models of internet use – i.e. mainly text-based information – it is unlikely that large portions of certain populations will be able to benefit from the medium even if higher access rates are achieved. Moreover, he notes the gender disparities in literacy rates across countries, serving as an important reminder of how existing inequalities could be easily exacerbated even if the medium spreads to some portions of the population.

Having conducted research in Brazil, China, Egypt, and India, the author is able to give examples of programs that are being implemented in these nations despite numerous local hurdles (e.g. the 'computador popular' in Brazil, the 'simputer' in India). In general, the book is very helpful in

identifying existing programs and describing examples of how new media can be used to improve conditions in developing nations (e.g. by disseminating information about the weather to agricultural workers or health-care options to residents of rural villages). Such information dissemination is not always done directly via the internet. Programs exist whereby staff members collect questions from community members, research them online and then broadcast responses via more traditional media to reach wider audiences. Warschauer's extensive review of the literature and description of many existing programs is very helpful for a better understanding of the diverse ways in which information technologies are being used in various corners of the world.

DIRECTIONS FOR FUTURE RESEARCH

The wealth of data presented in these three books gives us a good baseline understanding of who among the world's population is going online and who is not. Each book goes into some additional detail on what people online are doing, how they may be benefiting from the technology and the contours of the new medium's social implications. With this knowledge in hand, it is time to move the research agenda forward. It remains important to track users and see what portions of populations are gaining access. But we must also expand the research agenda.

First, it is important to realize that the term 'digital divide' is misleading because it suggests a one-dimensional divide. Rather, divides exist on multiple dimensions – technological access, autonomy, social support, skill, types of uses – and thus a better term to capture the potential consequences of differentiated internet access and use for social stratification is 'digital inequality' (DiMaggio and Hargittai, 2001). Although concerns about differentiated access may decline in countries where penetration rates reach high percentages, other divides may exist and continue to discriminate among people. More research needs to be done exploring the differences in what people do online and their abilities to use the internet for various purposes.

It will also become increasingly important to specify in any study what the researcher means by 'internet use'. Use of digital technologies for computer-mediated communication with other individuals can be very different from their use for information retrieval of various types. This is especially relevant when comparing the different diffusion rates of various digital technologies such as, for example, internet use and cell phone use. Although much can be done via the latter medium as well, most of its current use is restricted to person-to-person communication. This must be kept in mind when comparing the rates of different media use and the patterns of their adoption.

We also need to learn more about non–users and especially those whom Katz and Rice call 'internet dropouts', people who once used the internet but no longer report to do so. Although we have some idea behind the reasons for dropping out, thanks to some survey measures (e.g. high cost, confusion, disinterest), it may be beneficial to do more in-depth studies of this phenomenon. Even when people state that their reason for ending use is a lack of interest, it is unclear if this is at least in part because they did not gain a full understanding of what is possible via the medium.

Although all three books allude to the role of policy concerning who has access to the internet and who does not, none of them focus on this factor enough to result in concrete policy recommendations being made to facilitate more people going online. We are in need of more detailed analyses of both national and local-level government initiatives to know what works and what does not in expanding the number of internet users. Similarly, we need evaluations of existing programs sponsored by the private sector and nonprofits. Too often programs are subsidized to the extent of implementing something new, but none of the budget is allocated to evaluating the programs' outcomes.

Finally, we need to expand studies of digital inequality to units of analysis other than the individual. What kinds of organizational changes are we seeing due to the varying implementations of digital technologies that may have consequences for social stratification? Although both Norris and Warschauer address institutional-level variables, much remains to be done at this level of analysis. Moreover, what kind of inequality exists on the side of content production? Which creators of content get more slices of the audience pie? Although all three books address related questions briefly, there is need for looking in more detail at the inequities in the production side of online content and its consequences for the internet's social implications.

Finally, even studies whose focus is not on social inequality should still take care in identifying their relevant populations. When looking at the behavior of participants in an online environment or exploring how web use influences people's actions beyond direct use of the network, it is important to clearly state about whom claims are being made and which segments of the population are not part of certain inquiries and discussions. For these reasons, tracking basic internet access and use remains an important task and deserves continued attention.

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