stronger versions, it may be wider socio-technical theoretical approaches to American political econo-
stronger foundations for the relationship between new organisation, and their relational patterns, and forms of vital backdrop to current ICTs marks a ‘fifth long the emergence of a ‘new aspect, value-added services, productive impact of network

A new economy is found in proposes that the new paradigm that the cumulative information technology paradigm late eighteenth century. changes upon the global world, the labour force, global and forms of resistance to Castells aims to develop undertakes a profoundly temporary global culture because, it is not without its understanding of culture as for more comparative belonging to new media sociological accounts of understandings of how new

VIRTUAL CULTURES

The history of new media technologies is frequently told as a history of computers and networks: a history of RAM, hard disk capacity, packet switching, and TCP/IP. Such technological developments would, however, be limited in their significance if they had not also been accompanied by changes in how people use these technologies, and how they transform modes of social interaction. One of the most interesting elements of the development of the Internet as a global communications network has been the rise of virtual communities, or virtual cultures, based around ongoing interactions among those participating in computer-mediated communication (CMC). This chapter will consider the rise in virtual cultures through CMC, their relationship to debates about the democratic and community-building potential of the Internet, and some case studies of such virtual cultures. This will lead to consideration of the digital divide, or questions of inclusion and social exclusion from such forms of interaction and participation, as well as questions of identity and the self in virtual environments.
The chapter also considers new forms of 'social software' to have emerged such as collaborative and open publishing and weblogs ('blogs'), and evaluates their relationship to current debates about the significance of social capital to the development of communities and political interaction.

Virtual communities and online identities

In perhaps the most famous early account of CMC-based online cultures, Howard Rheingold defined virtual communities as 'social aggregations that emerge from the Net when enough people carry on those public discussions [using the Internet] long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace' (Rheingold 1994: 5). While recognising that the origins of the Internet lay in the US military-industrial-governmental complex, Rheingold observed that the democratic potential of CMC lay in the decentralised nature of such networked communications, which presented, in a way very different to one-to-many mass media, the possibility to 'piggyback alternate networks on the mainstream infrastructure', and 'use CMC to create alternative planetary information networks' (Rheingold 1994: 14). Rheingold was enthusiastic about the development of virtual communities, seeing in them the possibility of a reinvigorated sense of community-building and citizen participation in public life. This potential arose from three interrelated attributes of CMC: the building of social networks and social capital; the sharing of knowledge and information; and the enabling of new modes of democratic participation in public life. In contrast to more technologically determinist accounts of the impact of the Internet, Rheingold emphasised the elements of social choice and political activism that would be involved in the achievement of such outcomes:

The technology that makes virtual communities possible has the potential to bring enormous leverage to ordinary citizens at relatively little cost—intellectual leverage, social leverage, commercial leverage and, most importantly, political leverage. But the technology will not in itself fulfill this potential—this latent technical power must be used intelligently and deliberately by an informed population. More people must learn about that leverage and learn to use it, while we still have the freedom to do so, if it is to live up to its potential (Rheingold 1994: 4-5).

Much of the early interest in virtual communities stemmed from activist communities in the USA, particularly among those with a history of involvement in oppositional social movements. The first community network system, Community Memory, was developed during the early 1970s by anti-Vietnam War activists in Berkeley, California. During the 1980s several significant initiatives were undertaken in the USA and Canada to develop locally-based community networks, such as the Cleveland Free-Net, which was created in 1986; the Big Sky Network, developed in Montana in 1988; the Santa Monica Public Electronic Network (PEN), developed by the Santa Monica city government during the late 1980s; and the Seattle Community Network, developed by the Seattle chapter of Computer Professionals for Social Responsibility during the early 1990s (Schuler 1996). International networks were established, particularly through the peace movement, with organisations such as the Institute for Global Communications and PeaceNet emerging in the mid-1980s, and in a significant Australian development, Pegasus, based in Byron Bay, New South Wales, emerging in the late 1980s (Friedland 1996; Peter 1999). Perhaps the most famous of these online communities, the Electronic Frontiers Foundation (EFF), was established by Lotus co-founder Mitchell Kapor and John Perry Barlow, Internet activist and former bass player for the Grateful Dead, in 1991, in response to free speech and privacy concerns raised by the FBI's 'hacker crackdown' of 1990 (Sterling 1992; Rheingold 1994).

The enthusiasm for virtual communities that emerged during the 1980s and 1990s had its precursor in early writings on CMC by J. R. Licklider. In 1968, Licklider and Taylor presented what is considered to be the first statement of what virtual communities would look like:

In most fields they will consist of geographically separated members, sometimes grouped in small clusters and sometimes working individually. They will be communities not of common location, but of common interest. In each geographical sector, the total number of users...will be large enough to support extensive general-purpose information processing and storage facilities...Life will be happier for the on-line individual because the people with whom one interacts most strongly will be selected more by commonality of interests and goals than by accidents of proximity (quoted in Jones 1998: 19).

Enthusiasm for virtual communities relates to both the how and why aspects of communication and participation using networked technologies such as the Internet. Garth Graham, a founder of Telecommunications Canada, observed four aspects of CMC that promoted convergence, not only at the technical level, but also at the social level, including convergence between:

- senders and receivers
- conversation and information
- the means of carriage and its content
- public and private identities (Graham 1996).

In his discussion of the WELL, Rheingold (1994) argued that the value of such a network for its participants stemmed from: its personal and intellectual diversity; the scope that this allowed for the site to be a 'living encyclopedia' of knowledge; the willingness of members to participate in a kind of collectivist gift economy; and the ability to 'hang out' and establish friendships which may be ephemeral or long-lasting, transient, or intimate. Such characteristics are often contrasted to those of 'old media', particularly television. Douglas
Schuler, founder of the Seattle Community Network, contrasted the opaque, capitalistic, and disjointed offerings of commercial broadcast media to the possibility of integrative, contribution-based, and collectively-owned media that can be developed through community networks (Schuler 1996). Like other authors, Schuler stressed that these are affordances of the decentralised and networked infrastructure that is the Internet, and the elements of social choice that such developments would entail for the future of the Internet.

The why of promoting online community networks has been strongly connected to the view that there has been a decline in opportunities for democratic participation and community formation in contemporary industrial capitalist and mass-mediated societies, and the need to build social capital. In his discussion of the possibilities for a democratic politics of technology, Richard Sclove observed that ‘technology is implicated in perpetuating antidemocratic power relations and in eroding social contexts for developing and expressing citizenship’ (Sclove 1995: 7). Sclove instead proposed a politics of technology that focuses upon the building of strong democracy based upon: political decentralisation; self-governing local communities; cultural pluralism; moral autonomy; collective self-education and deliberation; and self-actualising work (Sclove 1995: 37-44). Sclove’s work drew upon political scientist Robert Putnam’s (1995) arguments about the decline of social capital in American public life, which Putnam presented as a consequence of mass media, individualism, and consumerism, to be discussed in more detail below. In a similar vein, Douglas Schuler (1996: 11-16) found in online community networks the scope to develop new forms of community, based on the core principles of: an inclusive, supportive and convivial culture; education for citizenship and active learning; strong democracy and active citizenship; community-based health and well-being; economic equity, opportunity and sustainability; and freely available information and participatory media. Pierre Lévy (1997) argued that virtual communities could be situated on a continuum, between organic groups based on families, clans, tribes, and small-scale communities, where identities are routinely affirmed and reinforced through face-to-face interaction, and organised groups such as nations, institutions, religions, large corporations, and large-scale political movements, where identities are far more ‘imagined’ and mediated through communications technologies.

The desire for strong communities as an antidote to the sense of alienation and disenfranchisement seen as characteristic of modern, industrial, capitalist societies has been a long-standing feature of discourses surrounding new technologies. It must be noted, however, that the concept of community has an ambivalent status in social theory. Debates about the value of community have their origins in Ferdinand Tönnies’s distinction between Gemeinschaft (community) as traditional, rurally-based, private, and built upon positive human attributes, and Gesellschaft (society) as modern, urban, public, and presenting the potential for public danger. More recently, the rise of communitarianism as an antidote to current social problems has generated new debates about the value of community. Influential social thinkers such as Amitai Etzioni, Robert Putnam, and Francis Fukuyama, politicians such as UK Prime Minister Tony Blair and the Australian Labor Party leader Mark Latham, as well as indigenous leaders such as Australia’s Noel Pearson, have argued the need to build relationships and networks that involve commitment to a ‘do-it-yourself’ ethos, where community members would become actively involved in reforming their own communities, as an alternative to relying upon the funding and guidance of government (e.g. Pearson 2000; Giddens 2000: 62-5; c.f. Rose 2000).

From a very different perspective, virtual communities have also been identified as a site of play and performativity through the creation of online identities more broadly indicative of the transition from modernity to postmodernity. Mark Poster saw the space of electronically mediated communication as a postmodern one, which ‘clears the way to seeing the self as multiple, changeable, fragmented, in short as making a project of its own constitution’ (Poster 1995: 77). In perhaps the most significant early work on online identities, Turkle (1995) presented a detailed argument about how participants in various forms of online communications—most notably MUDs (Multi-User Dungeons) and MOOs (Multi-User Object-Oriented Domain)—were engaged in forms of performativity online which differed significantly from their personas in ‘real life’ forms of social interaction. Drawing upon psychoanalysis, Turkle found that participants in virtual communities increasingly came to view ‘real life’ as simply one ‘window’ through which a personality is developed and expressed, and that CMC constitutes a constructive and potentially liberatory space through which ‘the obese can become slender, the beautiful plain, the “nerdy” sophisticated’ (Turkle 1995: 12). Turkle found in this possibility for the multiplicity and performativity of identities in online environments a parallel both to postmodernist and poststructuralist arguments about the fluidity and fragmented nature of contemporary subjectivity, and to developments in human-computer interface interaction that promote ‘surface’ interaction over deep engagement with the technology. Turkle argued that, through both identity play within CMC and the simplification of graphical user interfaces (GUIs) seen with the Apple interface and, later, with Microsoft Windows, ‘We have learned to take things at interface value. We are moving toward a culture of simulation in which people are increasingly comfortable with substituting representations of reality for the real’ (Turkle 1995: 23).

Writers such as Rheingold, Schuler, and Turkle can be seen as activist-entrepreneurs of the emergent online media environment and of ‘first generation’ Internet studies (c.f. Flew 2001; Silver 2000). Their descriptions of cyberspace and online environments also involved a degree
of proselytising for increased engagement with these sites, and a belief that developments in the online world prefigured alternative scenarios for society more broadly. As Slater (2002) has observed, one consequence of this desire to promote not only understanding but also engagement with Internet culture was a determination to approach new media in terms of a sharp distinction between the 'online' and 'offline', or the 'virtual' and the 'real'. A critical engagement with this literature should, therefore, be engaged with at three levels.

First, any engagement with what can be termed early Internet theory needs to acknowledge that the medium itself changed radically during and after the time in which these writers developed their initial propositions. Put simply, the Internet in the mid-2000s is profoundly different to the Internet of the early 1990s. We can clearly identify three ways in which the Internet has changed between the early 1990s and the mid 2000s, which any theory of virtual communities and online identities would have to account for:

1 There are far more users worldwide (as documented in chapter 1), and they are drawn from a far wider geographical, cultural and social base than the relatively closed, middle-class and US-based Internet culture of the early 1990s.

2 The nature of who uses the Internet, where they use it, and why they use it, has also changed dramatically. Perhaps the most significant manifestations of this are the ways in which the Internet is increasingly used by children and linked to their education through the schools system, and the growth in availability of Internet access through public sites, such as schools and universities, public libraries, and cyber cafés and other public telecommunications facilities. Questions of Internet governance, particularly over the public availability of online content, became increasingly relevant in this changed online environment.

3 The Internet is far more integrated into the everyday activities of individuals, the conduct of organisations, and the pursuit of commercial activity, than was the case in the early 1990s. While there is differentiation between the utilisation of different software for types of online interaction (e.g. email use at the office is less likely to have the same identity implications as intensive engagement with others through ICQ software), the whole concept of 'online' and 'offline' worlds has become less tenable over time.

Second, there are those who would dispute any claims that CMC could ever constitute in and of itself a socially or politically positive force. Drawing attention to the lack of attention to existing socio-economic inequalities or the distribution of political-economic power in the first generation Internet literature, critics of virtual communities saw the search for like minds on the Internet as an evasion of the obligations to deal with diversity, difference, power relations, and inequality as they appear in contemporary capitalist societies. These critical theorists found in virtual communities 'an impoverished agenda...[and] a retreat from the disturbing realities of global change' (Robins and Webster 1999: 231), and an 'elite political voyeurism' (Lockard 1997: 229) that is 'contributing to the dispersion of the social processes which make up civil society' (Breslow 1997: 254). Langdon Winner argued that the quest for virtual community involved a desire 'to be connected to those who are like you and to avoid situations in which you would feel awkward', such as the reality of modern cities where class and racial inequalities are visible and contested, instead offering 'electronic equivalents of the gated communities and architectural barriers that offer the well-to-do freedom from troubles associated with the urban underclass' (Winner 1997).

Robins and Webster (1999) argued that the 'futurology' of virtual communities entailed the growing incorporation of subjects into a technologically mediated form of everyday life that is increasingly shaped by corporate and bureaucratic systems, the resulting pacification of public space, and the further penetration of relations of power and domination into the social body.

Such critical analyses of virtual communities and online identities were in many ways part of an inevitable backlash against the optimistic and sometimes hyperbolic claims of 'first generation' cyberculture studies. While some of this literature can itself be hyperbolic in its denunciation of virtual communities, it identified two real limitations in the early work on virtual communities, which are well summarised by Slevin (2000) and Slater (2002).

First, the literature tends to have a bias towards the 'heroic' or the transformative over the mundane and everyday. For instance, online role playing is more likely to be an object of study than email or online shopping. Second, by focusing on the technical properties of the Internet as a medium, rather than the social contexts in which information is produced and received through CMC, it often implies that individuals come together in virtual communities or other group-based forms of CMC 'out of nothing' (Slevin 2000: 113). It can thus lose sight of the different resources, skills, advantages, and affordances that individuals bring to the online world which they have acquired in social relations more broadly. The claim that race is irrelevant in CMC, for example, due to the invisibility of participants ignores the extent to which 'whiteness' operates as a norm in CMC environments, and those from minority races need to actively work to make their racial characteristics invisible in order to participate as equals (Kolko et al. 2000).

Finally, as noted above, there is an ambivalence attached to the status and value of 'community' as such. Raymond Williams made the ironic observation in Keywords that 'Community can be the warmly persuasive word used to describe an existing set of relationships, or the warmly persuasive word to describe an alternative set of relationships. What is most important, perhaps, is that...it seems never to be used unfavourably' (Williams 1976: 66). Accounts of modern urban life which see it as...
potentially alienating and dangerous, and posit the ideal of community as an intrinsically positive alternative, have always been contested. Writing in the context of Paris during the mid-nineteenth century, Charles Baudelaire described the flâneur in modern cities as an anonymous and transient observer of modern life, whose existence was to be 'away from home and yet to feel oneself everywhere at home; to see the world, to be at the centre of the world, and yet to remain hidden from the world' (quoted in Donald 1992: 443). This has clear analogies in the contemporary capacity of the 'cyber-surf' to lurk in online discussion groups, receiving correspondence from the sites, but remaining a vicarious consumer of the content generated rather than an active participant in its ongoing development (Kitchin 1998: 83). As Slevin observes, the tendency of many Internet users is not to passionately commit themselves to single online communities, but rather to participate in a multitude of such communities, and to move in and out of them, thereby taking maximum advantage of the new forms of human association enabled by the Internet (Slevin 2000: 96–7). The flip side to this is that some of the communities which form online through CMC do not represent forms of human association which serve a wider public or community interest, and the Internet may render visible that which many would rather not see as a part of the public domain. 'Cyberhate' sites such as White supremacist, neo-Nazi, and anti-Semitic sites are obvious examples (Zickmund 1997). In a different but related vein, the trial in 2004 of Armin Miewes in Kassel, Germany, who killed and ate computer programmer Bernd Brandes after they arranged to meet for this purpose through the Internet, revealed a surprisingly large global online community of people interested in eating other people, or being eaten by them. While cannibalism obviously precedes the Internet, and is not a product of the Internet, the idea that CMC provides a global channel for such liaisons is certainly something that many find morally problematic, to put it mildly.4

**Participation in virtual cultures:**

**The social psychology of Internet users**

The 'first generation' Internet studies literature on virtual communities and online identities emerged in a context where access to the Internet was still relatively limited, and computer-mediated communications was largely text-based. It also emerged at a time when deficit models of CMC were most prominent. Early studies of CMC suggested that people were cooler towards one another, more task-oriented and more prone to disagreement in CMC than they were in face-to-face groups; this was attributed to the absence of visual and verbal cues in online communication. Later studies would point to the dangers of Internet addiction, or the possibility that people become more socially isolated or depressed the more they use the Internet (Nie and Erbring 2000). Reviews of this literature by Wallace (2000), DiMaggio et al. (2001) and Baym (2002) have found these concerns to be overstated, and to rest upon too sharp a dichotomy between CMC and face-to-face interaction, as well as the assumption that patterns of user interaction were largely dictated by the nature of the technology rather than the diversity and creativity of the users.

Nonetheless, there remains a series of interesting questions about how and why people participate in online discussion groups, chat rooms, and other forms of 'virtual communities'. As Nancy Baym points out, 'One of the wonderful things about CMC is that it gives us the opportunity to rethink theories of communication' (Baym 2002: 68). Shenton and McNeeley (1997) have observed that among the reasons why people participate in online discussion groups are:

- the opportunity to form friendships and relationships that may be perceived as being more difficult to develop in the 'off-line' community
- the ability to play with personas
- the capacity to circulate new ideas among a group of like-minded people
- the chance to find people who share the same interests, however obscure or odd they may appear to others
- the search for romantic and sexual relations
- the ability for those who feel marginalised or persecuted by society to express views and disseminate opinions, in ways that are not possible through more mainstream media outlets.

All of these reasons for involvement in online communities would seem to reflect dissatisfaction with the limitations of 'real' communities. Yet it is important to note that the concept of 'virtual communities' precedes the development of the Internet, referring to forms of collective identity and shared feeling that are frequently engendered by media in all of its forms. Benedict Anderson's notion of nations as imagined communities is relevant here. Anderson argues that a nation provides a common form of identity that is shared by its members, even though very few of these people will ever meet, know of, or hear from most of their fellow-citizens (Anderson 1991).

One important difference, however, is the greatly enhanced scope for play, deception, and the adoption of different and multiple personas that online communities enable. Jordan (1999) described the instance of a female online participant, Hertz, who chose to have gay male sex online as she lived in an area—South Miami Beach—where the gay male population was very large, and she was interested to see if she could 'pass' as gay. Tipper (1997) outlined the practice of 'trolling', or the posting of deliberately misleading statements onto a discussion list as a form of 'bait' for 'newbies' to the group. Such practices are, however, not always so playful. Instances have occurred of people passing themselves off as online medical specialists and leaving people who have physical and mental problems even more...
traumatised once the ruse was observed (Jordan 1999), and there have been well-documented cases of cyberspace 'rapes' on Multi-User Dimension (MUD) sites (Dibbell 1996).

The design and administration of online discussion groups is an important factor in whether they enable or prohibit new forms of community and participation. Baym (1998) argued that factors which influence participation in CMCs include:

1. the external contexts from which participants come to the discussion groups, including employment and economic background, nationality, race, gender, reasons for participation, and styles of interaction that are encouraged or discouraged on the discussion group
2. the temporal structure of communication, particularly whether it is synchronous ('real time') or asynchronous (where messages are received following some period of time after they are sent)
3. the system infrastructure, or the interface design that users engage with, as well as the technical infrastructure through which messages are sent and distributed
4. group purposes for involvement in the discussion group
5. participant characteristics, including the number of participants, their history of joint interaction, familiarity with both the Internet medium and the communicative protocols of the group, and the extent to which participation has instrumental, affective or social purposes.

Baym observes that such interaction through CMC environments requires the development over time of group-specific meanings, identities and relationships, as 'it is these stable patterns of social meaning, manifested through a group's ongoing discourse, that enable participants to imagine themselves as part of a community' (Baym 1998: 62). Moreover, insofar as CMC environments generate such 'virtual communities', the lines between the 'online' and the 'off-line' will increasingly blur, as the contexts that shape online interaction become increasingly relevant to the group, and as people who have established online relationships seek each other out for other forms of interpersonal interaction.

On the basis of his experiences with the WELL and the EFF, Mike Godwin (1998: 38–40) proposed ten principles for making virtual communities work:

1. use software that promotes group discussion
2. do not impose a length limitation on postings
3. front-load your online community with diverse and talkative people
4. let the users resolve their own disputes
5. promote institutional memory, through archiving of previous discussion threads
6. promote continuity by keeping old postings available
7. act as a host to one or more interest groups (for example the WELL benefited from being the cyberspace home of Deadheads, or followers of the band the Grateful Dead)
8. make the space 'child-friendly'
9. commit the online community to the principle of maintaining public spaces for public communication and public events
10. be prepared to confront the users with a crisis, as a reason for continuing to participate.

Godwin's recommendation that 'users resolve their own disputes' is one of the most hotly debated. Godwin's preference for unmoderated discussion lists has been at odds with the experience of many hosts of discussion lists, who have found a need to moderate their lists in instances where 'flaming' or personal abuse has occurred, or when the dogmatic adherence of some to particular points of view has acted as an obstacle or a turn-off to others, who have simply left the discussion group to avoid being bombarded with unwelcome email correspondence. Sites can also be infiltrated by those with a point of view diametrically opposed to that of the group convenors, as Bruckman (1996) documented with anti-feminist postings on the alt.feminism Usenet site. The recommendation that sites be 'child-friendly' would also not be appropriate to sites where participants wish to engage in frank discussion about sexual matters or to meet others for sexual relations, and it may be preferable to alert those entering the site of the nature of discussion, and advise those under the age of 18 that they should not enter the discussion space. For instance, David Shaw (1997) has observed that gay men have been among the largest users of CMC, pointing out that there is considerable fluidity between the network of Internet Relay Chat (IRC) sites used by gay men, and the network of bars, clubs, and other places that constitute an gay 'scene' or 'community' in various cities.

The digital divide

The question of the digital divide, or the inequalities of access to ICTs that arise from broader social inequalities based upon social class and income, occupation, gender, race and ethnicity, geographical location (especially urban/rural divides), and nationality, is central to debates about the merits of 'virtual communities' and CMC as a basis for more socially effective human interaction. The most extreme digital divide is between the so-called 'First World' economies, most particularly the USA and, to a lesser extent, Canada and Western Europe, and the 'Third World' economies of Asia, Latin America, Eastern Europe, the Middle East and, most particularly, Africa. Global information inequalities can be traced by a variety of measures. A survey in 2004 by Cyberatlas (<www.cyberatlas.com>) found that the world's 18 largest Internet-using nations accounted for 81% of the global Internet population, with the USA alone accounting for 27.4% of global Internet users. Significantly, however, the US share of total world Internet users is down from 33.4% in 2002, as there is rapid growth in Internet use in countries such as Japan, China, South Korea, Russia, India, and Brazil (see table 4.1).
Table 4.1 World’s largest Internet users, 2004

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage of world Internet users</th>
<th>Number of Internet users (million)</th>
<th>Percentage of population online</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>27.4</td>
<td>166.75</td>
<td>59.1</td>
</tr>
<tr>
<td>Japan</td>
<td>9.2</td>
<td>56</td>
<td>44.1</td>
</tr>
<tr>
<td>China</td>
<td>7.5</td>
<td>45.68</td>
<td>3.6</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>5.66</td>
<td>34.3</td>
<td>57.24</td>
</tr>
<tr>
<td>Germany</td>
<td>5.3</td>
<td>32.1</td>
<td>38.9</td>
</tr>
<tr>
<td>South Korea</td>
<td>4.2</td>
<td>25.6</td>
<td>53.8</td>
</tr>
<tr>
<td>Italy</td>
<td>3.2</td>
<td>19.25</td>
<td>33.37</td>
</tr>
<tr>
<td>Russia</td>
<td>3</td>
<td>18</td>
<td>12.42</td>
</tr>
<tr>
<td>France</td>
<td>2.8</td>
<td>16.97</td>
<td>28.4</td>
</tr>
<tr>
<td>Canada</td>
<td>2.78</td>
<td>16.84</td>
<td>52.8</td>
</tr>
<tr>
<td>Brazil</td>
<td>2.3</td>
<td>14</td>
<td>7.77</td>
</tr>
<tr>
<td>Australia</td>
<td>1.75</td>
<td>10.63</td>
<td>54.38</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1.6</td>
<td>9.73</td>
<td>60.83</td>
</tr>
<tr>
<td>Spain</td>
<td>1.3</td>
<td>7.9</td>
<td>19.7</td>
</tr>
<tr>
<td>India</td>
<td>1.15</td>
<td>7</td>
<td>0.67</td>
</tr>
<tr>
<td>Sweden</td>
<td>1.0</td>
<td>6</td>
<td>67.8</td>
</tr>
<tr>
<td>Malaysia</td>
<td>0.94</td>
<td>5.7</td>
<td>25.15</td>
</tr>
</tbody>
</table>


These figures show that while North American users still predominate among the global Internet population, countries such as China, Russia, Brazil, and India are beginning to constitute an increasing proportion of the world’s online population. At the same time, relatively affluent countries such as France, Italy, and Spain have had comparatively low Internet take-up rates, perhaps reflective of the predominantly English-language content on the Internet. The extent of global inequalities in Internet access, and changes between 1997 and 2002, can be seen in Table 4.2.

Two trends can be observed from this data. The first is that as the Internet is evolving as a global communications medium, there is more rapid growth in Europe, Asia, and especially the Middle East than is the case in the ‘early adopter’ region of North America. Such a trend is particularly strong where it is combined with rising levels of disposable personal income, as is the case in much of the Asia-Pacific region. At the same time, the global inequalities in Internet access remain very marked. A North American child is 19.5 times more likely to have Internet access than a child from the Asia-Pacific, 28.5 times more likely to have Internet access than a child from Latin America, and 195 times more likely to have Internet access than a child from Africa. The reasons for such global inequalities are readily understandable. The World Bank (2004) has found that inequalities of access to television between low-income and high-income economies (7.4:1), and even cable or subscription television (7.425:1) are considerably less than those relating to personal computers (68.24:1), indicating strongly that the transition to a global knowledge-based economy will significantly increase inequalities between the ‘have’ and ‘have-not’ nations in the global economic system (see Table 4.3).

In the high-income, technology-rich economies, evidence of the digital divide, and its adverse consequences, have been well documented. A study by the National Telecommunications and Information Administration (NTIA) division of the US Department of Commerce, *Falling Through the Net: Defining the Digital Divide* (NTIA 1999), found that those on incomes above US$75,000 were five times more likely to have Internet access at home than those on incomes below US$25,000, and that those with a college or university degree were sixteen times more likely to have Internet access at home than those with an elementary school education. This study also found that those of Black or Hispanic background had about a third of the rate of Internet usage at home as those of White or Asian background.

Table 4.2 Global inequalities in Internet use: Changes between 1997 and 2002

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage change 1997-2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>133</td>
</tr>
<tr>
<td>Europe</td>
<td>338</td>
</tr>
<tr>
<td>Asia-Pacific</td>
<td>486</td>
</tr>
<tr>
<td>Australia and New Zealand</td>
<td>95</td>
</tr>
<tr>
<td>Latin America</td>
<td>95</td>
</tr>
<tr>
<td>Middle East</td>
<td>833</td>
</tr>
<tr>
<td>Africa</td>
<td>178</td>
</tr>
</tbody>
</table>


Table 4.3 Global access to communications technologies

<table>
<thead>
<tr>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Low-income countries</td>
<td>91</td>
<td>24</td>
</tr>
<tr>
<td>Middle-income countries</td>
<td>291</td>
<td>56.7</td>
</tr>
<tr>
<td>High-income countries</td>
<td>677</td>
<td>178.2</td>
</tr>
</tbody>
</table>

The issue of why the digital divide matters in terms of overall life-chances in the emergent knowledge economy has been addressed by a number of sources. Groups such as the Benton Foundation, a USA-based non-profit organisation with a particular concern for ‘digital divide’ issues, has identified the need for active public policy to address these inequalities (Benton Foundation 2000). More generally, access to ICTs is clearly bound up with the equal capacity to exercise citizenship rights in the context of the ‘new economy’. Peter Golding and Graham Murdock (Golding and Murdock 1989; Murdock 1992) have identified a normative ‘bottom line’ for equitable citizen participation in public life through the use of communications media in all of its forms as entailing:

- maximising access for all individuals to information, advice, and analysis about their rights as citizens
- providing all sections of the community with the broadest possible range of information and opinion on issues of public concern
- providing opportunity for all individuals to register criticism of current policies, organise opposition, and propose alternatives
- allowing people from all sections of society to recognise themselves in available media representations and contribute to their development.

Measures to address the digital divide have focused upon the development of community-based Internet access centres, provision of computers in low-income schools and the re-skilling of teachers, and incentives to the corporate sector to develop broadband telecommunications services in rural and regional areas (Benton Foundation 2000). Some have argued that the ‘digital divide’ is a short-term problem that will be resolved over time as computers become cheaper and as small-scale entrepreneurs meet an access gap through the global proliferation of Internet cafés. Such an argument oversimplifies the problem, since the digital divide is not simply due to access to and availability of networked personal computers. Balka (1996) observed that there are seven layers of access to networked computing services: (1) the quality of carriage facilities, or the telecommunications network; (2) the capacity of computing devices, such as computers and modems; (3) pricing systems for online access; (4) content and services; (5) relationship of users to Internet service providers (ISPs); (6) issues of technological literacy and the degree of support and facilitation available for new ICT users; and (7) overarching national and international policies towards Internet access and use, such as support for computing in schools and universities, universal service obligations for telecommunications service providers, or measures to promote more equitable access to information resources globally. To simply focus upon ensuring access to ICTs would be to ignore factors such as how the poor quality of telecommunications facilities in many developing countries, as well as many rural and remote areas in developed countries, acts as a barrier to online participation. It would also ignore the extent to which a supportive environment for ICT users, and one that is particularly conducive to the participation of new users, is bound up with what sociologist Pierre Bourdieu has described as the cultural capital of those within different social groups, or the skills, literacies, social interactions, and competencies acquired by those within these groups, which are frequently bound up with inequalities based on class and education (Emmison and Frow 1998).

Gender has also been seen as a central marker of difference and inequality in access to online media, although its significance is contested, and the ‘gender gap’ seems to be diminishing over time, at least in terms of Internet access. Early World Wide Web user surveys conducted by the Graphics, Visualisation and Useability Center of the Georgia Institute of Technology (<www.cc.gatech.edu/grvu/user_surveys> found that only 10% of Web users surveyed in 1994 were female; a later 1998 survey found that only 33.6% of users were female. Male users were also, on average, considerably more experienced in their use of the Internet, in both the amount of time they had used it and their self-assessed level of expertise (GVU 2000). The National Telecommunications Infrastructure Administration (NTIA) study, Falling Through the Net, found that, in 1998, 34.3% of American males had accessed the Internet in the last 12 months, as compared to 31.4% of females (<www.ntia.doc.gov/ntiahome/fttn99>), while a 1999 study of Internet users in the USA by Nielsen Media Research and CommerceNet found that in 1999 57% of American Internet users were male (<www.commerce.net/research>). By contrast, Nielsen/Net Ratings found in December 2001 that women were a majority of the Internet population in the USA, with female Internet users constituting 52% of US Internet users although it found that this was unique to the USA, and that global data pointed to a continuing majority of male Internet users, particularly in Europe and the Asia-Pacific (Cyberatlas 2002b).

Social capital and social software

The concept of social capital has been increasingly prominent over the last decade. Robert Putnam, Professor of Public Policy at Harvard University whose work has been of central importance to this field, defines social capital as: ‘Features of social life—networks, norms, and trust—that enable participants to act together more effectively to pursue shared interests... Social capital, in short, refers to social connections and the attendant norms and trust’ (Putnam 1995: 665).

Social capital has been identified as being important for three reasons. First, as both Putnam’s empirical work on the economic performance of Italian industrial districts (Putnam et al. 1993) and the literature on industry cluster development (discussed in chapter 7) indicate, high levels of social capital in a community can boost economic outcomes, as high
levels of trust, networking, and cooperation promote innovation and information sharing. Second, Putnam has identified declining participation in voluntary and community-based organisations in the USA as a major factor contributing to other social problems, such as rising crime rates, drug abuse, poor health outcomes, and a growing distrust of government, public institutions, and fellow citizens (Putnam 2000). Third, by strengthening the institutions of civil society, the promotion of social capital development can address some of the weaknesses of public sector institutions in addressing social problems, by devolving responsibility from large-scale government bureaucracies and ‘one size fits all’ solutions to approaches that involve and empower local communities and promote social and civic entrepreneurship (Leadbeater 1999). This last factor in particular has attracted the attention of the World Bank, which has seen social capital formation as increasingly critical to alleviating poverty in developing nations (World Bank 2003).

In order to understand the significance of the Internet and new media for social capital, we need to understand the different dimensions of the term. Aldridge et al. (2002) distinguish between three main types of social capital:

- bonding social capital, characterised by strong social bonds between individuals, e.g. members of a family, a local community, or an ethnic community
- bridging social capital, characterised by weaker, less dense but more cross-cutting ties, e.g. with business associates, links across ethnic groups, links between families and communities
- linking social capital, characterised by connections between those with differing levels of power or social status, e.g. between political elites and the general public, policy makers and local communities, and individuals from different social classes.

It must be noted that, when defined in this way, social capital is not an unequivocal good. As it rests upon tacit, informal networks between individuals, it can constitute the basis for corruption and the formation of cliques. Moreover, high levels of bonding social capital in particular have been associated with racial intolerance and conflict between communities, as well as characterising the structure of many crime syndicates and drug cartels. In Northern Ireland, for instance, there is a great deal of bonding social capital within both the Protestant and Catholic communities, but relatively little bridging social capital which can bring these communities together (Aldridge et al. 2002: 32–3), and the family-based and ethnically-structured nature of criminal organisations such as the Sicilian mafia, the Columbian drug cartels, the Russian mafia, the Chinese Triads and the Japanese Yakuza has of course been widely observed.5

As a technology that promotes networking and community formation on a historically unprecedented scale, there has seemed to be a natural affinity between the Internet and social capital. Early Internet theorists such as Rheingold, Schove, and Schuler certainly saw an innate connection between the decentralised and inclusive nature of networked CMC and the revivification of civic engagement and a sense of community. Nonetheless, Putnam himself was cool on the idea that Internet users would be more civically engaged, and expressed concerns about unequal access to the new technology and ‘cyber-balkanization’ (Putnam 2000: 177). At the same time, it may be the case that the Internet is promoting a transformation of forms of civic engagement, particularly among younger users, where sustained engagement with globally networked organisations is becoming more important than participating in locality-based community organisations such as sporting teams, local churches or Rotary clubs (Aldridge et al. 2002: 48–9).

Perhaps ironically, a renewed interest in the relationship between the Internet and social capital has been stimulated by the ‘dot.com crash’ of 2000 and the resulting scepticism about the transformative potential of the Internet and new ICTs. The ‘two-worlds’ view of the Internet—the idea that there is a ‘virtual’ world through the Internet that exists in a parallel universe to the ‘real world’ of everyday life—has not only proved to be a conceptual barrier to understanding the social nature of CMC through the Internet, but has contributed to a growing public disaffection with involvement in virtual communities, as they increasingly became the outlet for spam, annoying correspondence among users, ‘flaming’ of individuals by other group members, and a source of unwanted clutter in email in-boxes due to an excessive volume of contributions. The American Internet theorist Clay Shirky has argued that as the Internet grew exponentially from the mid-1990s on, there became a fundamental confusion between the nature of a community and that of an audience, and many virtual communities became caught in this divide:

Though both are held together in some way by communication, an audience is typified by a one-way relationship between sender and receiver, and by the disconnection of its members from one another—a one-to-many pattern. In a community, by contrast, people typically send and receive messages, and the members of a community are connected to one another, not just to some central outlet—a many-to-many pattern... As a result of these differences, communities have strong upper limits on size, while audiences can grow arbitrarily large. Put another way, the larger a group held together by communication grows, the more it must become like an audience—largely disconnected and held together by communication travelling from centre to edge—because increasing the number of people in a group weakens communal connection (Shirky 2002).

Social software has been proposed as a means of addressing this paradox of Internet development, that its rapid diffusion increasingly
turns it into a mass medium, yet its appeal to users and its capacity to contribute to broader social goals such as social capital arises from its difference to traditional forms of mass communication. For William Davies, the underlying principle of social software is 'to break down the distinction between our online computer-mediated experiences and our offline face-to-face experiences. It is software that pays heed to the lessons of social capital, and seeks to integrate the Internet further into our everyday lives, and our everyday lives further into the Internet' (Davies 2003: 7). Davies identifies the ways in which social software can promote more sustained and effective interaction among individuals and organisations, observing that:

We are entering an era in which informal networks are rivalling the power of hierarchical organisations, but there is a pressing lack of institutional form available to publicly represent the social relations that are ordering our society...the greatest benefits that social software can offer everyday life lie in the fostering of trust. This is a further irony, in view of the early paranoid perception of the Internet as home to freaks and falsehoods (Davies 2003: 61).

While the concept of social software can incorporate everything from email and messenger systems (ICQ, MSN Instant Messenger) to relatively obscure software editing tools, its principal impact is seen in two areas: the development of personal weblogs, or blogging, and collaborative online publishing. Weblogs, or blogs, evolved from early listings of web sites that a particular person liked, to increasingly take the form of personal journals or notebooks, whereby a person builds a community of interest by sharing their thoughts and encouraging others to participate in an ongoing conversation. Blogging first emerged in 1999, but it was the 11 September 2001 attacks on New York City that saw a surge in blogging, as many New Yorkers felt a strong urge to recount the events and their aftermath, and to communicate with others about their experience (Blood 2002). While most bloggers are not widely known outside of their community of regular readers and posters to the site, there has emerged an 'A-list' of bloggers who command large readerships and can even make money from their blog (Jacobs 2003). Political blogs have proved to be popular, with conservative columnist Andrew Sullivan attracting a large readership to his blog (www.andrewsullivan.com), and from the other side of the political spectrum, Noam Chomsky now has a blog, titled Turning the Tide (blogs.zmag.org/zt). Blogs can be seen as being on a continuum of peer-to-peer (p2p) publication initiatives that include open news sites and more traditional news sites. Open news sites will be discussed in more detail in chapter 5, but Bruns (2003) has identified a continuum of web site models, from blogs to open news to traditional news sites (see table 4.1).

8 The empirical turn in new media studies

This chapter has tracked an intellectual debate within the field of new media studies or Internet studies that has taken debates about the nature and significance of virtual cultures as central to its broader arguments about both the Internet's overall social significance, and how to research it. The chapter has discussed first generation Internet studies, found in the works of authors such as Howard Rheingold, Sherry Turkle, Mark Poster and Douglas Schuler, which staked out an ambitious claim about the radical and transformative significance of the Internet to society and, as 'activist-entrepreneurs' in this new media environment, implored their readers to not only understand the online world, but to actively engage with it. The core propositions of first generation Internet studies were: (1) the development of the Internet marks a moment of radical discontinuity in human communication; (2) at the core of this discontinuity is the emergence of a new online environment (the 'virtual' or 'cyberspace') that existed as a parallel universe to society ('real life' or the 'offline'), and has become the site of large-scale experimentation in new forms of human community (the 'virtual community') and the construction of social subjectivity (the fluid nature of online identities); and (3) such online experiments have an important bearing on current social and political debates, whether about the transition from modernity to postmodernity, or the prospects for new forms of community in the face of a decline in other forms of civic engagement and social capital formation. I would argue that this was the dominant strand of new media studies from the early to the mid-1990s.

Not surprisingly, the upbeat and optimistic tone of these early appraisals met with criticism when evaluated in the cold light of analyses of the digital divide and the question of who had access to the Internet, observations about the 'brittleness' of virtual communities when confronted with conflict and dissension (Kolko and Reid 1998), and the patently unsustainable claim...
that differences based upon race, gender, class, and nationality did not matter on the Internet, since one could always assume other textual ‘masks’ (Daneet 1998). Given the tendency of first generation Internet studies to downplay the political economy of communications, it was not hard for critics to point to elements of technological determinism, political naivety, and neglect of the social and historical contexts that shaped contemporary Internet culture. At its simplest, critics pointed out that while Bill Gates and Howard Rheingold may both write books about the Internet, Gates’ ideas were more likely to shape the Internet’s development than Rheingold’s, not because he writes better books (he doesn’t), but because he is CEO of Microsoft. Some critical theorists, most notably Kevin Robins and Frank Webster (1999), went further, arguing that the new media technologies themselves had embedded within them a logic that promoted capitalistic priorities in relation to the organisation and control of space, subjectivity, and social relations. For Robins and Webster, attempts to hitch progressive politics onto the wagon of these technologies is worse than naïve; it actively participates in the incorporation of more and more of the world’s population into the logics of global capitalism and the ‘global panopticon’ (Robins and Webster 1999: 7). From such a standpoint, Robins and Webster observe, ‘it is sometimes easy to feel that virtual communitarians and cyberpunk enthusiasts simply function as promotional aids for the cause of Microsoft’ (Robins and Webster 1999: 4). This critical, or ‘second generation’, strand of new media studies was, I would argue, most influential in the late 1990s and early 2000s (c.f. Silver 2000).

Critical media studies has had to wrestle for a long time with what McKenzie Wark, paraphrasing Leonard Cohen, termed the ‘everybody knows’ problem: everybody knows that the media is owned by certain dominant interests, who promote certain dominant ideas or ideologies, and people do or don’t see through them at different times, for reasons which are often as much to do with the researcher’s prior assumptions about them (Wark 1998: 171). In particular, the political economy approach to communications has often felt uncomfortable with the issue of how actual audiences use media, and whether the question of ownership matters in terms of these issues of access and use. These issues become sharper with the Internet for the reason—rightly noted in ‘first generation’ new media studies—that the lines between being a producer/distributor and a consumer/user of media are far less clear-cut in the Internet environment than they have been with broadcast media (see Hartley 2004, for an elaboration of this). In this light, I would propose that we are seeing the emergence of a ‘third generation’ approach to new media studies, which takes a more empirical approach to questions about how people are interacting with the Internet environment. In her overview of academic research into interpersonal life online, Nancy Baym concludes by saying: ‘There are no simple questions to ask about CMC, as there is no single thing that is CMC, any more than there is a single thing called “telephone-mediated communication”, or “television-mediated communication”. Discussions about the quality of CMC...must be predicated on this more complicated and messy reality’ (Baym 2002: 73).

The ‘third generation’ approach to new media studies works from three propositions: (1) rather than demarcating the ‘online’ and the ‘offline’, or the ‘real’ and the ‘virtual’, there is a need to consider how people use CMC and Internet technologies as a part of their everyday lives and material culture; (2) the need to look at Internet use by people poses fundamental questions of who these ‘people’ are, i.e. where they are geographically located, what their racial, gender, class, age, educational etc. characteristics are; and (3) while people may adopt online identities and engage in virtual communities that are not geographically or socially defined, this does not in itself establish ‘cyberspace’ as an independent realm. Perhaps the most significant contribution thus far to this ‘third generation’ approach has been Daniel Miller and Don Slater’s ethnographic analysis of Internet use in the Caribbean island of Trinidad, and among Trinidadians residing overseas (Miller and Slater 2000). Miller and Slater’s principal finding is that, from a grounded study of Internet use in Trinidad, distinctions between the ‘real’ and the ‘virtual’ are simply based upon the wrong questions. The people of Trinidad are relatively heavy Internet users, but they use the Internet to embed interpersonal relations and a sense of Trinidadian national and cultural identity that is completely at odds with assumptions that they would use the Internet to escape these grounded aspects of their everyday life and culture. Such conclusions would not necessarily follow if, by contrast, they were studying Internet use in Vietnam, New Zealand, Scotland, Zimbabwe, or among college students in the US state of Ohio or the Australian city of Brisbane. Internet use in any of these places may indeed promote a more ‘virtual’ culture and identity than they find among Trinidadian Internet users, but this is an empirical question that cannot be resolved simply through recourse to the possibilities or the dangers of CMC per se. As Miller and Slater argue: ‘We need to treat Internet media as continuous with and embedded in other social spaces, that they happen within mundane social structures and relations that they may transform but that they cannot escape into a self-enclosed cyberian apartness...New mediations, indeed, but not a new reality’ (Miller and Slater 2000: 5–6).

Useful web sites

ClickZ Stats (www.clickz.com/stats/). Formerly Cyberatlas, perhaps the most comprehensive global source of Internet usage statistics.

Benton Foundation (www.benton.org/). US-based foundation that has been a leader in ‘digital divide’ research, and provides commentary and undertakes initiatives around a range of new media issues.

Blogger (www.blogger.com/). A site from which one can get an understanding of the blogging phenomenon, as well as resources to start one’s own blog.
3 New Media, New Economy?  
Technology, Political Economy,  
and the Network Society

The concept of the *longue durée* is derived from the work of French historian Fernand Braudel. See e.g. Braudel 1993.

For reasons of length, I have not provided the statistical indicators that establish the existence of these fifty-year cycles. Data can be found in Mandel 1975; van Duijn 1983; Dosi et al. 1988; Hall and Preston 1988; Tylecote 1992.

To borrow from the title of Clifford Stoll’s book, which provides an insider’s critique of the unsubstantiated hype of new media culture (Stoll 1995).

For overviews of these debates, see Schwartz 1977; Burkitt 1984; Argyrous and Stilwell 2003.

4 Virtual Cultures

James Carey has observed that ‘histories of the future’ have often been characterised by the hope that ‘particular policies and technologies will yield a way out of current dilemmas and a new age of peace, democracy, and ecological harmony will reign’ (Carey 1992b: 174). Such claims are often accompanied by the argument that a particular technological system provides an analogy to a basic human desire, such as the proposition that CMC facilitates a basic human need for communication and interaction. For Carey, this parallels earlier claims that electrical technologies would better meet human needs as they mapped the workings of the human brain (Carey 1992a: 122–3).

Donna Haraway’s theory of the cyborg identity marked both a highly influential critique of binary thinking based around male/female, mind/body, culture/nature, human/machine, through its claim that the ‘infomatics of domination’ thoroughly blur such boundaries. At the same time, and perhaps paradoxically, it could be argued that Haraway’s championing of those who are ‘not afraid of permanently partial identities and contradictory standpoints’ (Haraway 1991: 154) itself rests upon a demarcation between personas constituted in the ‘online’ and ‘offline’ worlds that are akin to those described above.

Lockard, for example, argues that ‘cyberspace is to community what Rubber Rita [an inflatable sex toy] is to human companionship’ (Lockard 1997: 225).

The sensational aspects of the Armin Meiwes trial notwithstanding, there is a need to be cautious about claims that the Internet constitutes a new form of global ‘stranger danger’ and a haven for sexual predators. This is partly because the often anonymous nature of CMC does lend itself to ‘moral panics’, particularly generated through other media such as newspapers and television (c.f. *Media International Australia* special issue on ‘moral panics’, No. 85, August 1997), but also because of the well-established criminological findings that young people are far more likely to be sexually abused by someone who they know and trust—and, most importantly, have met—than by anonymous strangers lurking either at the school gates or on the Internet.

Castells (2000) argues that the organisation of the global criminal economy can be seen as being shaped by the logic of networking in ways that are very similar to those shaping the global corporate sector.

5 Digital Media

6 Games: Technology, Industry, Culture

Hollywood and the games world have of course had more successful subsequent liaisons, most notably with the *Lara Croft* films, starring Angelina Jolie as the versatile action heroine.