Digital Divide

Chapter 1:
Information Poverty in the Emerging Internet Age

For enthusiasts, the Internet promises to provide new forms of horizontal and vertical communication that will facilitate and enrich engagement, deliberation and democracy in the public sphere. Like the development of radio, telephones and movies at the dawn of the twentieth century, and the growth of television in the 1950s, the rise of the Internet Age has the potential to produce a significant revolution in personal lifestyles, social communication and public affairs. The core transformative capacities of the Internet stressed by many observers include the interactivity of the medium, the speed of electronic communications, the global reach of the net shrinking spatial distances, the greater choice of information on the web, and the ability of anyone to publish their own content online with a minimal role for gatekeepers. Messages can flow further, faster and with fewer intermediaries.

Our crystal balls predicting the longer-term consequences of the Net remain cloudy at this stage and the pace of technological and social change has fueled much giddy and breathless speculation. The birth of computer-mediated communication was first implemented in the US among a select community of scientists and scholars at elite universities and research centers in the early 1960s (Hafner and Lyon 1998). The key developments popularizing the Internet were the invention of the World Wide Web in 1990 and the graphical interface, the Web Browser, in 1993. The telephone took close to 75 years to reach 50 million users, and the television 13 years, but the Internet took only four years to reach the same number (ITU 1999). The network exploded from 312 host computers in 1981 to more than 72 million by Spring 2000. There were just over twenty countries connected to the Internet in 1990 compared with over 200 by the end of the decade. Given the rapidity of change, not surprisingly interpretations about the ultimate consequences of this development produce deeply contested visions of the future.

One of the most important issues generating widespread concern in the emergent Information Age has been indications of a growing digital divide between Internet-haves and have-nots. A global divide has become strikingly evident in the chasm between industrialized and developing societies. A social divide is apparent in the access of rich and poor in each nation. And within the online community, a democratic divide is emerging between those who do, and do not, use Internet resources to engage, mobilize and participate in public life. A growing theoretical and empirical literature is examining these issues in America but it is difficult to know how far we can
generalize about this phenomenon more widely unless we see how the technology interacts with a broader environment set by each country’s social, economic, and political system. Despite the Internet’s growing importance, at present there is little systematic research that addresses its diffusion across nations and its permutations in different societies. Who surfs in Germany, Japan and Mexico? Who uses the web for financial and banking services in Hungary, Norway and Argentina? Who reads online newspapers, watches broadband TV, or listens to radio online in the US, Britain and Italy? Who downloads information about local government services in Switzerland, Canada and Taiwan? And who uses the Internet to contact parties, network among new social movements, or follow legislative debates in France, Sweden and Spain? Arguably, connection to the information society is becoming increasingly essential for work, leisure and public life, such that information-poverty is becoming a real phenomenon. So far, the rising technological tide has failed to lift all boats. This book focuses on analyzing the extent and causes of the inequalities apparent in the emerging Internet Age, and which policy initiatives are proving most effective in mitigating information poverty. Although the Internet remains a relatively recent phenomenon, our understanding needs to be rooted in the broader literature on the well-established causes of inequality in traditional forms of social communication and civic engagement. The key issue is whether the potential of the Internet will serve to reduce existing disparities or exacerbate them.

(Figure 1.1 about here)

The theory developed in this book, which can be termed the Internet Engagement Model, suggests that use of the new technology can be understood as the product of resources, motivation, and the structure of opportunities (see Figure 1.1). Individual resources, including time, money, computer literacy, language skills, and social networks can all be expected to influence whether people access and use computers online. The initial hurdles facing middle-class college-educated teachers, lawyers or healthcare professionals in New York or LA, surrounded by desktops connected to high speed LAN access at work and mobile computers on the road, are obviously in sharp contrast to the start-up barriers facing rural workers in Mexico or Uganda. Individual motivation can also be regarded as important, particularly the interest, involvement and confidence that people bring to the process of using computers and communicating via the Internet. Even among affluent middle-class families with home computers, there is often a generational divide between young people who want to surf for games, MP3 music and movie clips and the older generation who prefer to spend an evening with network TV or a rented video. Studies show that some of the online community are interested in information about stocks and financial services, others in news or entertainment, and still others in specifically political functions of the Net (Norris 1999a).
These factors interact with the structure of opportunities set by the information environment within each country. This concept refers to the systemic opportunities to access the Internet for a variety of different functions, particularly for information, mobilization, or engagement, within each society. In some countries like the United States, there are multiple web sites easily available for news, entertainment, banking or shopping, as well as thousands of chat rooms, list-serves and news groups, and a cornucopia of political and commercial web sites. The costs of online access have dropped and some new computers have even been given away, albeit with advertising or ISP strings attached. Corporate, non-profit and government initiatives have sought to expand low-cost computer access in community centers, public libraries, Internet cafes and schools. In many other countries, local content in indigenous languages is often scarce, there are few possibilities of online interaction with social networks, training is minimal, and the costs for access remain prohibitive.

The multiple and diverse uses of the Internet can be probably best conceptualized as altering the structure of opportunities for social communication and civic engagement, for example changing the ability of citizens to buy goods and services online, to check news headlines, to participate in online discussions in chat rooms or by email, to support social movements, charities or parties via web pages, to research information about particular community issues, to access local government services, or to network with groups. Altering the structure of opportunities in turn influences the balance of relevant resources, for example the costs of acquiring information, as well the role of mobilizing agencies which can interact and communicate with supporters more easily, but probably has minimal impact on altering the motivational basis of participation. If this theory is correct, then we would expect those citizens who are already most interested and involved in social communications and public affairs would take most advantage of the opportunities for information, expression, mobilization, and political activism via the web.

The core components of this theory are not new but instead build on the general literature on social interaction, political communications and civic engagement. Differences in resources such as socioeconomic status and education have long been part of the standard variables commonly used to explain differences in political participation via voting, party campaigning and contact activity, in the United States and elsewhere (Verba and Nie 1972; Verba, Nie and Kim 1978; Verba, Schlozman and Brady 1995). The concept of the structure of opportunities builds on the work on collective action and new social movements developed by Charles Tilly (1978), Doug McAdam (1982), and Sidney Tarrow (1983), among others (see McAdam, McCarthy and Zald 1996). These themes have also recurred in the growing body of American research examining the role of the Internet for parties, candidates and election campaigns (Corrado and Firestone 1996; Hill and Hughes 1998; Bimber 1998; Margolis, Resnick and Tu 1997; Davis and Owen 1998; Davis 1999; Dulio, Goff and...
Thurber 1999; Wilhelm 2000); for new social movements, interest groups and community activism (Bimber 1998; Zelwietro 1998); and for the policymaking process and governing in an information age (Selnow 1998; Hauben and Hauben 1998; Bimber 1999). Building on this foundation we can seek to apply these concepts systematically to understand how these factors interact to promote Internet engagement from a cross-national perspective.

One possible scenario is that resources are likely to play an important role in explaining who goes online, and the high costs of gaining initial access to the Internet may exacerbate social inequalities. But motivation may prove far more critical in explaining what people do once they are online, given the wide choice of where to surf on the web compared with traditional mass media. And the structure of opportunities within each country can be expected to interact with both resources and motivation, for example influencing opportunities to read online newspapers in different languages, or to submit taxes electronically, or to email representatives, as well as public access and online costs in different societies. By systematically examining evidence in a wide range of countries we can test how far this model provides a useful way of understanding the diffusion of the Internet and the divisions of unequal access and use that are evident in the early years. First, we need to sketch out the nature of the digital divide at different levels then describe the core theory in more depth and the overall plan of the book.

The Global Divide

Worldwide there is considerable concern that the explosion of the Internet may leave many nations far behind, producing growing disparities between advanced industrialized and developing societies. In theory the Internet can broaden and enhance access to information and communication in developing nations, because it offers a relatively cheap and efficient service. Small businesses in South Africa and Mexico can sell their products directly to customers in New York, irrespective of the traditional barriers of distance, the costs of advertising, and the intermediate distribution chains. With the travel industry accounting for up to a third of total online revenues in 1997, sales via the Internet are likely to be an important source of growth for developing countries (ITU 1999). The Internet also offers promise in the delivery of basic services like education and health information to far-flung regions, allowing a teacher or doctor in Ghana or Calcutta access to the same database information as one in London or New York. Networks of hospitals and health care professionals in the Ukraine, Mozambique and Senegal can share medical expertise and knowledge. Distance learning can widen access to training and education, such as open universities in India and Thailand and language web sites for schools. Moreover by connecting disparate social movements, new coalitions can be formed mobilizing global civic society, such as those concerned about the World Trade Organization meeting in Seattle, sweatshop manufacture of Nike shoes, or opposition movements in
Burma, linking indigenous groups in developing societies with Norwegian environmentalists, Australian trade unionists and EU human rights organizations. In all these regards, the Internet promises to level the playing field and reducing the traditional disadvantages of the developing world. But basic access is required before these benefits can flow. How realistic is this?

In the emerging Internet Age the information revolution has transformed communications in post-industrial states like Sweden, Australia, and the United States at the cutting edge of technological change, reinforcing their lead in the new economy. But in the early twenty-first century so far the benefits of the Internet have not yet trickled down very far to the poorer nations in Sub-Saharan Africa, South Asia and the Middle East. The gap between the information-rich and poor countries has sharply increased in the emergent years of this new technology (OECD 1999:85-98; Norris 2000). The United Nations Development Report warned that the gains in productivity produced by the new technology may widen differences in economic growth between the most affluent nations and those that lack the skills, resources and infrastructure to invest in the information society: “The network society is creating parallel communications systems: one for those with income, education and literally connections, giving plentiful information at low cost and high speed; the other for those without connections, blocked by high barriers of time, cost and uncertainty and dependent upon outdated information.” (UNDP 1999:63). Echoing these concerns, UNESCO emphasizes that the North-South divide may be exacerbated in a situation where most of the world’s population lacks basic access to a telephone, let alone a computer (UNESCO 1998). As a result, societies can become increasingly marginalized at the periphery of communication networks. Although the Internet is a new technology, there is nothing particularly novel about this pattern. Research on global information flows from north to south have long emphasized the center-periphery distinction, a problem which aroused heated debate in the 1980s centering on UNESCO’s New World Information Order (Galtung and Ruge 1965; Mowlana 1997). But the growing importance of the information economy can be expected to exacerbate these divisions.

How far has the Internet diffused around the world? No official data yet exists on how many people go online on a global basis but there is evidence about the penetration of the new technology based on analyzing the location of Internet hosts, web servers and e-commerce sites, as well available surveys of the general population conducted by market researchers. Data remains incomplete, in some countries we have only ‘guesstimates’ (Rood 1999), but the use of overlapping sources confirms the broad picture of global inequalities of access and use. NUA provides the most comprehensive unofficial estimates based on combining surveys by different companies, most commonly asking a sample of the general population whether they have access online at home or at work. The survey evidence collected by NUA suggests that worldwide the number of Internet users
exploded from about 26 million in 1995 to approximately 275 million by Spring 2000 (www.nua.com). Although a remarkable rise, it remains the case that at present only 5% of the world's population are online (see Figure 1.2). Globally the regional disparities are marked. In spring 2000, NUA estimate that almost half of the world's online community (136 million) live in the United States and Canada alone. In contrast the whole of Sub-Saharan Africa contains only 2.5 million Internet users, or less than 1% of the world's online community. Indeed there are more users within affluent Sweden than in the continent of Africa. Growing inequalities are evident even within post-industrial economies. In the European Union, for example, the spring 1999 Eurobarometer survey found that almost two-thirds of the population had access in Sweden, Denmark and Finland, some of the highest levels of penetration worldwide, compared with only one tenth of those living in Mediterranean Europe (see Figure 1.3) (Norris 1999c).

Alternative indicators of Internet dispersion can be estimated from the distribution of Internet hosts, which are regularly monitored by agencies such as Netcraft, Network Wizards, Matrix Information, the Internet Software Consortium, and RIPE. The most comprehensive estimates for the number of web servers around the globe is provided by Netcraft, who found that by the end of the twentieth century there were about 11.1 million sites worldwide, up from 18,000 in 1995. The location of hosts and servers gives an indication of technological development across countries although one limitation for geographic analysis concerns the structure of domain names. Internet hosts are defined as a domain name with an associated IP address record, including country codes such as those ending .uk or .fr, and generic domains, such as .com, .org and .edu. To distribute the generic domains to individual countries, an OECD study weighted the number of generic domains according to the number of such registrations from a particular country.

The results of the OECD study in Figure 1.4 confirm the North-South division found in surveys of Internet users. Again Scandinavia and North America dominate the location of Internet hosts, followed by many Western European countries, with poorer societies like Turkey, Mexico and Poland at the bottom of the ranking (OECD 1999). There are almost as many hosts in France as in all of Latin America and the Caribbean, and there are more hosts in New York that in all of Africa (ITU 1999).

How do we explain these major disparities? Many factors may plausibly have contributed towards global inequalities in Internet access but in terms of the Internet Engagement Model discussed earlier we can theorize that the resources of a country and the structure of opportunities are likely to prove most important, rather than cultural differences in motivation and interest.
The importance of resources includes cross-national differences in general levels of socioeconomic and human development, and in particular differences in the education, literacy, English-language skills, and service sector employment of the population (ITU 1997). Many studies in the United States have noted the need for resources such as capacities, skills and training before an individual can participate fully in the Information Society (Wilhelm 2000). Translated to a societal level, cross-national disparities in economic development should be systematically related to the development of the technological infrastructure necessary for Internet access. Hargittai (1999) found that a nation’s per capita GDP was significantly associated with levels of Internet connectivity in OECD states. Linguistic skills are also likely to prove important, since the most comprehensive analysis of over 1 billion Web pages found that 87 percent of all documents were in English (Inktomi 2000). This may change in coming years, as more and more residents get online in China, Korea and Brazil, but in the meanwhile those who use English as their native tongue, or who are familiar with English as a second language, will be greatly advantaged in communicating on the web. Rao et al. (1999) argue that in the South Asian context, the quality of web content in indigenous languages, as well as the limited local relevance of sites, limits the incentive to go online for much of the population. Use of the Internet is also related to the availability and costs of technology and access in different countries, including the price of hardware/software, Internet Service Providers, and telephone services. This is not just a matter of the familiar income disparities between rich and poor nations, since the relative costs are actually higher in many developing countries. The OECD (1999) estimates that the monthly charges for Internet access, for example, are $24 per month in Australia compared with almost three times the cost in Turkey ($65 per month) and almost four times the cost in Mexico ($94 per month).

Moreover, the structure of opportunities will be shaped by public policies within each country, such as government and corporate initiatives towards IT education and training, investment in science and technology, and the regulation of telecommunications. Hargittai (1999) concluded that telecommunications policies, such as the level of competition under deregulated systems, were significantly associated with levels of Internet connectivity in OECD countries.

In contrast, motivational factors such as interest in using the new technology and attitudes towards computers are expected to play a more minor role in determining access per se, rather than what people do and where they surf when on the web. Certainly general attitudes towards science and technology can be expected to vary between different societies, for example a study by Dalton and Rohrschneider (1998) found that perceptions of the threats of nuclear power and attitudes towards industrial pollution varied widely even within Western Europe. There may also be systematic differences in attitudes towards computer technology between social groups, in particular
motivational differences are often discussed to explain gender gaps in science and technology classes in schools. Nevertheless, rather like the diffusion of radio and television, access to the Internet can be expected to be influenced more strongly by basic resources like costs and the structure of opportunities like the available content rather than motivational interest per se. Examining the pattern of Internet access across a wide range of developing and post-industrial societies worldwide allows us to examine the systematic evidence for these propositions.

The Social Divide

Equally important, many have expressed concern about the development of a social divide, referring to the inequalities of Internet access and use by disadvantaged groups within society, even in countries at the forefront of the information society. In the United States, the Department of Commerce’s recent study, Falling through the Net, emphasizes the familiar disparities in access found among low-income American households, and the gap among high-school educated, blacks and Hispanics, those in rural areas, and to a lesser extent among women. The 1998 survey found that households with income of $75,000 and above are twenty times as likely to have Internet access as those at the lowest income levels, and more than nine times as likely to have computer access (www.ntia.doc.gov.ntiahome/fttn99). In February 2000, President Clinton expressed concern about this situation and proposed a new plan to help bridge the ‘digital divide’, offering private companies a $2bn tax break, new teacher training programs, and the development of Community Technology Centers in low-income neighborhoods to help close the gap so that access to computers eventually becomes as ubiquitous as the availability of the telephone or television (www.digitaldivide.gov). The Department of Commerce has headed this initiative, emphasizing the role of public programs to widen access, promote the skills people need to use the technology, and encourage content that will empower under-served communities. In the private sector too, industry leaders like Steve Case, chairman of AOL-Time Warner, have warned that too many people are being left behind in the information age (Case 1998). Other countries like Finland, Germany and Sweden have all announced initiatives to address these concerns, often incorporating a mix of private and public resources. In south Asia, initiatives have been proposed to extend the Net to rural areas via Internet kiosks, community centers, wireless delivery, and public sector initiatives (Rao et al. 1999).

(Figure 1.5 about here)

The social inequalities commonly found in the United States are also evident in the European Union. The 1999 Eurobarometer survey shows that almost a third of the younger Europeans are online, compared with 3% of the over 65 year olds. Those in the highest quartile incomes are three times as likely to be online as the lowest income households. Education,
occupational class and region are strong predictors of Internet access, although the gender gap is small (see Figure 1.5). Moreover, most importantly, rather than equalizing, the social gap between the users and non-users has expanded from the mid to late-1990s. The pattern may flatten again in the next few years if use spreads more widely, as with the early years of radio and TV, but the emergent Internet era has seen a growing divide between the information-rich and poor (Norris 1999c).

This situation raises many issues that need to be explored further. Will the familiar social divide in Internet access gradually close over time, as the online community ‘normalizes’? Or will this gap persist even in nations where the online community has grown most rapidly? And what are the broader implications of this division for social inequalities in the workforce and public life? The Internet Engagement model can be applied to understand the primary reasons for the inequalities of access, particularly the role of resources such as the financial costs, cognitive abilities and technical skills for each group. Attitudes may play a role, such as interest in going online and confidence in the new technology. The structure of opportunities can also be expected to vary between societies, for example if government investment in public access through public libraries, Internet cafes and community associations expands access for certain disadvantaged social groups.

**The Democratic Divide**

Lastly, there is also growing awareness that even if Internet access gradually becomes widespread among all major social groups, rather like the penetration of radio in the 1920s and television in the 1950s, nevertheless there will still be a growing democratic divide between the minority who use the multiple resources of the Internet for civic engagement and the majority who opt out from any online political activity. Yet interpretations of the capacity of the Internet to influence public life differ sharply.

On the one hand, **mobilization** theories claim that virtual democracy promises a cornucopia of empowerment in a digital world. The strongest claims of mobilization theories are that the net provides a distinctive structure of opportunities for political mobilization that differs, in significant ways, from conventional activities like working for political parties or candidates, organizing grassroots community movements, or lobbying elected officials. It is thought that the net may equalize social inequalities in public life by sharply reducing (although not eliminating) certain barriers to civic engagement, leveling some of the financial hurdles, and widening the opportunities for political debate, the dissemination of information, and group networks. Hence Etzioni (1993) sees the Internet as advancing public affairs through ‘teledemocracy’. Schwartz (1996) emphasizes the potential for a virtual community. Tsagarousianou (1998) hopes that cyberdemocracy can revitalize civic networks and urban neighborhoods. Rheingold (1993) argues that bulletin board systems are
democratizing technologies, used to exchange ideas, mobilize the public and strengthen social capital. Grossman (1995) anticipates the opportunities for shrinking the distance between governed and government using the new communication technology, creating an ‘electronic republic’. Budge (1996) believes that the web will facilitate direct democracy. Bimber (1998) concludes that the net may contribute towards ‘accelerated pluralism’, at least in the United States, contributing towards a more fluid, less institutionalized group politics. By directly linking activists worldwide, and reducing communications costs, Frederick (1992) suggests that the net may foster new types of international mobilization by NGOs around the globe, exemplified by campaigns against NAFTA, or more recently against land mines and the World Trade Organization. Steve Case (1998), chairman of America Online-Time Warner, argues that the Internet offers to reconnect people to the political process by helping people become more informed citizens, by helping representatives become more responsive to citizens, and by engaging more people in public policy debates.

Yet these claims have been strongly disputed. In contrast, reinforcement theories suggest that use of the net will not radically transform existing patterns of social inequality and political participation. Davis and Owen (1998) concluded that the Internet does provide new sources of information for the politically interested, but given uneven levels of access there are good grounds to be skeptical about its transformative potential for democratic participation. Murdock and Golding (1989) warn that the familiar socioeconomic biases which exist in nearly all conventional forms of political participation seem unlikely to disappear on the net, even if access gradually widens to the electronically disadvantaged. Wilheim (2000: 150) echoes these concerns, suggesting that the dominance of the Internet by commercial interests, and asymmetric ownership of advanced telecommunications services, means that people with the access and means to use the Internet to locate valuable information, exchange ideas, and engage in e-commerce, making them proportionately better off than those who cannot or will not appropriate these tools. Bimber (1998) concludes that technological enthusiasts often exaggerate how far the messages communicated via the Net are similar to those already communicated face-to-face or through other media like newspapers, changing the form of transmission but not its contents.

So far most of the evidence has focused on the use of the Net in the United States and few empirical studies have compared the political consequences of Internet use across a wide range of different political systems. The available evidence from Pew surveys in the United States (Pew 1999), and from Eurobarometer surveys in the EU, serves to confirm the more skeptical reinforcement perspective. Although many people use the net for email and general news, in these countries only a few participate in Internet political activities, like consulting local government services, engaging in political discussions, or contacting elected representatives (see Figure 1.6). The small group of net
political activists is drawn from those already most likely to use existing channels of civic engagement (Norris 1999c, 2000; see also Davis and Owen 1998).

(Figure 1.6 about here)

There many reasons why we need to build on this work to examine the situation more closely. First, we need to extend the comparisons across different political systems to understand systematic variations in Internet civic engagement. It is well established that conventional forms of political participation vary substantially between societies, such as campaigning and contacting elected officials (Verba, Nie and Kim 1978), party membership (Katz and Mair 1992), campaigns (Swanson and Mancini 1996), as well as voting turnout (IDEA). If the Internet is a medium that adapts to the culture and structure within each society, then we might expect to find very different patterns of Net civic engagement in political systems as diverse as the United States, Sweden and Australia, let alone in Russia, Turkey and Mexico. Who contacts government agencies online in Canada, Sweden or Germany? How many get information via party web sites in Britain, Australia and Mexico? Which community groups mobilize grassroots activists around environmental issues in the Netherlands, the US, and France?

Moreover we need to monitor trends over time in the emergent Information Age, to understand how the political uses of the Internet rapidly evolve as parties, candidates, new social movements, and government agencies adapt to the new structure of opportunities presented by the technology in different societies. The early years of the Internet are likely to prove atypical of subsequent developments as people learn what does, and doesn’t, work. For example, in the 1998 US elections only one in ten of the major party Senate, House and Gubernatorial candidate web sites facilitated online campaign donations and almost half did not even ask for money (Kamarck 1999). In February 2000, John McCain’s campaign raised $1 million via online contributions in the 48-hours after his New Hampshire victory, or $2.5 million in total online (www.McCain2000.com), an example that every other American candidate wants to emulate. The links between organizations mobilizing against the WTO meeting in Seattle, complete with live online video-feeds from demonstrations, provide another recent example of Web innovations. If new interactive formats become available, allowing horizontal as well as vertical patterns of communication, how does the public respond? Can parties, groups, and campaigns mobilize supporters in horizontal networks via ‘virtual’ conferences, policy discussions, and innovative feedback mechanisms? What new formats work, and what don’t? The early years of the emerging Internet era are a unique opportunity to study how the first generation of users evolves, like analyzing the television audience in the 1950s.
The Internet Engagement Model can be applied to differences in where we surf, as well as whether we surf, although we might expect that motivational factors and the structure of opportunities plays a greater role here than resources. Previous studies have established a consistently positive association between political use of the Internet and indicators of civic engagement, in the US and Europe (Norris 1999a, 1999b, 2000). That is, those who surf for campaign news, or engage in online political discussions, or read party web pages are more politically informed, trusting and active than average. If this pattern is confirmed in this study, it could be explained in any one of three alternative ways.

The association could be the result of ‘selection effects’, if the chain of causality runs from prior civic engagement to use of the Net, that is, if people who are most politically interested and involved turn to news and public affairs on the web to keep themselves well-informed and networked. This perspective, which echoes the ‘uses and gratifications’ theory of television viewing (Blumler and Katz 1974), emphasizes the motivational basis of political participation, and the need for prior predispositions before people use the political resources available on the Net.

Alternatively, the association could be accounted for by ‘media effects’, if the causal direction runs from use of the Internet to subsequent civic activism, for example if people who happen to go online (for whatever reason) discover new resources like political chat rooms or issue campaigns which help them become more involved in public affairs. This view emphasizes that the Internet can engage many groups like the younger generation, those in isolated communities, or political minorities who might otherwise be unlikely to become involved through conventional organizations like parties or community groups. While users may go online because they are mainly attracted by home shopping, or entertainment or financial services, when surfing they may stumble upon political resources that stimulate further interest in public affairs. Both accounts, however, make strong and rather implausible assumptions that the effects are purely one-way.

In contrast, the theory of a virtuous circle suggests that there is a process of mutually reinforcing interaction involved in use of the Internet, as with use of the traditional news media (Norris 2000). In this view, we can theorize that the most motivated citizens will be most likely to use the political opportunities on the Internet, such as reading political news, checking party web pages, or coordinating organizational activities via the web, driven by their prior interests, attitudes and resources. In the longer term, however, as a result of accumulated experience this process will thereby positively reinforce their civic engagement; the more political information acquired, the more networks contacted, the greater the more awareness of current affairs, the lower the costs of becoming further involved in the democratic process. Through the Internet, this theory predicts that the most engaged will thereby become more engaged.
Yet if the engaged are reinforced through this process, why are the apathetic and alienated not similarly affected? This theory suggests that the most politically disengaged will be largely immunized from political messages on the net for three reasons: first, this group will be least likely to access the Internet for political information, preferring multiple alternative choices on the web; second, if they do encounter political messages, lacking interest they will be less likely to pay attention; and lastly, if they are come across political web sites which they do pay attention to, they will be less likely to trust the information. The Internet will thereby have the least influence over the apathetic, disenchanted, or disinterested. If this theory is correct, and if this situation persists as Internet use spreads and normalizes, it suggests that there will be a growing ‘democratic divide’ in civic involvement. Far from mobilizing the general public, the Internet may thereby function to increase political divisions within societies. This tendency exists in the traditional news media as well but because of the distinctive characteristics of the Internet, namely the fragmentation of sources and à la Carte choices about what to see and do, rather than the predetermined schedule and front-page headlines of the traditional mass media, this tendency may be exacerbated.

Of course, there are strong grounds for caution in any prognostication, given the rapid pace of change, and debates about the long-term consequences of the new technology for society and democracy cannot be resolved at this stage. The Internet changed rapidly during the late 1990s, and multiple developments may well occur within the next few years, such as the introduction of online voting in some countries, the expansion in broadband transmissions, and growing convergence of television and the Internet. But the pattern of a ‘virtuous circle’ fits what we already know about the impact of traditional forms of political communications like newspapers and television, it also receives support from studies of the emergent years of the Internet, and therefore the theory deserves to be tested more widely.

**Plan of the Book**

To examine these issues evidence is drawn from worldwide surveys of public opinion, systematic content analysis of web sites, and case studies of online political engagement. The comparative framework for book adopts a ‘most similar’ comparative research strategy by focusing upon OECD member states that share similar economic and political backgrounds, as most are long-established democracies and advanced post-industrial societies. There are significant variations within this universe in terms of the Internet, such as the costs and ease of access, the availability of online newspapers and television, and the structure and organization of party web sites. The last section of the book focuses on the United States and the 15 member states of the European Union, drawing on public opinion data from the American National Election Study, the Pew Center on the People and the Press, IRIS surveys of Internet users, and the European Commission.
The book is divided into three sections. To explore these issues, Chapter 2 develops what we know about the global divide in the information society, drawing upon aggregate indicators to understand the spread of the Internet worldwide, and then considers alternative explanations for cross-national differences in Internet use. Chapter 3 goes on to analyze the extent and the causes of the social inequalities in Internet access within different countries, in particular divisions of class, education, gender and generation. Part II compares the political uses of the Internet, in terms of the news environment, political parties and campaigns, civic society and the government. Part III then examines the impact of attention to the Internet for news and political activism, considers the major explanations of net activism, and evaluates the main policy options for reducing the digital divide. The conclusion draws together the major findings and considers their implications for democracy.
The Structure of Opportunities

Resources

Motivation

Internet Access

Online Civic Engagement

Figure 1.1: The Internet Engagement Model
Figure 1.2 Number of Users and Sites Worldwide, 1995-2000

Figure 1.3: Percentage of Internet Users, EU & US 1996-1999

Source: Eurobarometer Spring 1999, Norris 1999c
Figure 1.4: Hosts per 1000 population, July 1998.

Figure 1.5: The Social Background of Online Users, EU 15 1996-1999

Figure 1.6: The Most Popular Uses of the Internet, EU-15 1999

Source: Eurobarometer Spring 1999

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1 For example, if 5% of the total generic top level domains are from a particular country, then 5% of the total number of hosts surveyed under generic top level domains are reallocated to that country. For details, see OECD 1999: 87.