

Chapter 6

The Emerging Internet Era

Like earlier periods witnessing the rise of radio, and then television, the birth of the Internet Era has generated extensive speculation about the potential consequences of this development for older news media, for political campaigns, and for civic society¹. As the internet has taken off, research has explored the consequences for parties, candidates and election campaigns; for new social movements, interest groups and organizational activism; and for the policymaking process and governing in an information age². Despite the growing literature in America, we know less about who surfs in other societies.

This chapter compares the social characteristics of net users in Western Europe and the United States, examining the evolution of the information society and the online community since the mid-1990s³. The chapter focuses on two issues: At national-level, is the information society expanding throughout post-industrial societies or is a new cleavage emerging between the information-rich and poor? And at individual level, is the Internet community 'normalizing' throughout society, or are clear disparities emerging between the more affluent and well-educated and the rest of society? The conclusion summarizes the core findings and considers the implications for understanding political communications in the emerging Internet Era.

Mobilization and Reinforcement Theories of the Internet

The explosion in Internet use in post-industrial societies has led to a potential transformation in the major sources of political news, with the rise in online newspapers, broadband television and radio, and new forms of political interaction like online political discussion groups. Interpretations about the potential for expanding social equality through the Internet differ sharply. On the one hand **mobilization** theories claim that virtual democracy promises a cornucopia of empowerment in a digital world; Schwartz emphasizes the potential for a virtual community⁴. Rheingold argues that bulletin board systems are democratizing technologies, used to exchange ideas, mobilize the public and strengthen social capital⁵. Lawrence Grossman anticipates the opportunities for shrinking the distance between governed and government using the new communication technology⁶. Ian Budge argues that the web will facilitate direct democracy⁷. The strongest claims of mobilization theories are that net activism represents a distinctive type of political participation which differs, in significant ways, from conventional activities like working for political parties, organizing grassroots social movements, or lobbying elected officials. By sharply reducing the barriers to civic engagement, leveling some of the financial hurdles, and widening the opportunities for political debate, the dissemination of information, and group interaction, it is thought that the net may equalize social inequalities in public life. For enthusiasts, the net promises to provide new forms of horizontal and vertical communication, which facilitate and enrich deliberation in the public sphere.

If mobilization theories are correct, and if information on the net reaches those such as young people, or people in isolated communities, or minority political groups, who have conventionally tuned out from traditional media or been less involved in public affairs, then this should have the capacity to expand civic engagement in important ways. By directly linking citizens worldwide, and reducing communications costs, the net may also foster new types of international mobilization by NGOs around the globe, such as the campaign against land mines. At societal level, potentially the new technology may also prove critical to economic development in societies like Malaysia and India, facilitating the move from a semi-agricultural to a service economy, as in Singapore. Bill Gates claims that the information society may thereby reduce global inequalities between rich and poor nations⁸.

Yet in contrast **reinforcement** theories suggest that use of the net will strengthen, but not radically transform, existing patterns of social inequality and political participation. From this more skeptical perspective, this media will serve to reinforce, and perhaps even widen, the participation gap between the have and have-nots. Owen and Davis 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 participation⁹. Murdock and Golding 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 disadvantaged¹⁰. From this more skeptical perspective, the new media will serve to reinforce, and perhaps even widen, the existing gap between the have and have-nots. At societal level, the North-South divide may be exacerbated in a situation when most of the world's population lacks basic access to a telephone, let alone a computer¹¹. The gains in productivity produced by the new technology may widen differences in economic growth between the most affluent societies and those that lack the skills, resources and infrastructure to invest in the information society¹².

To examine these issues, this chapter compares 'net users', defined as those who report having access to, or using, the Internet or the World Wide Web. Chapter 12 goes on to analyze differences between those online primarily for social reasons, such as to browse news about the stock market, read email from friends, compare software prices, check reviews of local movies, and net *activists* who engage in more strictly political functions such as emailing an elected official, participating in a political discussion group, consulting local or central government services, or acquiring electoral information from a party/candidate, interest group, or newspaper web site.

The Evolution of the Information Society

The first issue to consider is whether the information society had taken off equally across post-industrial societies. If the reinforcement thesis is correct, we would expect to find that existing differences between information-rich and poor nations would be exacerbated by the growth of the Internet. In the adage, "To them that hath...", the most affluent and advanced post-industrial economies can be

expected to have the investment in skills, technology, and infrastructure which could allow them to becoming leading players in the global information society, while poorer states could lag further behind. Far from promoting greater equality between nations, the net could allow more advanced economies to pull further ahead.

[Table 6.1 about here]

We can compare the spread of the 'information society' in Europe in the mid to late 1990s, encompassing a wide range of mediated and interpersonal communication technologies. These can be categorized as *computer*-related (including access to a computer, CD Rom and modem facilities, and the Internet), *television*-related (such as access to cable and satellite television, decoders for paid television programmes, teletext news services on television, the use of video recorders or VCRs), and *telephone*-related (such as use of minitel or other videotext service without TV, and fax machines).

[Table 6.1 about here]

The comparison in Table 6.1 shows a dramatic explosion of use of the information society but the pattern across post-industrial nations, even within the EU, has proved highly uneven so far. Trends in Europe from the mid to late-1990s show that of all the communication technologies, the growth in computer-related formats have easily outstripped other systems. During just four years, the proportion of Europeans with access to a computer rose from 31 in spring 1996 to 40 percent in spring 1999. Even more dramatically, during the same period the proportion of European Internet users quadrupled from 5 to 20 percent. In the late 1990s, the Internet moved from margin to mainstream in Europe, reaching more people than many traditional media outlets. There was a related surge in those with access to a CD Rom on their computer or a modem connection. In contrast, during the same years, demand remained flat for the use of television-related technology like VCRs, satellite TV and decoders for paid TV; only access to televisions with teletext news increased, in large part because this feature became fairly standard among TV manufacturers. About two-thirds of all television households in Europe now have access to a VCR and to teletext, while half have cable or satellite TV (see Table 4.2). The purely telephone-related technologies also stayed fairly stable (with the exceptions of the all-pervasive jangling mobile phones, not shown here¹³); while use of older minitel systems, largely confined to France, declined during this period.

[Table 6.2 about here]

The overall surge in the Internet, however, disguises major contrasts between European states. The level of penetration is highest in Sweden, where almost two-thirds (61%) of the adult population are online, followed by Denmark and Finland. In the middle ranks, from one fifth to one third are online in the Netherlands, Luxembourg, Britain and Northern Ireland. The laggards in Internet use are countries in Southern Europe, notably in Spain, Greece and Portugal. Patterns of net users are closely correlated, not surprisingly, with access to computers (see Table 6.3 and Figure 6.2). Again Sweden leads the way

in computer users, followed by Denmark, Finland and the Netherlands. But affluent Germany and France remain low on both indicators, while Greece and Portugal are the least wired to the information society. The importance of the North-South divide already observed in European use of TV and newspapers is reinforced when we examine trends in access to computers and the Internet (see Table 6.2). The pattern shows by far the highest levels of net users in Northern Europe, where 39% are online in spring 1999, in contrast to Southern Europe where only 8% surf.

[Table 6.3 and Figure 6.2 about here]

Strict comparisons between the United States and Europe are difficult, since measurements differ and the alternative estimates about the proportion of Internet users that are available often vary considerably (see for example <http://www.nua.ie/>). If we turn to the estimates in the regular Pew surveys of online users, by January 1999 almost half (47 percent) of all Americans said they ever went online to access the Internet or World Wide Web, up from 14% in June 1995, and 23 percent in July 1996¹⁴. As well as access, regular use has also surged dramatically in just a few years. Pew estimated that by January 1999 two-thirds of all Americans (69 percent) used a computer, whether at home or work. The overall rate of growth has been phenomenal: the number of Americans using online and Internet services has been doubling every twelve months for the past three years.

There are many possible reasons for these cross-national variations. Levels of socioeconomic development can be expected to play a role: societies with a large white-collar service sector facilitate internet access in the workplace and those with experience of higher education are likely to have acquired computing skills. At national level, use of the net was significantly correlated with levels of affluence and education¹⁵. Participation in the Internet requires telephone or broadband cable facilities, computer and software skills, literacy and a certain standard of living. When Europeans were asked in the Eurobarometer why they were not interested in getting certain services over the Internet, cost proved a major factor. Yet the level of economic development can provide only a partial explanation of the observed patterns. After all, low access to the Internet in Greece and Portugal cannot simply be blamed on the education skills of the workforce or the size of the service sector, since Austria, France and Germany also have few net users.

Another reason may lie in linguistic skills. Surveys of web sites indicate that the net remains an overwhelmingly English-language dominated medium¹⁶. If so, then we would expect that the level of Internet use would reflect a society's familiarity with English as the primary or secondary language. This could help to explain the size of the online community in Scandinavia, the Netherlands, Britain and Ireland, compared with Germany or France.

Lastly, technological developments, government policies and private sector initiatives within each country structure the opportunities for Internet use and access, including investments in scientific research, programs to facilitate Internet connections via public libraries and schools, computer training in schools, further and

higher education, and communications policies regulating telephone charges, cross-media ownership and online server companies.

We can conclude that at present the information society has not spread evenly throughout post-industrial economies, instead there are major differences between leaders and laggards even within the European Union. There is a strong correlation at national level between patterns of newspaper readership and use of the net¹⁷. Far from equalizing the playing field between European societies, the adoption of new technology has so far exacerbated a North-South divide that already existed in use of the traditional mass media.

The Characteristics of the Online Community

Is the online community disproportionately concentrated among the more affluent and well-educated strata, men, and the younger generation? Does it draw from those who are already heavy users of newspapers and television news? Is the online community 'normalizing' over the years, if Internet usage gradually widens and broadens into mainstream society?

Based on what we know about the characteristics of the online community in the United States, we would expect to find that net users would be drawn disproportionately from the more affluent and well educated sectors of society, the male population, younger generations, and from those most attentive to the traditional news media¹⁸. In these respects, except for age, the online community reflects the socio-economic biases common in conventional forms of political participation¹⁹. The literature also suggests that we would also expect to find that the online community would include those already most engaged with, and knowledgeable about, public affairs. With the important exception of age, if the profile of net users is similar to those already most likely to participate politically, the Internet may function to reinforce rather than transform existing social inequalities in civic society.

[Table 6.4 about here]

Table 6.4 compares the social background and use of traditional news media of European Internet users in spring 1996 and spring 1999. For multivariate analysis these variables were entered into a logistic regression model, shown in Table 6.5, along with each nation (coded as dummy variables) to examine the effects of societal level variations already observed. The typical profile of Internet users shows that, as expected, they are more similar to newspaper readers than television viewers. The demographics of net use shows that the strongest predictors of this group are age, education and region; Internet users in Europe are far higher among the younger generation (in marked contrast to TV news viewers), the better educated and those living in Northern Europe. Users also tend to be of higher socioeconomic status and income, and there is a familiar gender gap with women slightly less active on the net than men. The pattern by occupational status was clearly defined, with 44% of managers online, compared with 15% of manual workers, and only 10% of the unemployed. Once we control for region then the large disparities by nation reduce in strength. In

terms of use of the traditional news media, as in the U.S., European online users were more likely than average to read a newspaper and listen to radio news, although there was no significant relationship with use of TV news. Although there is much overlap in media use, those on the Internet typically tend to differ in some important regards, particularly by age, from those who most often rely upon television news. The generation gap in patterns of media consumption will probably have important consequences for future developments in the news industry. The familiar social biases in the online community that are widely observed in the United States are also present in Western Europe.

[Table 6.5 about here]

The multivariate analysis in Table 6.5 confirms that all these variables proved significant. After controlling for individual-level social background and media use, the societal-level variations we have already observed remained significant. This suggests that the pattern we have already observed in the higher use of the net in Scandinavia is not just a product of the educational and occupational background of the population in these countries but does reflect broader societal patterns of access. That is, a white-collar graduate in Portugal would still be less likely to be online than his or her Swedish equivalent.

If we compare the changes in Table 6.5, as use of the Internet expanded from the mid to late-1990s, it is apparent that the social divisions between net users and non-users has widened. The groups who have flocked most readily to the net are the young, the most affluent and the well educated, while other groups registered far more modest increases. For example, the proportion of managers online shot up by 30%, double the average rate of increase. The profile of online users may flatten again in a few years if use spreads more widely throughout society, for example if the price of equipment and access drops, as seems likely, but during the emerging Internet period it is the younger generation with the educational skills and financial resources to get online who have taken most advantage of the opportunities on the internet. The gap between the information-rich and poor has widened substantially, at both individual and societal levels, in the emergent Internet era.

Conclusions: Reinforcing the Information-Gap

Many exaggerated hopes and fears surround virtual democracy in the emerging Internet Age. Internet research is sometimes in as much danger of 'irrational exuberance' as the Nasdaq index. Much debate revolves around whether the distinctive structure and interactive format of the internet will provide a genuinely new form of political mobilization, enticing the disengaged and apathetic into public life, producing a more egalitarian democracy, or whether its primary function will be to reinforce those who are already most active through conventional channels like social organizations, community groups and parties. At present we often lack systematic evidence and much of the more speculative theoretical literature seems to treat the Internet as a Rorschach test, broadly reflecting technophile or technophobe beliefs about the future.

Mobilization theories suggest that by sharply reducing some of the barriers to political participation, leveling some of the financial hurdles, and widening the opportunities for political debate, the dissemination of information, and group interaction, net activism may have the potential to broaden involvement in public life. For enthusiasts, the net promises to provide new forms of horizontal and vertical communication, which facilitate and enrich deliberation in the public sphere and produce a more egalitarian politics.

Yet an emerging consensus in American research on net users seems to favor the reinforcement view: in the early stages of the Internet era, the online community in America is drawn from the more affluent and educated social strata, and net activists share many of the characteristics of conventional activists²⁰. If so, the new medium may merely reproduce divisions between the information-rich and information-poor.

The conclusion from my earlier analysis of the social and political characteristics of net activists in the 1996 and 1998 American elections, based on Pew surveys of online users and the general public, serves to confirm the overall pattern of *reinforcement* rather than mobilization: net political activists were already among the most motivated, informed and interested in the American electorate²¹. In this sense, during these campaigns, politics on the net was essentially preaching to the converted. The Internet still provided a valuable service in widening the range of information that was easily available to the online community during the campaign. But the web was used more often as a means to access traditional news sources, like the *New York Times*, rather than as a radical new source of unmediated information and communication between citizens and their elected leaders.

While the reinforcement pattern does seem to characterize Internet users in past American elections, if use broadens and evolves over the years it remains to be seen whether this pattern is maintained in subsequent campaigns. The Internet Era remains in its adolescence: the first packet-switching network started in the UK in 1968 and UCLA launched Arpanet the following year, but it was only in 1992 that the World Wide Web was born, with an explosion of use and the launch of Mosaic and Netscape, in 1993-94²². Mobilization theorists could argue that it will take more than a few years for the net to level the playing field and transform established patterns of political participation, and the social profile of users could well change over time. Just as the early, more affluent, television audience in the 1950s had moved mainstream by the 1960s, in a process of 'normalization', so the massive surge in web access, and the fall in costs, means that early users may well prove atypical of later ones. Whether the Internet has the capacity to reach beyond the active group, and beyond traditional news sources, as access gradually ripples out to broader groups in the electorate, and political uses of the web evolve in new ways, remains an open question at this stage.

This chapter confirms that patterns of reinforcement within the context of American campaigns can also be found in this broader comparison of post-industrial societies. The familiar social biases observed among American users in the early years of Internet expansion

are also evident in Western Europe, notably the appeal of the net for the more affluent and more educated. The mobilization of the younger generation in the online community provides some counter-evidence to this argument, since this is the group who are least involved in many traditional forms of political activism like voting turnout, and who are also least likely to watch television news. In the longer-term, this may provide some grounds for the mobilization thesis. At societal level the North-South divide in the information society is marked and seems likely to reinforce existing cross-national differences in use of the print and electronic news media. The European nations that have moved most rapidly towards the Internet tend to be those that are already heavy consumers of the printed press while the Mediterranean region, which is slowest to move online, is characterized a television-centric mass media. It remains to be seen whether this pattern is evident more generally in other post-industrial societies. The next chapter goes on to consider the consequences of the Internet for campaigns and elections, and Chapter 12 examines the mobilizing effects for virtual democracy in the Internet age.

Table 6.1: Trends in Use of Communication Technologies, EU-15, 1996-99

| | % With Access/Use | | | | Increase 1996-99 |
|------------------------------|-------------------|------|------|------|---------------------|
| | 1996 | 1997 | 1998 | 1999 | |
| COMPUTER-RELATED | | | | | |
| Computer | 31 | 30 | 35 | 40 | +9 |
| CD Rom | 13 | 16 | 25 | 26 | +13 |
| Modem | 8 | 8 | 12 | 23 | +15 |
| Internet/WWW Connection | 5 | 6 | 12 | 20 | +15 |
| TELEVISION-RELATED | | | | | |
| Video Recorder (VCR) | 72 | 73 | 74 | 73 | +1 |
| Teletext on TV | 50 | 52 | 59 | 60 | +10 |
| Satellite TV | 17 | 18 | 18 | 20 | +3 |
| Decoder for Pay TV eg Canal+ | 10 | 11 | 11 | 10 | 0 |
| TELEPHONE-RELATED | | | | | |
| Fax Machine | 19 | N/a | N/a | 19 | 0 |
| Minitel or Videotext System | 5 | 5 | 3 | 3 | -2 |

Note: Eurobarometer Q. "Do you have access to, or do you use..."

Sources: Eurobarometers 44.2 spring 1996; 47.0 spring 1997; 50.1 fall 1998; 51.0 spring 1999.

Table 6.2: Proportion of Internet Users, EU and U.S. 1996 -1999

| | Spring 1996 | Spring 1997 | Fall 1998 | Spring 1999 | Increase 1996-99 |
|------------------|----------------|----------------|--------------|----------------|---------------------|
| Sweden | 12 | 26 | 43 | 61 | +49 |
| U.S. (a) | 21 | 36 | 42 | 49 | +28 |
| Denmark | 10 | 17 | 26 | 44 | +34 |
| Finland | 11 | 16 | 18 | 39 | +28 |
| Netherlands | 9 | 16 | 19 | 32 | +23 |
| Luxembourg | 5 | 13 | 16 | 22 | +17 |
| Britain | 9 | 10 | 11 | 22 | +13 |
| Northern Ireland | 4 | 8 | 10 | 20 | +16 |
| Italy | 3 | 5 | 7 | 14 | +11 |
| Ireland | 4 | 5 | 9 | 14 | +10 |
| Austria | 4 | 10 | 7 | 11 | +7 |
| Belgium | 3 | 6 | 8 | 11 | +8 |
| France | 2 | 4 | 4 | 9 | +7 |
| Germany West | 5 | 8 | 8 | 8 | +3 |
| Germany East | 2 | 4 | 5 | 8 | +6 |
| Spain | 2 | 2 | 5 | 8 | +6 |
| Greece | 1 | 3 | 3 | 7 | +6 |
| Portugal | 2 | 2 | 3 | 5 | +3 |
| EU15 | 5 | 9 | 12 | 20 | +15 |

Note: The Eurobarometer question asks, "Do you have access to, or do you use, the Internet or World Wide Web."²³ The Pew survey asks, "Do you ever go online to access the Internet or World Wise Web or to send and receive email?"

Sources: Eurobarometers 44.2 Spring 1996; 47.0 Spring 1997; 50.1 Fall 1998; 51.0 Spring 1999. (a) US: successive surveys by *The Pew Research Center for the People and the Press*. See www.people-press.org.

Table 6.3: Proportion of Computer Users, EU and US 1996 -1999

| | Spring 1996 | Fall 1997 | Spring 1999 | Increase |
|------------------|-------------|-----------|-------------|-----------|
| Sweden | 43 | 62 | 73 | +30 |
| U.S. (a) | 60 | 66 | 69 | +9 |
| Denmark | 49 | 61 | 65 | +16 |
| Netherlands | 54 | 61 | 64 | +10 |
| Finland | 36 | 43 | 52 | +16 |
| Luxembourg | 41 | 49 | 48 | +7 |
| Britain | 41 | 47 | 45 | +4 |
| Northern Ireland | 25 | 34 | 39 | +14 |
| Italy | 31 | 32 | 37 | +6 |
| Belgium | 28 | 32 | 37 | +9 |
| Austria | 23 | 41 | 33 | +10 |
| Spain | 25 | 29 | 33 | +8 |
| Ireland | 23 | 27 | 31 | +8 |
| France | 25 | 34 | 30 | +5 |
| Germany West | 31 | 32 | 29 | -2 |
| Germany East | 27 | 32 | 27 | 0 |
| Portugal | 21 | 20 | 22 | +1 |
| Greece | 12 | 19 | 17 | +5 |
| EU15 | 31 | 38 | 40 | +9 |

Note: The Eurobarometer question asks, "Do you have access to, or do you use, a computer."²⁴ The Pew surveys ask: Q "Do you use a computer at your workplace, at school or at home on at least an occasional basis?"

Sources: Eurobarometers 44.2 Spring 1996; 47.0 Spring 1997; 50.1 Fall 1998; 51.0 Spring 1999. (a) US: successive surveys by *The Pew Research Center for the People and the Press*. See www.people-press.org.

Table 6.4: The Social Profile of Online Users, EU-15 1996-99

| | % Online Spring 1996 | % Online Spring 1999 | Change |
|----------------------|-------------------------|-------------------------|--------|
| ALL EU-15 | 5 | 20 | +15 |
| AGE | | | |
| 15-25 | 9 | 32 | +23 |
| 26-44 | 7 | 24 | +17 |
| 45-64 | 5 | 16 | +11 |
| 65+ | 1 | 3 | +2 |
| HH INCOME CATEGORY | | | |
| -- | 4 | 14 | +10 |
| - | 3 | 14 | +11 |
| + | 5 | 22 | +17 |
| ++ | 10 | 37 | +27 |
| AGE FINISHED EDUC | | | |
| Up to 15 | 1 | 5 | +4 |
| 16-19 years | 4 | 15 | +11 |
| 20+ | 9 | 33 | +24 |
| GENDER | | | |
| Men | 6 | 22 | +16 |
| Women | 4 | 17 | +13 |
| OCCUPATIONAL STATUS | | | |
| Managers | 14 | 44 | +30 |
| Other White Collar | 8 | 29 | +21 |
| Manual Worker | 3 | 15 | +12 |
| Home worker | 2 | 8 | +6 |
| Unemployed | 3 | 10 | +7 |
| Student | 13 | 44 | +31 |
| READ DAILY NEWSPAPER | | | |
| Never | 2 | 12 | +10 |
| Sometimes | 5 | 21 | +16 |
| Everyday | 6 | 23 | +17 |
| WATCH TV NEWS | | | |
| Never | 5 | 20 | +15 |
| Sometimes | 6 | 22 | +16 |
| Everyday | 5 | 19 | +14 |
| LISTEN TO RADIO NEWS | | | |
| Never | 4 | 16 | +12 |
| Sometimes | 5 | 19 | +14 |
| Everyday | 6 | 22 | +16 |

Sources: Eurobarometers 44.2 spring 1996; 51.0 spring 1999.

Table 6.5: Predictors of Use of the Internet, EU-15 1999

| | Using Internet R | Sig. | B | Operationalization |
|---------------------|------------------------|------|-------|----------------------------|
| DEMOGRAPHICS | | | | |
| Age | -.168 | .000 | -.642 | In years |
| Education | .153 | .000 | .609 | Age finished FT education |
| Income | .141 | .000 | .439 | Harmonized HH income scale |
| Class | .077 | .000 | .574 | Manual (0)/Non-manual HoH |
| Gender | .052 | .000 | .327 | Male (1) Female (0) |
| USE OF MEDIA | | | | |
| Newspaper Use | .044 | .000 | .139 | 5-point scale |
| Radio News Use | .031 | .315 | .092 | 5-point scale |
| TV News Use | .000 | .315 | -.031 | 5-point scale |
| NATION | | | | |
| Greece | -.073 | .000 | -1.72 | 0/1 |
| Germany | -.067 | .000 | -1.30 | 0/1 |
| France | -.057 | .000 | -1.24 | 0/1 |
| Spain | -.055 | .000 | -1.36 | 0/1 |
| Portugal | -.054 | .000 | -1.44 | 0/1 |
| Belgium | -.052 | .000 | -1.20 | 0/1 |
| Austria | -.041 | .000 | -.93 | 0/1 |
| Italy | -.036 | .000 | -.91 | 0/1 |
| Ireland | -.029 | .000 | -.73 | 0/1 |
| UK | .000 | .432 | .23 | 0/1 |
| Netherlands | .021 | .000 | .45 | 0/1 |
| Finland | .035 | .000 | .65 | 0/1 |
| Denmark | .049 | .000 | .89 | 0/1 |
| Sweden | .099 | .000 | 1.77 | 0/1 |
| Cox-Snell R2 | .278 | | | |
| Nagelkerke R2 | .431 | | | |
| % Correct | 83.8 | | | |

Notes: The table reports the coefficients predicting use of the Internet based on logistic regression models. Use of the Internet is measured as a dichotomy where 1=yes, 0=no. Luxembourg, which is close to the European mean, is excluded from the national dummies.

Sources: EuroBarometer 51.0 Spring 1999.

Figure 6.1

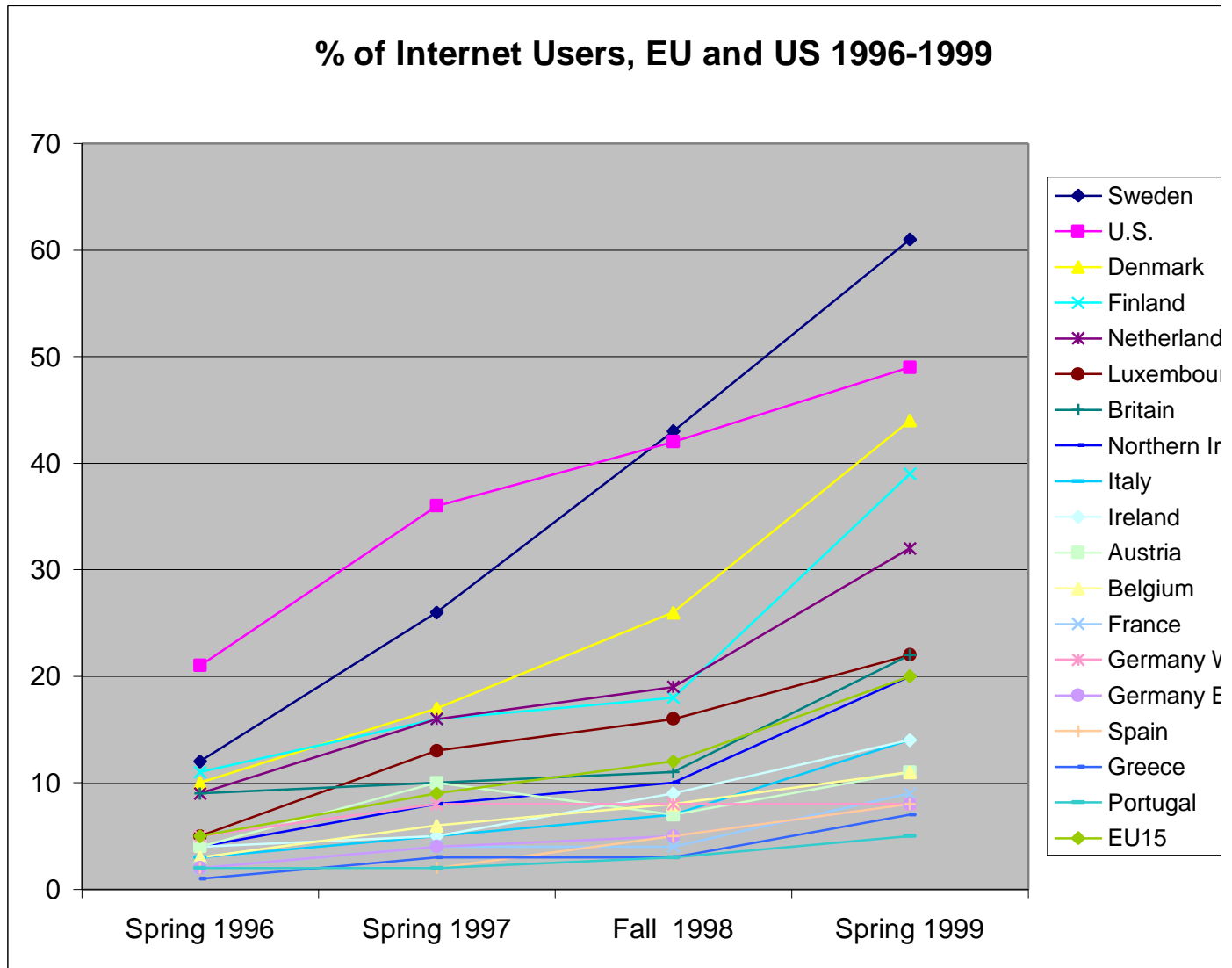


Figure 6.2

Use of Computers and Internet, EU 1999

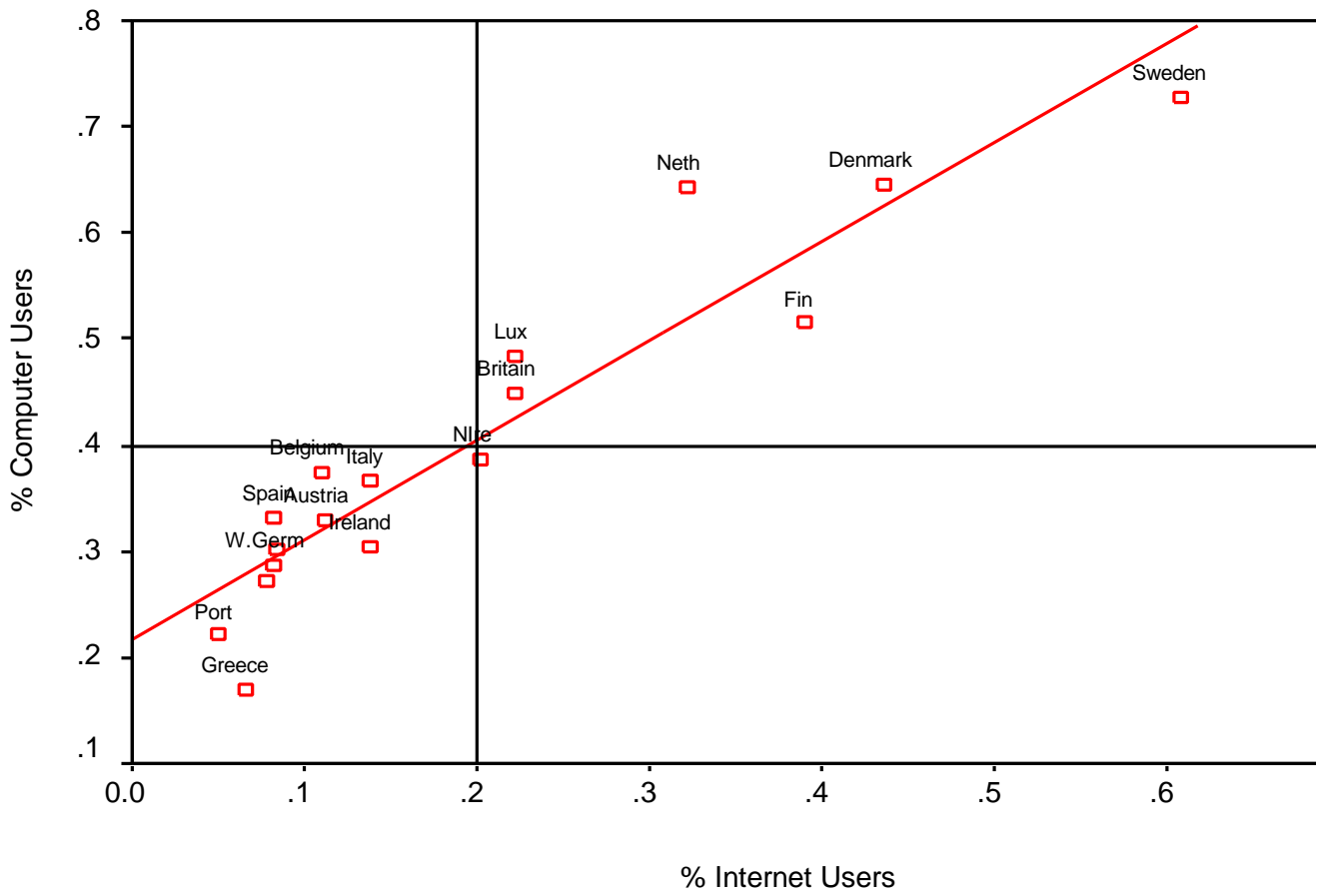
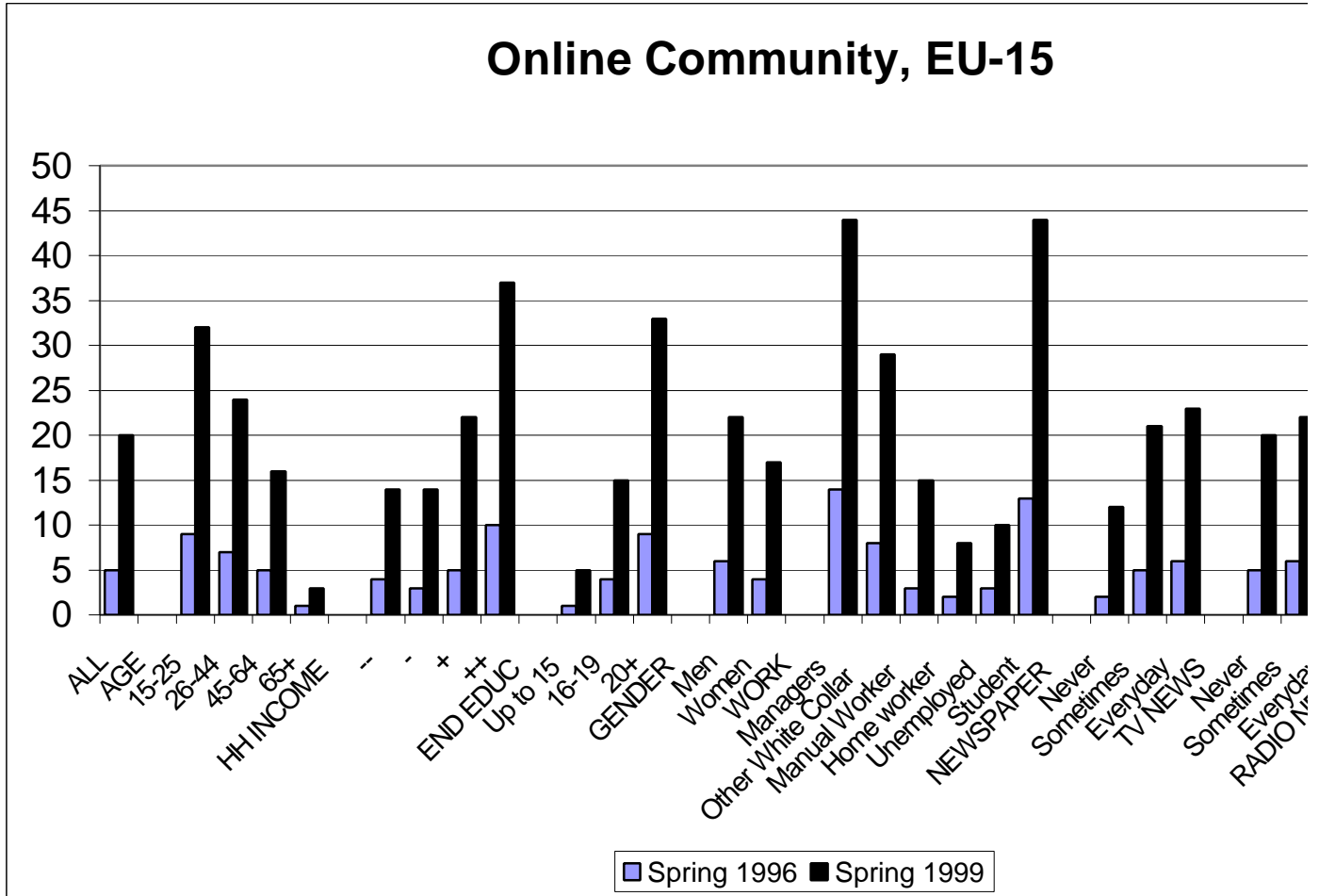


Figure 6.3



Notes

¹ See, for example, Nicholas Negroponte. 1995. *Being Digital*. New York: Knopf; Iain McLean. 1989. *Democracy and New Technology*. Cambridge: Polity Press; Ian Budge. 1996. *The New Challenge of Direct Democracy*. Oxford: Polity Press; Edward Schwartz. 1996. *Netactivism: How Citizens Use the Internet*. Sebastopol, CA: Songline Studios; Michael Dertouzos. 1997. *What Will Be: How the New Information Marketplace will Change our Lives*. San Francisco: Harper; Wayne Rash, Jr. 1997. *Politics on the Nets: Wiring the Political Process*. New York: W.H. Freeman; Christopher Harper. 1998. *And That's the Way it Will Be*. New York: New York University Press; Bellamy, Christine and John A. Taylor. 1998. *Governing in the Information Age*. Buckingham: Open University; W. Russell Neuman. 1998. "The Global Impact of New Technologies". In Doris Graber, Denis McQuail and Pippa Norris (eds.) *The Politics of News: The News of Politics* Washington DC: CQ Press; Elaine Ciulla Kamarck and Joseph S. Nye, Jr. 1999. *democracy.com? Governance in a Networked World*. Hollis, NH: Hollis Publishing.

² Michael Margolis, David Resnick and Chin-chang Tu. 1997. 'Campaigning on the Internet: Parties and Candidates on the World Wide Web in the 1996 Primary Season.' *The Harvard International Journal of Press/Politics*. 2(1): 59-78; Michael Margolis, David Resnick and Joel D. Wolfe. 1999. 'Party Competition on the Internet: Minor versus Major Parties in the UK and the USA.' *The Harvard International Journal of Press/ Politics*. Winter; Michael Hauben and Rhonda Hauben. 1998. *Netizens: On the History and Impact of Usenet and the Internet*. Los Alamitos, CA: IEEE Computer Science Press; Kevin A. Hill and John E. Hughes. 1998. *Cyberpolitics: Citizen Activism in the Age of the Internet*. Lanham, MD: Rowan & Littlefield; Richard Davis and Diana Owen. 1998. *New Media and American Politics*. New York: Oxford University Press; Richard Davis. 1999. *The Web of Politics*. New York: Oxford University Press; Pippa Norris and David Jones. 1998. 'Virtual Democracy' *The Harvard International Journal of Press/Politics*. 3(2): 1-4; Pippa Norris. 1999. 'Who Surfs? New Technology, Old Voters, and Virtual Democracy.' In *democracy.com? Governance in a Networked World* edited by Elaine Ciulla Kamarck and Joseph S. Nye, Jr.

³ European data comes from successive Eurobarometer surveys conducted among representative samples of the European public in the 15 EU member states: EB44.2bis (N.65, 178) in Spring 1996; EB47.0 (N.16, 352) in Spring 1997; EB50.1 (N. 16,201) in Fall 1998; and EB51.0 (N.16, 179) in Spring 1999. See the Book's Appendix for details.

For American data, I am most grateful to Andrew Kohut and the Pew Research Center for the People and the Press for generous release of the survey data on online users. The Pew surveys used in this paper are those of online users in 1995, 1996, and 1998, and the May 1998 survey of the public's media consumption, and the November 1998 election surveys. Trends on net users are updated by the June 1999 Pew survey. For all information about Pew questionnaires, datasets, published

reports and technical fieldwork details see: <http://www.people-press.org/>.

⁴ Edward Schwartz. 1996. *Netactivism: How Citizens Use the Internet*. Sebastapol, CA: Songline Studios.

⁵ Howard Rheingold. 1993. *The Virtual Community: Homesteading on the Electronic Frontier*. Reading: Mass.: Addison-Wesley.

⁶ Lawrence Grossman. 1995. *The Electronic Republic*. London: Penguin.

⁷ Ian Budge, Ian. 1996. *The New Challenge of Direct Democracy*. Oxford: Polity Press.

⁸ Bill Gates. 1995. *The Road Ahead*. New York: Viking.

⁹ Richard Davis and Diane Owen. 1998. *New Media and American Politics*. Oxford: Oxford University Press. P.185.

¹⁰ Graham Murdock and Peter Golding. 1989. 'Information Poverty and Political Inequality: Citizenship in the Age of Privatised Communications.' *Journal of Communication*. 39: 180-193.

¹¹ UNESCO. 1998. *World Communication Report: The Media and Challenges of the New Technologies*. Paris: UNESCO. pp.88-95.

¹² Hamid Mowlana. 1997. *Global Information and World Communication*. 2nd ed. London: Sage.p.104.

¹³ The Eurobarometer comparison does not monitor changes in the use of mobile phones and pagers, which sales figures indicate have become far more popular in Europe during these years. The 1997 EB indicated that over a third of Europeans use a mobile telephone outside of work.

¹⁴ The Pew Research Center on the People and the Press. 1999. *Striking the Balance: Audience Interests, Business Pressures and Journalists' Values*. Washington DC: The Pew Research Center on the People and the Press. Survey 18-21 February 1999.

¹⁵ Levels of Internet use in the EU-15 and the US correlated with levels of per capita GDP ($R=.457$ Sig. $.075$), the proportion of the adult education who completed secondary education ($R=.491$ Sig. $.054$), and most strongly with the proportion of the adult population with higher education ($R=.664$ Sig. $.013$).

¹⁶ UNESCO. 1998. *World Communication Report: The Media and Challenges of the New Technologies*. Paris: UNESCO. P.95)

¹⁷ The zero order correlation between national levels of newspaper readership and net use in EU-15 and the US is moderately strong and significant ($R=0.530$ Sig. $.035$).

¹⁸ Kevin A. Hill and John E. Hughes. 1998. *Cyberpolitics: Citizen Activism in the Age of the Internet*. Lanham, MD: Rowan & Littlefield; Richard Davis and Diana Owen. 1998. *New Media and American Politics*. New York: Oxford University Press; Pippa Norris. 1999. 'Who Surfs? New Technology, Old Voters, and Virtual Democracy.' In *democracy.com? Governance in a Networked World* edited by Elaine Ciulla Kamarck and Joseph S. Nye, Jr.

¹⁹ Sidney Verba and Norman Nie. 1972. *Participation in America: Political Democracy and Social Equality*. New York: Harper and Row; Sidney Verba Norman Nie and Jae-on Kim. 1978. *Participation and Political Equality: A Seven-Nation Comparison* New York: Cambridge University Press; Sidney Verba Kay Schlozman and Henry E. Brady. 1995. *Voice and Equality*. Cambridge, MA: Harvard University Press.

²⁰ Kevin A. Hill and John E. Hughes. 1998. *Cyberpolitics: Citizen Activism in the Age of the Internet*. Lanham, MD: Rowan & Littlefield; Richard Davis and Diana Owen. 1998. *New Media and American Politics*. New York: Oxford University Press; Pippa Norris. 1999. 'Who Surfs? New Technology, Old Voters, and Virtual Democracy.' In *democracy.com? Governance in a Networked World* edited by Elaine Ciulla Kamarck and Joseph S. Nye, Jr.

²¹ Pippa Norris. 1999. 'Who Surfs? New Technology, Old Voters, and Virtual Democracy.' In *democracy.com? Governance in a Networked World* edited by Elaine Ciulla Kamarck and Joseph S. Nye, Jr.

²² UNESCO. 1998. *World Communication Report: The Media and Challenges of the New Technologies*. Paris: UNESCO. Pp.50 -51)

²³ There is some ambiguity in these items whether they refer to use at home or work or both. It should be noted that Eurobarometer 50.1 asked users whether they had access at home or at work to different types of technology, like a computer. The results suggest that in the other surveys respondents based their answers on their home use. If so, this measure may considerably underestimate the total proportion of computer users and online users in Western Europe.

²⁴ Published estimates about the number of computer users differ considerably. There are also important differences in question wording, as well as fieldwork, in the US and EB sources which hamper strict comparability. Items have been selected which are functionally equivalent although not identical. Nevertheless the comparison of Eurobarometer and Pew surveys over time should increase the reliability of the estimates of change.