

1

"READING" CYBERCULTURES

CHAPTER PLAN

Introducing Cybercultures

The Information Society

Key Issues in Cyberculture Studies

Globalization, Technocapitalism, and Cybercultures

Materiality and Corporeality

The Digital Divide

E-Governance

Civil Society

Governing Cyberspace

Identity

Race

Class

Gender and Sexualities

Space and Geography

Risk

The Mediapolis and the Space of the Other

Aesthetics

Cyberculture Studies

Ethnographies of Cyberspace

Apparatgeist Theory

Cultural Studies

On January 31, 2008, a ship's anchor cut through underwater cables in the Mediterranean. Internet and communications services were massively affected across the world. India, where I was writing, experienced disruption to its business process outsourcing (BPO) operations (S. Joshi 2008). In November 2008, a report

from the Indo Asian News Service, tellingly titled “Second Life Romance Costs First Life Marriage,” told the story of a British couple who were getting a divorce because of an affair the husband was having in the virtual world *Second Life*: the wife refused to accept his excuse that it “was after all an affair in the unreal world” (IndiaInfo.com 2008). The two incidents capture the thesis of this book: cyberspace, cyberculture, and virtual reality remain deeply embedded in very material conditions.

This book argues throughout that cybercultures and virtual worlds have a material dimension. It pays attention to the rhetoric and discourses of and about cybercultures, while constantly drawing attention to the fact that the “hardware” of structures – bodies, cities, concrete, cables, sentiments, work spaces, and labor – that make cybercultures possible are subject to the dynamics of race, class, gender, economic inequalities, governance, and injustice.

Introducing Cybercultures

“Cybercultures” serves as a shorthand term to include the networked, electronic, and wired cultures of the last three decades of the twentieth century. Other terms used include Internet studies, new media studies, digital media studies, digital

CYBERSPACE

Cyberspace describes the worlds and domains generated by digital information and communications technologies (ICTs). It is seen, in this book, as a set of relations and actions in electronic space.

culture studies, networked culture studies, information society studies, and contemporary media studies. The number of terms available to choose from indicates the transdisciplinary nature of the field.

Cyberspace is also often called “information space” or “technospace” (Munt 2001: 11). It is defined as “new social spaces fostered by computer-enabled automated information and communication technologies (AICTs)” (Hakken 2008: 216). Cyberculture, as defined by the *Encyclopedia of New Media*, refers to “cultures formed in or associated with online social spaces” (Kendall 2007).

Technically, “ICTs” include the collection, processing, storage, retrieval, and transmission of information in the form of text, video, audio, and graphics for economic,

CYBERCULTURE

The electronic environment where various technologies and media forms converge: video games, the Internet and email, personal homepages, online chats, personal communications technologies (PCTs, such as the cell phone), mobile entertainment and information technologies, bioinformatics and biomedical technologies.

social, cultural, scientific, and political applications among individuals, groups, institutions, and nations. Information is converted into digital form and transmitted through increasingly convergent technologies where the personal computer, the phone, the Internet, and multimedia provide an integrated form of communication.

Cyberspace is also produced by multimedia applications such as mobile phones, electronic

surveillance, and video conferencing. As more people surf the Net via iPhones and the cell phone becomes ubiquitous across the world, “cyberspace” itself has to be redefined. While virtual reality (VR) environments are fashionable for academic studies of cyberculture, they do *not*, as Lisa Nakamura (2006) rightly points out, constitute the bulk of the experience of users of digital technology. Blogs and games, the homepage and social networking, online shopping and chat are more central to the common and the everyday, and if cyberculture studies hopes to draw from the frameworks of cultural studies – which is grounded in the everyday – it must turn to the popular Internet rather than the exotic environments of VR labs. There is no *one* cyberculture: because it has been so normalized, appropriated, altered, and domesticated into our everyday lives, there are in fact many cybercultures, of which the Internet is perhaps the most common. With mobile telephony and 3G phones, we have cybercultures in the palm of our hands and access to a virtual world. This book treats cybercultures as a *formation* that is the consequence of many structures, artifacts, ideas, and ideologies coming together: the political economy, information, global finance, capitalism, the logic of the market, the structures of cables and wires, monitors, and SIM cards. Cybercultures include a multiplicity of sites and applications, from medicalization to mobilization, pornography to politics, entertainment to addictions. However – and this is the key point – the formation that is cybercultures is at various points, and in different ways, attached to, connected with, replicates, extends, and augments real-life *material* conditions.

The cyberspace environment – from the “space” of mobile communications systems to gameworlds – is throughout this book treated not simply as a parallel universe but as an *extension* and *augmentation* of the everyday one. The human as an “avatar” in cyberspace, with different and multiple identities, is not so much dispersed as *reconfigured* as an extended human. The posthuman is not a startling new form but a modified version of the human as we have known it.

Cybercultures are a “formation” which is linked to and embedded in material contexts and conditions. These conditions generate, inform, and even govern the nature of cyberspace, its production, expansion, and application. This means that we need to see cybercultures as any other cultural process/event/structure, positioning, representing, influencing, and affecting race, class, gender, sexuality, and identity in particular ways. Cyberculture studies extends the work of cultural criticism and cultural studies by locating cybercultures as affected by and affecting these actual identities of individuals.

As the Internet, digital media, and cybercultures become “normalized,” domesticated, and integrated into

AVATAR

An avatar is an online identity. It is usually a graphic representation of the user in a virtual environment. It can be modified and made to look like anything the user wishes, and it can also be made to perform actions in the online environment. The term comes, incidentally, from Hindu mythology, where it signifies the reincarnations or earthly manifestations (appearances on earth) of gods. Its first use may have been in Lucasfilms’ online game *Habitat*, dating back to the 1980s.

the everyday life of individuals and organizations, we need to understand how they affect that everyday life. Do all sections of society acquire the same degree (or nature) of control over virtual worlds and representations in these worlds? Are cybercultures gendered in the everyday lives of individuals? These questions are important because they reveal cybercultures to be a set of social practices. Cybercultures are, like film or television or sport, cultural formations that have their own cultural politics (of race, economy, class, or gender). This book explores cybercultures as embedded in, masking, or generating forms of power.

In order to “read” cybercultures, we need to see them as *technoculture*. This book does not treat cyberspace as an independent entity but as one that is connected to the material world with all its attendant problems and concerns. While cultures determine what forms of technologies develop, these technologies, in turn, shape cultures. Technology, in other words, is not merely an effect or cause of culture but is *both*: it determines and is determined by the culture in which it develops. There is a spirit and logic of a particular technology that feeds off and into the community and culture. In other words, one needs to locate any technology *within* its particular *material* contexts. All technology, in this reading, is context-bound. Technologies are not simply out there: they become a part of our lives, are incorporated into the everyday. They are “domesticated” (Silverstone and Haddon 1996) and, in turn, inform the way we run our everyday lives *around* them. Technologies, in addition to possessing instrumental value, also possess cultural values – of prestige, safety, and sociability – values that increasingly inform the design and development of technological devices.

The mobile phone needs to be more than a phone – it now has to serve as a personal diary, a health indicator, an entertainment device, and a status symbol. Designers therefore need to account for those values that have become important and rendered desirable within a culture, and incorporate those into the “thing.” The “thing” is therefore more than that: it represents aspirations, lifestyle choices, cultural values, sentiment (empirical research has demonstrated, for example, that people are *emotionally* attached to their cell phones; see Palen and Hughes 2007; Srivastava 2006), and functionality. A cell phone must be both efficient and attractive: one is the value of *productivity* and *instrumentality*, the other is *symbolic* and *cultural*. In October 2007, Hotmail launched “Cool Hotmail” (www.coolhotmail.com). Its key “features” are all social and allow users to pick personal IDs:

“Get cool e-mail IDs as proof of residence!”

“Exclusive e-mail IDs created for the top icons!”

“Find an e-mail ID that describes your personality right here!”

“Sport, food, drink and lots of fun! IDs for all occasions. How many of these funky e-mail IDs have you got?”

And finally, as a clinching argument:

You’re in a class of your own, individuality is your key. It’s all about being you, in your own space. It’s about your e-mail ID!

The ideology of individualism informs the design of the desktop and email. Hence Microsoft labels its software program *MS Office*, thereby suggesting that it serves a particular class of people (who work in offices rather than, say, at masonry or gardening). These are not technical details, they are social and cultural values. The name of the software program is rooted in real material contexts where, increasingly, office work and services – or “knowledge work” (A. Liu 2004) – are given more value than other forms of labor in the informational economy.

Similarly, technologies of databasing are governed by factors that are non-technological such as transborder access of information, security concerns, questions of privacy, human capital, or conflicts. Finance, the market, and cooperative policies between nations are also factors in the operational mechanisms of databases. Where earlier the state or the archive controlled information (tax details, criminal records, population, birth and death records), digitization opens up the possibilities of archivization to various actors. The logic of technology is thus often a sociologic.

We also need to ask whether men and women use digital technology in the same way. Does digital culture significantly alter identities in the real world where race, ethnicity, class, and gender continue to remain key markers? Such questions are not about virtual worlds or electronic communication or digital gameworlds: they are about the lived experiences of humans around the world.

Cybercultures are driven by material considerations of profit and power, and affect people in their real lives. All this goes to show how technology must always be seen as contextual, and treated as technoculture where meanings, values, and functions are integrally associated with the object. Culture and technology are therefore not distinct but linked.

Cybercultures emerge in the context of large-scale movements of people, miscegenation of cultures leading to hybridized forms, dispersed forms of production, and, most importantly, the widespread “flows” of capital. Capital’s increasing moves to control the production, circulation, and consumption of commodities demands greater connectivity but also increasing controls (Stratton 1997).

Nongovernmental organizations (NGOs) research and link up with dispersed locations in their bid to effect changes in societies across the world. Migrant workers (mainly from Asia) built Silicon Valley, which eventually headquartered the research and commercial aspects of the computer revolution. The Internet emerged out of a US Department of Defense project. The entertainment industry sought to spread as widely and as deeply as it could, and the demand for greater, continuous, and more varied entertainment fueled Walkmans, mobile technologies of film, and entertainment on the move. Globalization, arguably the most decisive social/political/cultural aspect of twentieth-century culture, would not be possible without ICTs.

The focus in this book is Internet networked cultures and digital worlds, where computers, digital technologies, and communication systems play a major role. While mobile phones increasingly become terminals and nodes for Internet

cultures, they figure here as extensions of such network cultures. This book examines:

- popular forms of cybercultures;
- the spaces (private, public, ageographic) generated by cybertechnologies;
- the gendered, raced, and classed nature of these new cultures.

In the rest of this chapter I outline (1) the contexts of cyberculture in terms of the information society and globalization; (2) the key issues in cyberculture studies; and (3) select approaches to cybercultures.

The Information Society

The “information society” (Webster 2003) can be defined as an order where there is

- increasing convergence of telecommunications and computing in everyday life, production, consumption, and politics;
- an increasing importance of knowledge production;
- an ever-increasing number of people involved in information work (as opposed to agricultural or industrial labor);
- networking of cities and spaces via flows of information (through telecommunications networks); and
- an increasing amount of information *exchange* in the form of text, images, and sound.

The world has moved on, according to Daniel Bell’s (1973) famous thesis, to the state of a “post-industrial” society. This shift is characterized by a reduction in industrial labor and a concomitant expansion of the service industry and a “knowledge society.” Instead of laborers and workers we have “professionals,” a “new intelligent-sia” who seek to fulfill the information needs of the post-industrial society.

The information society is intimately linked to globalization. Globalization is marked by the following features:

- The expansion of trade in terms of trading relationships and movement of capital.
- The development of transnational and global communication networks.
- The diminished role of the nation-state even within its territorial space.
- The rise of transnational cultural, economic, and political networks (such as the International Monetary Fund, Greenpeace, and Amnesty International).
- The increased presence of Western consumer products and cultural artifacts (from Levi’s to Microsoft), or what is often called the “McDonaldization” of the world.

A new international division of labor facilitated by the telecommunications networks is visible in the age of globalization. Global and offshore finance, outsourced work, multiple and fractured sites of production and consumption, and cultural flows are all enabled by the new ICTs.

The increasing dependence on information collection, processing, and distribution in a globally connected world has led to what Manuel Castells characterizes as an “informational order” where the “flows” of information are of paramount importance. Cash flows are in fact information flows (Castells 1996).

INFORMATION SOCIETY

This term is used to describe the age of massive expansion of information and communications technologies (ICTs) over the last decades of the twentieth century – and the increasing reliance on electronic exchange/linkage of data, money, and markets.

Key Issues in Cyberculture Studies

This section summarizes the key concerns in cyberculture studies. Many of these issues are examined in greater detail in subsequent chapters, and are included here mainly to indicate the possibilities within cyberculture studies.

Globalization, Technocapitalism, and Cybercultures

Globalization has been enabled by the advent of high-speed communications. Capitalism is increasingly becoming *technocapitalism* because the distributed nature of production, marketing, and consumption demands technological linkages and synchronous, 24/7 communications. Manuel Castells’s work, as noted above, has demonstrated how the flows of information assume prime importance in this context. It is the management of information and financial flows that becomes the key focus in globalized technocapitalism.

As an example of such flows in the age of informationalism, consider Amazon.com. Amazon.com is arguably the most successful .com company today. Having survived the .com bubble burst in 2000–2001, it has expanded astronomically since its founding to become the foremost example of the linkage between globalization, technology, and commerce.

Amazon.com is a unique company because of the way it localizes itself. While its name and web address are now a brand, the company uses a flexible screen geography – as Martin Dodge (2004) points out, the screen is a micro-geography – so that local cultural and even personal elements can be incorporated. This makes it a local “firm” for users, something like the old grocer down the street, because the Amazon.com website is designed for and by the individual user, to the extent that the entire website is in the local language. Amazon.com is a Seattle-based company, but it is a transnational one whose flows and networks of finance and product distribution

are global. Finally, even if Amazon.com does not own a physical store, it possesses a massive material infrastructure “substrate” to its website.

In addition to the theme of commerce and globalizing ICTs, other features draw our attention here. Increasingly, people, classes, and territories that are not significant for the informational society are excluded from the wired world. The old, African nations, the mentally ill, and inner-city ghettos are all peripheral to the globalizing ICT movement. Just as capitalism was driven by the logic of capital accumulation and production, the high-tech age is driven by the need to possess ever greater amounts of information, and those who lack this (the “information poor”) are left out of the race. Human labor power is, however, central to this new condition as well. Automation, information gathering, and labor are, argues Douglas Kellner (1999), analogous to mechanization in the earlier age of capitalism. In such a new capitalist order, the information poor fall through the gap.

Globalization has very clear material consequences – from profits to poverty – and these are the conditions in which cybercultural forms, the informational economy, and ICTs exist and function. This book believes, therefore, that cyberculture studies constitutes a vital aspect of globalization studies itself.

Materiality and Corporeality

Studies of cybercultures such as that by Howard Rheingold (1994) celebrate virtual worlds for enabling the user to transcend geography and the body. Disembodiment, it is argued, is the overcoming of the body’s limitations in favor of pure rationality and thinking. When Hans Moravec (1988) describes the body as “mere jelly” (p. 116), the key assumption is that information, thinking, and the mind are more significant than the body (even though cyberpunk is often critical of such views of technologized bodies, which often represent cultural anxieties about “informatization”). The theme of disembodiment and bodily transcendence also forms the basis of the work of cyber- and digital artists like Stelarc. The body’s limitations – disease, degeneration, aging – can be overcome through technological prosthesis. What we have is an *augmented* body: the posthuman.

Subjectivity and identity are no longer rooted in the body. Subjectivity in the posthuman condition is “dispersed throughout the cybernetic circuit” (Hayles 1999: 27). The incorporation of data from the outside into the body and the extension of consciousness into other spaces through VR or cybernetic circuits suggests that consciousness need not be confined to the body. However, while the transcendence of the body’s limits is attractive – since in some respects it does away with degeneration and aging – it poses its own problems. Since suffering, politics, and emancipation continue to be *embodied*, the transcendence of the body does not help. Besides, for women, minorities, and the socially marginalized, claims for justice must remain rooted in the *body* rather than in pure, disembodied, and abstract “consciousness.”

It is also significant that any technology of corporeal transcendence can only be built through rigorous labor by very material bodies, often working in sweatshops and for low wages. On the more positive side, new developments in computer-driven prostheses and medicine can significantly improve the functions and therefore material life of differently abled, aging, and diseased bodies.

Cyberculture studies explores the impact, consequence, context, and manifestations of computer technology and ICTs on the social, cultural, economic, and material (i.e., fleshly) conditions of real bodies, and examines the shifts in the nature of living for material bodies via ICTs and new media. In the chapter on cyberbodies (Chapter 3), we return to these and other corporeal themes.

The Digital Divide

It is a truism that resources and power are not evenly distributed among the people and nations of the world. The rise and rapid expansion of ICTs are subject to a similar condition of unequal access between, for example, Africa and Europe, leading to a “digital divide.” Focusing primarily on Internet access as the focal point of networked culture, Pippa Norris suggests a three-layered digital divide: the *global divide*, referring to the divergence in Internet access between developed and developing nations; the *social divide*, referring to the divergence between Internet access and use between classes and sections within a particular society (termed “information rich” and “information poor”); and the *democratic divide*, referring to the difference in the nature/quality of use of the Internet and digital resources between users (Norris 2001: 4). An example of this digital divide, identified in September 2007 (Internet World Stats 2007), would be the rate of Internet use and population penetration:

- Africa has 14.7 percent of the world’s population and constitutes 3.5 percent of the world’s total Internet use (though it shows the largest expansion of Internet use – 874.6 percent between 2000 and 2007).
- Europe has 12.3 percent of the world’s population and constitutes 27.2 percent of world Internet use.
- North America has 69 percent Internet penetration, even though it has only 5.1 percent of the world’s population.
- Within Asia, Afghanistan constitutes 0.1 percent of total users in Asia, and has 2.0 percent of its population wired. India constitutes 13.1 percent of total Internet users in Asia, and has 5.3 percent of its population wired. Hong Kong has 68.2 percent of its population wired, and Japan 68 percent.

The difference between users and Internet penetration is obvious from the statistics. However, the significance of this difference is not so obvious at first, and it is the nature of the digital divide that concerns us here in terms of agency, ability, and questions of power and identity.

DIGITAL DIVIDE

This term is used to describe the uneven nature of access to and quality of Internet access, electronic communication, and cybercultures in general. It gestures primarily at the difference in digital cultures – including production, dissemination, and use – between First World and Third World nations, though the “divide” within the former is also increasingly described under the same rubric.

The First World is increasingly “informatized,” networked, and linked. The digital age in such cases might mean, for particular segments of society, *increased access* to health services (networks of healthcare workers, data, and expertise), education (distance learning, access to information), financial transactions (e-commerce), and civic engagement (online voting, public debates via the Internet). The personal computer and faster and cheaper connec-

tivity alter the individual’s or community’s role in the public sphere, enabling individuals and communities to access information and therefore improve their lifestyles or conditions.

Within First World nations, however, racial and class inequalities exist in access to and use of digital resources: there is differential access for blacks and Chicano/a populations, and there is a rural–urban divide. The digital divide therefore needs to be studied at the level of the nation, the institution, and the individual (Norris 2001: 14–15). White students without a PC at home might access the Internet in other places more than non-white students. Studies have shown that Caucasian children surf for humor and entertainment sites while African American children of the same age group often look up information, education, and race support activities, though the popular Internet seems not to show a racial divide among children (Jackson et al. 2007).

However, the digital divide is not merely a question of access to a PC or the Internet. Other cultural factors such as language (the lack of English, for instance, among immigrants in the USA, who may need to find information about social welfare or laws) can determine the number of users. This brings us back to the question of *power* in debates about the digital era. The Internet arose as an elite, selective formation and expanded into a full-fledged techno-elitism determined by capital. Differential access, infrastructure, and costs determine the power of individuals to spend time on the Internet or to form online communities. Questions of authority, including peer review, control of resources, respectability, and policy-making capability – their *genealogy*, to be accurate – continue to

inform cybercultures. These are ultimately questions of power and are precisely the areas where subcultures like hackers make their *agency* known.

Cyberculture studies’ emphasis on the political economy of ICTs pays attention to issues of power and justice, the social agenda, and the political consequences of ICTs. Cyberculture studies calls attention to the raced, gendered, and classed nature of the “information

AGENCY

Agency is the capacity of individuals to make choices to alter the course of their lives, and to implement those choices. Agency in social theory is the cornerstone of identity and rights, where the demand for rights is the demand for individuals to be able to pursue their goals, ambitions, and aims without hindrance.

revolution,” the effects of this revolution on different sectors of society, and the question of power that determines the course of the revolution.

E-Governance

A key element in the digital divide debate is that of e-governance. Enthusiasts of digital democracy argue that the expansion of the Internet and digital resources will enhance civic participation, communications between citizens and the state, and the state’s responses to society. E-governance includes increased public services ranging from community health care to civil servants’ responses to requests for local consultations. Where face-to-face meetings are difficult and expensive to arrange, networked cultures can fruitfully enable such interactions in cyberspace. Government and public service websites offer information about official processes, often for free. Research organizations have collated data from various countries and found that the UK and USA possess the highest number of government webbed operations (Cyberspace Policy Research Group 2001).

The two key aims and principles in cases of e-governance are “informational transparency” and “communication interactivity” (Norris 2001: 119–120). The first describes the amount of information offered by the government, while the second describes interactions between state agencies and citizens. Online publication and availability of official reports, administrative decisions, and policy-making processes could help citizens in voting, making representations to the state, understanding policies and regulations, and perhaps even making their own interventions. It could be argued that the process of e-governance seeks to increase transparency and enhance state–citizen communication. However, the mere availability of information does *not* ensure the quality or reliability of the information supplied.

Cyberculture studies is concerned with the role of ICTs in the formation of legislation and the impact of new technologies in the realm of political participation. Proceeding from its concern with the political economy of ICTs, cyberculture studies addresses issues of empowerment, control, political uses (and abuses) of new technologies, national identities, and new ways of citizenship participation in politics and governance.

Civil Society

With their potential for greater connectivity both within the community and between the community and the state, digital technologies have been commonly understood to enhance civil society. NGOs, activists, experts, and the general public now have greater access to information and greater chances of linking together to lobby. In 1999 during the World Trade Organization (WTO) meeting in Seattle, environmentalists, activists, anti-globalization protesters, and labor unions came

together to demonstrate. The International Civil Society website provided an hourly report on the demonstrations – reports that were distributed/telecast to hundreds of NGOs worldwide. Such examples are taken to indicate a strengthening of grassroots activism.

Social movements increasingly use the Internet as a medium of communication, propaganda, and political mobilization. Citizens' forums, state feedback mechanisms, and NGOs use the Internet and digital resources to strengthen their infrastructure, responses, and public interface.

Social movements with various focal points – the environment, anti-racism, gay and lesbian rights, anti-globalization, women's empowerment – have turned to the Internet as a space where solidarities might be forged and reinforced. Listservs, online petitions, and emails have solicited funding and political support. People who might otherwise have refrained from street protests or similar expressions of political opinions swell the ranks of online petitioners. Political protests have gone online in other, more "damaging" ways – blocking and defacing government websites, for instance – in order to attract attention (an example of this is pro-Palestine hackers defacing American pro-Israel websites in 2000). More importantly, there is the possibility of globalizing the movement itself because transnational linkages between organizations and groups are helped in their processes and public outreach programs by the medium. Protest and social movements are able to transmit their ideologies, beliefs, and values to a greater number of people and over larger territories than ever before. Manuel Castells suggests that the slow erosion of traditional political formations such as the political party and the trade union has enabled loose coalitions, ad hoc assemblages, and spontaneous mobilizations to "substitute" for permanent and more organized structures (Castells 2001: 140–141).

Citizen networks in towns and cities are now able to offer greater opportunities for the community and individuals to participate in debates about issues concerning them. University networks, local community networks for senior citizens, and help groups reach out to greater numbers through the medium of their websites, help-lines, feedback mechanisms, and online discussion forums. Democratic processes of feedback, opinions, and debate are facilitated by the new ICTs, marking a whole new era for civil society and enhancing political, social, and cultural agency – from opinion dissemination to political action.

However, it should also be kept in mind that such online political action might not have a *material* effect (the protests against the WTO or the Myanmar regime, for example, did not alter the course of events). There is a risk that cybercultural resistance or activism remains at the level of the virtual, with little or no impact upon the real world. A false sense of social commitment and empowerment emerges in online political activism – putting one's digital signature to an online petition is not the same as barricading a civil servant or blockading the road to obstruct traffic in order to articulate demands. We would also do well to recognize the irony that online petitioning could lead to a *withdrawal* from the material political demonstration that attracts attention and action.

With its interest in the political economy and material bases of information technology and digital cultures, cyberculture studies explores the ways in which organizations, individuals, campaigns, and civil society in general have appropriated or resisted ICTs.

Governing Cyberspace

While the digital era may herald improved citizen–state interaction through a democratizing technology, at least in post-industrial societies, cyberculture and networks are themselves subject to governance and regulation. The “freedom” of cyberspace demands careful examination in the face of the hagiographers of “Internet culture.”

Governance concerns not simply the hardware of wires, drives, terminals, and routers but also the consequence of modes of data transfer through codes, or protocols. Protocols (Transmission Control Protocol/Internet Protocol, TCP/IP, and the Domain Name System, DNS) are the material substrate of the Internet’s distribution system and can be regulated. A protocol is defined as “a language that regulates flow, directs netspace, codes relationships, and connects life-forms” (Galloway 2004: 74).

Protocols – software rules – are about power.

With the Reston, Virginia, conference and the International Forum on the White Paper (IFWP) in 1998, mechanisms began to be put in place to regulate the “root.” The Internet Corporation for Assigned Names and Numbers (ICANN) sought what it called “technical management,” but it was in fact an organizational system that initiated “Internet governance.” ICANN, Milton Mueller emphasizes, is a new international regime formed around the Internet’s use, where technical coordination is tied to the regulation of the industry (Mueller 2002: 217–218).

Allocation of domain names and categories (.xxx such as .kids) also involves issues of authority of the root administrator, as Mueller (2002: 9) points out. Who decides whether the sites under the label .kids really are appropriate for children? Address space allocation is influenced by *technical*, *economic*, and *policy* matters such as the uniqueness of identifiers, efficiency of consumption of the resources, and disputes among assignments of names (Mueller 2002: 29).

Finally, the commercial interests of AOL or Microsoft drive and constitute the *institutional* governance of the Internet. Copyright laws, domain names, and national security concerns can result in regulation, via protocols, of the inherently uncontrollable, distributed Internet. Even search engines have their own politics and serve the interests of corporations like Microsoft or Yahoo! when they become transformed into advertising domains rather than “neutral” search mechanisms (Introna and Nissenbaum 2000; Spink and Zimmer 2008).

PROTOCOL

The set of rules that determine the allocation of Internet addresses, domain names, and servers.

Identity

Contemporary social and critical theory rejects the notion of a stable, unified, and coherent identity, instead seeing identity as the cumulative effect of a series of negotiations, differences, and discourses (Butler 1990; Hall 2000). In cyberspace identities are malleable as never before. Avatars (online identities), homepages, email IDs, and bodies are all inherently unstable. The disconnect between representation and the body (still a primary source of identity in the “real” world) is, by definition, infinite in cyberspace. Cyberspace allows one to pick an identity, to masquerade, mimic, and transcend bodily identities and interact with the world as somebody else. In a world where race, class, gender, and sexuality can become obstacles in interactions with the world, cyberspace allows one to *choose* an identity that may have nothing to do with one’s “real-life” gender or race. Critics see this as an enabling condition (Turkle 1995). It allows the closet gay to assert his identity, just as a woman can be involved in the “unfeminine” space of political discussion by masquerading as a man in relative safety. The ugly body can be (re)presented as beautiful and attractive in cyberspace because software allows individuals to choose the color of their skin, hair, and eyes as well as change their shape. They can play any role they choose because it is difficult to authenticate the identity presented in cyberspace.¹ The individual’s subjectivity exists in a dispersed state, where the boundaries of the self are no longer the body or skin (Hayles 1999: 72).

Identity in cyberspace can be *augmented* by making additions from a variety of choices. This shifting, malleable, and unstable identity in cyberspace is therefore often treated as “fluid.” Once again, cyberculture studies’ interest lies in the consequences and appropriation of new technologies.

Questions of identity must be further pared down to specific kinds of identity: racial, class, and gender. The latter forms the subject of Chapter 5 and includes sexual identities.

Race

In February 2004, *Wired* magazine’s cover showed a South Indian woman with her hand partly obscuring her face, dressed in what appeared to be bridal finery. The palm of her hand was inscribed with *mehndi*, a traditional form of bridal decoration in many parts of India. The *mehndi* were actually the text of computer code and instructions. The cover story by Daniel Pink, “The New Face of the Silicon Age,” that complemented this visual image dealt with outsourcing and how high-tech jobs were being lost to India.

The visual was accurate insofar as the demographics go: South Indians constitute a sizeable chunk of programmers in the computer industry. The racial and gendered interpretation of the employment and technological scene by *Wired* is, of course, problematic. It not only racializes and genders the technological contexts of business

process outsourcing (which is based primarily on lower wages in India: Pink writes that the Indian female programmer “could do your \$70,000-a-year job for the wages of a Taco Bell counter jockey”), but also exoticizes the “worker.” The bridal finery suggests an identity that is full of promise and potential, even as the write-up expresses a definite antagonism and anxiety (Indian programmers are described by Pink as “the cause of fear and loathing,” not only because Americans lose their jobs to them, but also, he adds, because they are forced to train these Indian software workers). This anxiety has visible cultural, social, and political consequences: organizations seeking to protect American jobs from the menace of outsourcing have sprung up (e.g., the Coalition for the Future American Worker, www.americanworker.org/), and people stand for Congress on the anti-outsourcing ticket (John Kerry, the presidential hopeful in 2004, and Mike Emmons from Florida were two such candidates).

The Internet may facilitate the construction of pseudonymous and anonymous identities. However, this kind of “transcendence” of identity has two aspects that are more problematic than a simple question of “alternate” identities.

1. *Agency*: Do minorities, the disempowered, and the marginalized wish to transcend the crucial matrix of race, community, and gender, and if they do, or are they capable of doing so?
2. *Representation*: How is race represented on the World Wide Web? This again links to issues both of power and agency. What ideologies inform the “coding” of race on the Internet? Since the Internet is a social process, cultural factors such as race are surely integral to the function, shape, and use of the technology.

There exists a fundamental paradox at the heart of cybercultures, one that fits right into the cultural studies paradigm where corporeality and materiality are central constituents of identity and power.

First, cyberspace is a “raced” medium where disembodiment, transcendence, and fluid identities are the privilege of the white race (Nakamura 2002). When the entire cyberspace universe is made up of reconstituted, simulated, immaterial copies of the “real,” where all identities are suspect, and where the difference between “original” and “copy” is blurred, there is a concomitant cultural anxiety about authenticity. That is, in times of uncertain identities, stereotypes of “authentic,” unchanging, stable “natives” or the racial Other proliferate. It is in the context of the modified, unstable posthuman that there is a simultaneous search for the recognizable Other. This recognizable Other is often the woman or the black person. People who adopt different identities in cyberspace often have recourse to established stereotypes of gender and race (Nakamura 2002: 14), and thus essentialize and commodify the native, the woman, or the black person because they constitute the unchanging Other against which whites can conduct their posthuman alterations of identity. To adapt Donna Haraway’s (1991b) formulation, the cyborged human functions as the inappropriate/d posthuman only because there are suitably appropriate(d) stereotypes – or what Nakamura (2002) terms *cybertypes*.

Second, and more worryingly in discourses of fluid identities, avatars, and disembodiment in hagiographies of the digital age (Turkle 1995), is the denial of embodiment. Real-life practices and experiences, issues of citizenship, the law, and medical science rooted in the body (the citizen is an individual *body*, the law categorizes/incarcerates individual *bodies* based on their actions, medicine treats diseased *bodies*) are very corporeal and material. Transcendence of the body is not an option for those who desperately need the body – raced, classed, gendered, sexualized: a solid, recognizable, identified body – for the sake of identity. Disembodiment becomes one more technocapitalist mode of *denying agency*. The discourses of multiple, shifting, fluid identities make absolutely no sense to people like minorities, women, or the differently abled because it is their embodiment that needs to be recognized and empowered. Online avatars, however glamorous or perfect they may be, do not erase or alleviate the problems of the offline body in an unequal society.

Finally, the matter of race does not end with the body but has a larger *material* context. It must be remembered that, genealogically speaking, the new ICTs grew out of the labor generated mostly by non-white workers in Silicon Valley. BPO works that enable global networking depend almost entirely on Asian labor (India, where I write, is a center for the BPO industry). Bill Gates is reported to have stated that Microsoft's Beijing research center is one of his company's most productive, before adding that when he met his company's ten best-performing employees, "nine of them had names I couldn't pronounce" (Weber 2006). At this point it is important to see how power operates within technological development and innovation:²

- How does Microsoft control the research and harness the efforts of Asians in Silicon Valley and its offices worldwide?
- How much of black or brown agency is "free" and how much of it is "owned" by Microsoft?

These questions are of *raced* power equations.

Companies regulate employees' lives, the acquisition of materials, the route taken by research and development, and the marketing of products. Their advertising arm also informs and influences consumer actions. Power here includes financial, social, and political power where the agency of the employee and the consumer is, at least invisibly, directed and controlled by the corporation or the state. In terms of race, the question of power is about the differentials that exist between cybertechnologies of categories such as white/non-white or First World/Third World.

Differential wages and work benefits, profit sharing, and institutional structures are *raced* structures. These are matters of power, identity, and "materials." Software programs written by Asians in Silicon Valley (by 1996 nearly half of the US government's temporary visas for high-tech workers were issued to Indians), BPO units in Indian cities, and the financial centers in First World nations, where decisions about software, copyrights, and company acquisitions are taken, constitute the *raced* social, cultural, and material contexts of cyberspace.³

If the *augmentation* of the body is the *apparatgeist* – the spirit of the apparatus (see below) – of ICTs and the digital age, this augmentation is rooted in raced and classed structures that govern the design, research, circulation, and marketing of ICTs. Cyberculture studies is alert to this raced and classed nature of the informational economy.

Class

Questions of access, class, and techno-elitism shift the focus on to more material matters such as cyberpower. Cyberpower includes discussions about the freedom to access information (and therefore the politics of access), control over the Internet and the digital domain (hence the question of governance, domain name control, and the infrastructure that produces cyberspace), rights to privacy, and elitism.

New York City has the largest concentration of fiber-optic wired buildings in the world, of which Harlem has one; South Central Los Angeles (the site of the 1990s race riots) has none (Sassen 1999: 60). The difference in digital resources and connectivity in Sub-Saharan Africa and Singapore or Finland is very real and very worrying, especially since crucial areas such as health care and finance are increasingly worked through enhanced connectivity and rapid transmission of data and resources.

Even though these differences in infrastructure are being eroded, there is a considerable demographic, class, racial, and national distinction between the wired and unwired. The distribution, working, and structure of the Internet, mobile phone, router, and .com website that the ordinary person uses is controlled by a technoclass. The high-tech domain remains firmly in the hands of the techno-elite, who are predominantly white and male. In terms of social capital, the world's consumer societies privilege gadgets, connectivity, and speed, thus bestowing higher status upon those who possess all three. Status is also, in a sense, augmented through technocriticism (Dear and Flusty 1999; Gray 2001; Rutsky 1999).

Gender and Sexualities

If identities can be reinvented in cyberspace, what consequences does this facility have for gender? How do women use ICTs for their own empowerment? And how do the new environments of information technology portray women? How do women use mobile phones? Do they use them more to stay in touch with their family and homes than for pleasure and work? Do women surf for entertainment and pleasure rather than for information alone? Do women maintain separate, disguised identities in cyberspace that allow them to escape the constraints of their bodies and gender in the real world?

To begin with, there is the key problem of *access*. How many women have access to the wired world? This question needs to be further qualified and fine-tuned by paying attention to the class and racial profiles of women who do or do not have access.

A second problem is the *role of women* in the making of technology and as instruments of technical innovation and change. Feminist critics of technology (e.g., Wajcman 1993) have pointed out that not only do women *not* have equal rights of access to high tech, they are also rarely involved with the design and research that create the technology. Social constructionists (e.g., Bijker 1995) argue that women may serve the purpose of (cheap) labor in the factory or laboratory, but they have little say in how the design is finalized and how the technology is adopted.

The third key problem is that of *representation*. Since cybercultural terms such as “matrix” (derived from the Latin *mater*, meaning “mother”), motherboards, and “jacking in” are clearly coded in gender terms, it becomes important to ask how cyberspace becomes gendered. Representations of women as “techno-tards,” sexualized beings, and passive users reinforce the gendered power equations from the real world. Feminist readings have found that stereotypes from the real world pervade even passing, camp, and drag on the Internet, thus suggesting that even cyberspace is as gendered as the real world.

Cyberfeminists therefore seek to feminize cyberspace by ensuring that the technology is appropriated for their use. Cyberfeminists seek to disturb power hierarchies by representing themselves in cyberspace, by seeking to control their online identities, and by being upfront with their sexualities. Their popular terminology – contamination, virus, contagion – suggests a disturbance within the cybercultural domain (Flanagan 2002; Gajjala 2003; Haraway 1991a/1985; Plant 1995; Sofia 1999).

As the chapters on cybersexualities and the cyber-public sphere demonstrate, cyberspace is gendered not only in terms of access but also in the ways in which women appropriate cyberspaces.

Space and Geography

Twentieth-century critical theory has been obsessed with space. Cybercultures that create alternate spaces and virtual universes, and alter our experience of spatiality and location, have, unsurprisingly, provided fertile ground for geographers and students of space. Numerous spatial metaphors have entered the discourse of cyberspace: information *highway*, electronic *neighborhood*, virtual *travelers*, *surfing* the World Wide Web, and *websites*.

Cyberspace’s apparent lack of political boundaries lends it a certain glamor and exoticism. As such, our ideas of the nation-state, which are firmly tied to matters of territoriality, have altered. Transnational activities such as global markets, television, knowledge networks, and finance (and including, unfortunately, terrorism) have made it imperative that we modify what we understand as space.

Electronic space or cyberspace is different from the lived environment in significant ways. Where the lived environment, or social space, involves structures and artifacts such as schools, homes, factories, and hospitals that provide the location for social relations, electronic space consists of pictorial, aural, and textual artifacts that enable and

mediate social relations. Cyberspace is a network of myriad electronic connections, linkages, interactions, and knowledge sharing. This is the *logic* of cyberspace – a system of random or calculated linkages, which themselves are the result of social and cultural values, beliefs, and needs. It is also a space with its own contradictions. ICTs enable us to transcend borders and spaces – we can be here and there at the same time – while *simultaneously* providing us with precise information (via GPS) about our exact location. It is, clearly, difficult to privilege virtual spaces and virtual life when the real, material, and corporeal remains the center of surveillance and possible threat. Cyberspace is a site of social relations, a process rather than a thing.

These networks could be of the market (Sassen 2005), of sociability, or of knowledge sharing (Bach and Stark 2005), but they are basically *spaces of interaction*. Hence the term “digital formation” (Latham and Sassen 2005), which gestures at this socio-culturally informed/influenced dimension of interaction as the feature that generates spaces, seems appropriate to describe cyberspace. This means that cyberspace can be subject to the same stresses, strains, and manipulation as “real” social space, since it is embedded in the social.

It is possible, as Douglas Cowan (2005) has eloquently argued, that the experience of cyberspace as another place is basically the effect of its visual representation: we believe and imagine we are in the virtual shopping mall because it *looks* like a shopping mall. Indexicality – by which we distinguish between places – is based primarily on visual cues on webpages and images. Places are organized online for us around the experiences and expectations of/in that place, where the place is the site of possible action. This possible action could also be the platform for the formation of a community.

The Internet itself possesses a geography: its *technical geography* (the telecommunications infrastructure, routers, fibre optic cable networks, transmission hardware), its *user geography* (as manifest in the distribution of users in national/regional statistics), and finally the *economic geography* of Internet production (Castells 2001: 208–224). If the first is governed by corporate houses and business ventures, mergers, and acquisitions, the second is informed by the distribution of users and the third by the profits generated, e-commerce, and technocapitalism. AOL, Microsoft, Ericsson, Nokia, and IBM, with their control over the hardware, software, routers, and, more than anything else, the labor force, concentrate the ICTs in the hands (and coffers) of conglomerates and corporations. The economic geography of the Internet is precisely this selective, metropolitan, First World corporate control over large distances, manufacturing units, peoples, and media services through regulated and carefully plotted flows of capital (Castells and Hall 1994; Wheeler et al. 2000).

We will return to the theme of the geography of cyberspace in Chapter 6.

Risk

A small icon in the corner of my Windows menu announces that my computer is now protected against 914,000 viruses. Why is it important for me to know this piece

of information about my everyday workstation? It worries me that, but for this wonderful firewall/anti-spyware/anti-virus, 914,000 possible infections, invasions, and disasters could strike my PC. On an everyday basis, I live with the risk that my hardware, software, and, consequently, wetware (me) could be invaded. Websites assure me that they are “secure” and that I can carry out financial transactions without worry.

New and faster technologies seem to augment risk. Cybercultures generate their own forms of risk: computer crashes, cybersex addictions, privacy invasion, financial fraud, and stalking, among others. Building on Ulrich Beck’s (1992) influential formulation of a “risk society,” Joost Van Loon (2002) suggests that we live in a state of anticipating risk. Risk is always *potential*, always waiting-to-happen or “becoming-real” (2002: 130), and technoscience is called upon to both conceal and reveal the risks involved (2002: 156).

In the digital age, the environment of “cybernetic space” is constituted and constructed through a process of flows and transcoding between commerce, law, media, and the military. The virtual becomes “real” only when all these elements add up. The system (hardware-software-wetware) and the environment (cybernetic space) constitute each other, where the boundaries between the two are increasingly difficult to find. This is the dialectic of the virtual and the real.

In the case of cybercultures, the risk-aversion ethos is more complicated than a mere outlining of the risk. The appearance of a computer virus poses a risk to systems. An indirect risk proceeds from this recognition: programmers, webmasters, and users send dozens of emails warning people of this potential risk, thereby adding to the load on the system. Thus, not only does the risk element – the virus – proliferate self-replicatingly through the medium, so does the process of risk warning and risk management.

Donald MacKenzie (1998), exploring computer-related accidental deaths, has found that most of the catastrophic accidents may have involved faulty human–computer interaction rather than being “pure” computer failures. MacKenzie suggests that the risks involved cannot be based on past evidence (with computers or other forms of technology) because the incidence and complexity of computerization are increasing. What is needed to assess risk, he suggests, is addressing not only the computer’s technical aspects but also the cognitive and organizational aspects of their “real-world” operation (1998: 210–212). Developments in medical informatics and medical cybercultures have given rise to their own “brands” of risk. The debate over nanotechnological particles in the USA and UK is an example of what is termed “stigmatization,” where popular science writing and fiction (the novels of Michael Crichton, especially his *Prey*, 2002, are a case in point) highlight the risks of nanotechnology. Nanotechnology represents both a highly advanced medical and engineering technology and an invisible risk because of the scale of the objects. Newspaper coverage in the UK, for instance, offered a mixture of hope at the new technology’s potential and anxiety over its side effects (Wilkinson et al. 2007). Wilkinson and colleagues prove how debates about risk are primarily about public policy and media coverage of the technology. This is

the key moment in risk culture where the social implications of any technology occupy the foreground along with the scientific component.

The Mediapolis and the Space of the Other

The Internet is a medium through which we access distant parts of the world, strangers, and our immediate circle of friends and relatives. It serves an important social and political purpose. As Roger Silverstone envisages it, the mass media is a “space of appearance” (2007: 25–55). The Other appears to us, is made known to us, only on our screens. It enables us to see difference. “Mediapolis” is the “mediated space of appearance in which the world appears and in which the world is constituted in its appearance, and through which we learn about those who are and who are not like us” (2007: 31). The screen and the media construct the world for us, even as the medium is itself constructed *by* the world.

This means that we need to ask what “versions” of the Other or the world appear on our screens. How does the Internet orient the world to us and inform our orientation to the world? This set of questions takes us, Silverstone demonstrates, into the realm of ethics; it is

because the media provide ... the frameworks ... for the appearance of the other that they, *de facto*, define the moral space within which the other appears to us, and at the same time invite (claim, constrain) an equivalent moral response from us, the audience, as a potential or actual citizen. (2007: 7)

This “moral response” turns the issue of representation into one of possible global citizenship where one is called upon to respond in certain ways to images of suffering, exploitation, and injustice.

Minority and alternative voices that manage to find expression help constitute, in Silverstone’s argument, a framework for the culture of globalization, even when the media are governed by global capital. It might enable people to be cosmopolitan – a “citizen of the world” – with the increasing shareability and accessibility of the world. The stranger, the neighbor, and the Other all appear before us.

The mediated space of appearance provides the setting where decisions and judgments are made. This marks the potential for a new civil society – or a virtual one, to turn to its synonym – where the Other is somebody we can recognize and hope to understand.

Within cyberspace studies, the question of ethics, representations, and consumption of the Other on our screens and through information is a key one.

Aesthetics

Apple’s Cube was the first computer in history to be displayed in the New York Museum of Modern Art’s “Design” section. This transformed it from a machine into

an art object with aesthetic appeal and values. Sean Cubitt (1998), David Jay Bolter and Richard Grusin (1999), and Bolter and Diane Gromala (2003) have focused on the design of the computer and specific art forms that have appropriated new media technologies.

In 2006, an anthology of essays exploring the possibilities of *aesthetic computing* appeared (Fishwick 2006), marking the beginnings perhaps of a new “project” in the interface of computer technology, aesthetics, and art. Aesthetic computing is the “application of the theory and practice of art to the field of computing” (Fishwick 2006: 6). It includes looking at the internal, mathematical structures of computing, the use of software to create art (often called “software art”), or the art of the interface. Aesthetic computing focuses on specific areas such as human–computer interaction (HCI), visualization, or discrete structures. It also includes looking at the semiotics of the computer – such as the location and design of the desktop or the arrangement of the hardware.

In terms of aesthetics and computers, computer art presents a different order of art. Computer-assisted art generates larger philosophical questions about the very *nature* of art. Since most computer artists use commercially developed software, what is the role of the individual “creator”? The computer is not simply an artist’s tool because it performs a variety of functions and expands the artist’s corporeal and mental abilities. It should therefore be treated as a creative partner of the artist (Humphries 2003: 22–24).

While computer art seems to involve a more or less direct incorporation of computers and computing into the production of art forms, a less commonly noticed dimension is the art of the computer itself. The interface – the most visible and immediate dimension of computing for the ordinary user – can be regarded as a set of *signs*. Signs, as we know, are *cultural*. The interface consists of visible graphics that are the consequence of invisible software. This interface is also, as Nike and Grabowski (2006: 62–63) emphasize, tied to our embodied existence. We perceive these objects that appear on our screen or emerge from our speakers. The interface often changes with a change in the way we operate, through our bodies, the mouse, or the pointer. That is, there is on the one hand the design and art of the “basic” interface that appears on the screen and, on the other, the changing “landscape” of the interface as we negotiate it via the cursor and clicks.

There is also the visualization – from cell biology to outer space – we see in news reports and on our screens. Visualization techniques involve a lot of computing and constitute what Stephen Wilson (2002) has termed the “information arts.”

Finally, aesthetic computing includes looking at interaction digital design. Jonas Löwgren (2006) suggests that digital materials have to be shaped in such a way that users find them “good.” Interaction design is the “shaping [of] the digital materials to create conditions for good use” (Löwgren 2006: 384). Löwgren identifies 19 use qualities of digital designs, including playability, seductivity, usefulness, surprise, fluency control/autonomy, elegance, and relevance. These are features to be accounted for and incorporated at the moment of design in order to enable and engage the user to use the interface and the program.

Cyberculture Studies

Clearly, cybercultures are a congeries of the economic, the technical, and the socio-cultural. Cybercultures involve questions of labor and finance, of political control and power, of the individual and community. Any study of cybercultures must address all aspects of the information society. In order to do so, the approach must be eclectic and multi-sited, dealing with multiple aspects of cybercultures without sacrificing any. Most studies, including introductions such as this one, are a bricolage of approaches.

Thus, while it is tempting to reduce cybercultures to Internet cultures or digital cultures, the increasing convergence of technological forms invites a more broad-based perspective. Several innovative readings of and models for approaching cybercultures have been proposed, engaging the attention of scholars in media and communication studies, cultural studies, sociology, and the humanities.

Ethnographies of Cyberspace

If the Internet is a social formation or a social process, then it follows that, like social and cultural artifacts, it can be examined ethnographically. Following Christine Hine (2000), three key areas for studying the Internet can be isolated ethnographically: travel and face-to-face interaction; text, technology, and reflexivity; and the making of ethnographic objects. The first calls for a redefining of what face-to-face interaction means. The Internet is a collection of texts, and the task of the ethnographer is to understand the meanings generated by these textual practices. Finally, the Internet must be treated as a cultural artifact that is linked to offline relationships and contexts, to situate it within larger contexts and see how the two complement each other.

Ethnographies of cyberculture, suggests Arturo Escobar (1996), need to look at the ways in which software and applications are designed as well as used, the creation of online communities and networks, the popular cultural forms of such technologies (from cyberpunk to computer games), the cultural identities that emerge in the new technospaces, and the political economy of cyberculture (especially the relationship between capitalism, global economy, and power). An instance of such an ethnography would be the London School of Economics Young People New Media project studying the use of media by young people, the “individualization” that results from this, and new forms of leisure, literacy, and sociability (see Livingstone 2003).

This book covers something of all these domains, moving across political economy, questions of the public sphere, gender and other identities, and popular cybercultural forms. In each case, it seeks to foreground questions of power, agency, and identity, both of the users and “creators” of cyberculture.

Apparatgeist Theory

James Katz and Mark Aakhus (2002) have developed a theory of *apparatgeist* to convey the logic and spirit of the new communications technology. “*Apparatgeist*,” a neologism from “apparatus” (meaning “materials needed for a purpose” and “equipment”) and the German *Geist* (meaning “spirit” or “mind”), gestures at the sense of movement, direction, and motive in any technology. It captures the individual and collective aspects of societal behavior, even as it proposes the imbrication of the cultural situation with the extant technology. The *apparatgeist* of communication technology (Katz and Aakhus are working with mobile phones and personal communications technologies (PCTs), it must be noted) is that of “perpetual contact.” Perpetual contact is its logic and its spirit, and governs the premises of design, development, and use of PCTs. It describes the logic of the very language of, say, MS Word. For instance, if one were to run a right-clicked synonym search for “contact” on MS Word, this is what turns up:

Get in touch with
Make contact with
Call
Phone
Speak to
Write to
Drop a line to

These synonyms cover the range of possible modes of communication, as MS Word and its preloaded Thesaurus perceive communication.

Katz and Aakhus suggest that there is a sociologic of perpetual contact. People have explicit reasons (form, function, costs) and implicit ones (how others perceive them, beliefs about usefulness, appropriateness) for choosing particular models and designs (2002: 309–310).

The *apparatgeist* of perpetual contact can be used productively to formulate an approach to cybercultures because it

- locates technology within the realm of social interaction;
- locates individual and cultural factors within technology;
- gestures at emotional/subjective and social/impersonal aspects of technologies of communication by foregrounding personal values, folk theories of contact, and even physical pleasure;
- emphasizes the symbolic aspects of technology by paying attention to issues of class, and social roles and structures such as the family;
- links the individual, the material, and the social realms with the hardware–software elements of technology.

This last point takes us back to the social basis for technology by suggesting that the logic of perpetual contact is a sociologic that is rooted in social formations,

structures, and therefore ideologies and politics. However, it must be noted that Katz and Aakhus (2002) suggest *one* “spirit” or logic here. As we know, “cybercultures” are a composite of many things. They are a world medium of communication (Rasmussen 2002) and a storage and memory device. They mark the beginning, for some critics (Silverstone 2007), of a global “mediapolis.” Their key features include participation, collectivity, and connectivity (Thacker 2004b). The Internet, perhaps the most significant component of popular cybercultures, is ageographical and supposedly democratic. It can also serve as a useful instrument of technocapitalism through surveillance and databanks.

The inherent complexity and myriad forms of cybercultures means that there cannot be any one spirit that informs and influences the domain. Thus, I propose, in addition to the *apparategeist* of perpetual contact, a second one: that of *augmentation*.

Cybercultures constitute a significant condition of augmentation. This “spirit” applies to the design of cybercultural devices – from iPhones that seek to *improve* reception to search engines that pursue *faster* and *more efficient* searches to *faster* computers. *Greater* storage, *enhanced* security, *more efficacious* medical technologies are the keywords in the *culture of augmentation* facilitated by the new technologies. *Greater* participation and connectivity among a *larger* number of people – more and more of the Other appears on screens today than ever before – drive the Internet as a medium of communication, even as the state and the technocapitalist corporate body seek greater control over the medium (and this is the contradictory movement within the culture of augmentation: on the one hand the drive toward wider dissemination and greater freedom; on the other, the move for greater control and regulation). Wired and altered body states seek to *augment* the human in the move towards a posthuman condition.

“Perpetual contact” and “augmentation” capture the spirit and logic of contemporary cybercultures.

Cultural Studies

Cyberculture is perhaps best “read” through the lens of cultural studies. The definition of cultural studies given by Cary Nelson and colleagues serves as a starting point here: cultural studies is “committed to the study of the entire range of a society’s arts, beliefs, institutions, and communicative practices” (1992: 4). A society’s culture is taken to mean both a way of life and the set of practices, institutions, and structures of power that constantly negotiate meanings, where, through processes of inclusion and exclusion, some meanings, groups, and “texts” are valorized at the expense of others. Cultural studies involves a *political* reading of structures of power that influence, and often determine, meaning production in a culture, that harness the agency of others (including machines) for their ends, focusing on groups that are disempowered in cultural practices. Cultural studies, therefore, is interested in meanings (of poems, architecture, politics) and the structures in which meanings emerge (government, “literature,” academia, industry). More importantly, it focuses on the way

meanings are generated in everyday life through mass cultural forms (films, blogs, cookery shows) and social interaction rather than within high culture.

Cultural studies foregrounds four basic themes: agency, genealogy, identity and power, and social space and corporeality (Slack and Wise 2006: 143).

Agency involves questions of the capability of individuals, communities, or objects to assert their will and effect changes.

Genealogy is the location of a particular technology or cultural artifact within specific histories, discourses, and power struggles. It involves questions of need, sentiment, power structures such as the law or medicine, financial profits, and symbolic power. As we have seen above, the new media and cybercultures have emerged within multiple contexts that provide their genealogy rather than a simple linearity of “progress.” The Internet began life as a defense strategy planned and constructed by the US government in the eventuality of a nuclear war. Questions of control, therefore, continue to remain central to the so-called democratizing technology of cybercultures, where protocols of data transfer, censorship, and surveillance seek to deploy the Internet as systems of control rather than freedom.

Identity is seen less as an essential or core “self” than as the product of social relations situated at the intersection of multiple discourses. Identities are seen as *constructs* rather than as immanent. They are negotiated rather than self-evident. In this view, technology is never neutral because it involves political questions about identity. Thus, questions about technoculture from a cultural studies perspective would be: How does the mobile phone or the Internet help construct an identity? Does technology influence communities’ visibility and therefore validate identity?

Finally, a cultural studies approach to technology treats it as a contingent *social agent* that influences the use of space. This involves addressing three kinds of space: public “built” space, social space, and the body’s space. The increasing surveillance of public space alters the experience of that space, and involves issues of rights of access and security. Social space includes the realm of politics; in cybercultures, this must be taken to include issues of electronic voting, opinion expression, and state feedback mechanisms, all of which contribute to the social and the political. NGOs and activists use ICTs to promote specific causes, often subversive to mainstream state politics, thus transforming cyberspace into a tool of political counter-culture. The use of Internet technologies and digital devices radically alters the way humans use their bodies, augment them, and in specific ways transcend the body’s problems and deficiencies. Devices that augment and enhance abilities enable users to exercise greater agency via the body. Penetrative scans, neurological implants, and surgical interventions that rely on transmission of data from and into the body, from the level of the skin to the DNA, are also factors that inform agency. Thus corporeal space is a crucial dimension in analyzing the cultures of technology in the digital age.

For cultural studies, “cybercultures” is thus an articulation between three crucial elements or actors: hardware (machines, computers, cable networks), software (programs), and wetware (humans). Extending this proposition via the cultural studies approach, “cybercultures” throughout this book is also the articulation between

these three elements and others such as gender, race, symbolic and cultural forms, economy, politics, and identity: in other words, the “ecology” of digital culture. To separate the digital from the nondigital (say, the material) is to miss the crucial fact that digitization is inextricably linked to the social, cultural, and material. Hence Robert Latham and Saskia Sassen’s term “sociodigitization” for the process of digitization, where activities and their histories in a *social* domain are transformed into codes and databases (Latham and Sassen 2005: 3, 16–18). Sociodigitization extends the interaction at the level of the household or the workplace into the digital realm. Thus, the logic of social formations – which, for cultural studies, will involve questions of class, race, gender, power relations and practices – informs the nature and shape of any “digital formation” too.

There are “real,” physical elements or actors in the cybercultural network, but there are also more fluid, unquantifiable elements such as sentiment (online romances), economics (unequal access even in wired societies), and politics (control over domains or software via stringent copyright laws). Cyberculture is the articulation between hardware, software, and wetware, all three of which are *deeply embedded in the social and historical contexts of the technology*.

Cybercultures – which, it is worth emphasizing, include mobile phone culture, Internet culture, biomedical cultures, digital networks of corporate bodies, the state and NGOs, financial flows, military appropriations and entertainment – inform the identity of individuals or communities, determine profits and political responses from the state, and alter the body for a different or better lifestyle.

Thus cybercultures here are a *rhizome*, an *assemblage* of flows where multiple elements are connected, in contingent and dispersed ways, and all of which are embedded in the social and historical contexts of the technology. Cultural and material contexts influence telecommunications networks and cyberspace, and vice versa, in a kind of “recursive interaction” (Graham 1998: 174). That is, one cannot treat cybercultures of the new ICTs as flows without locating these flows in actual material, cultural, and social conditions. In other words, digital formations are mixes of computer-centered network technologies and social contexts. We will come back to this nature of digital formation in our discussion of cybernetic space below.

It is not the technology or a particular element that focuses our attention, but the *connections* of that technology or element with (and within) others. In short, it is not possible to see cybercultures as simply ICTs without reference to questions of:

- power (financial, political, cultural, agential);
- identity (gender, racial, individual/community, sexual);
- ideology (the politics of technocapitalism);
- culture (art, sport/games).

Cyberculture studies takes into account these questions as it explores everyday digital cultures. However, this book does *not* restrict itself to popular Internet studies but also looks at macro-issues such as the governance of cyberspace and the political economy of digital formations. While recognizing that these questions may not be

resolved, it argues that such issues should be examined. It is also possible that, like the rhizome it explores, the trajectories of this book are also contingent, shifting, aporetic, and multiple.

The emphasis on social agency and the politics of representation and meaning in a cultural studies approach to cybercultures means that we do not treat the virtual world as a separate entity, or the digital network as a separate space. Cyberspace and cyberculture are always rooted in the material, the fleshly, and the concrete. Cyberculture's technologies are social, and cyberspace, like material space, is made up of a series of social processes and interactions.

Cybercultures, this book argues, are recursively linked to, perpetually rooted in, return to, repeat, and reflect the material. Problems of agency, identity, and power from the domains of everyday material life are also reflected in, extended into, and inform cyberspace and cybercultures. Hence, throughout this book, these concerns will keep appearing – not unlike those pop-ups!

Thus we need to see computer games, online communities, electronic voting, or information databases of the body as always looping back into or connecting with the bodies that make and experience these “virtual,” “immaterial” spaces. Dissociation of the virtual from the material runs the risk of depoliticizing both its creation and its consequences. This means being alert not only to the cultural politics of the production, design, and dissemination of new media forms, but also to the ways in which people have used and subverted these forms. That is, while there is a politics (and profit) involved in the production of cybercultures, there is also a politics in their consumption. Protest movements that use ICTs, tactical media, feminist cyberpunk, and hacking patches in computer games are often unintentional appropriations of digital cultures. If power relations govern the production of cybercultures (in terms of design, funding for research, production, copyright, and monopolistic control), then power is also something the users possess and deploy in their appropriations of cybercultures. As we shall see in later chapters, power and ideology remain the cornerstone of analysis in cyberculture studies because cybercultures affect the lives of people, and affect is often a question of power (cultural, economic, political, and social).

In keeping with the breathtaking diversity of cybercultures, this book's theoretical approaches are manifold. They include feminist and poststructuralist theories of bodies and discourses, popular culture studies, political economy studies, and communication theory, among others.⁴

This book treats cybercultures as a “formation” and the Internet – the keystone of the cybercultural arch – as a cultural artifact that informs and is informed by multiple contexts such as political economy, popular art, discourses of emancipation, and bioethics, even as it extends earlier forms of communication, sociability, surveillance, and archiving. It looks at Internet cultures at a *multiplicity of sites* – all of which use PCs, software, connections, and the Internet to varying degrees and in differing ways – including, among others, homepages, blogs, fictional accounts of cyberspace, media reports, design (such as the desktop), and art forms that work with computers.

This chapter has outlined the key contexts, terms, and approaches in/to cyberculture studies. It has suggested that cyberculture is not one but many. There are many sites, designs, and applications of cyberculture, which is therefore not a coherent entity but a series of processes, uses, applications, negotiations, and structures. What we have argued, therefore, is that there is not a cyberculture but cybercultures.

This chapter has proposed the book's thesis that cybercultures cannot be treated as simply virtual worlds created by computers but as a formation linked to, rooted in, affected by, and impacting upon the material and the real. This formation is the consequence of many structures, artifacts, systems (economic, legal, political, social, and cultural), ideas, and ideologies coming together: political economy, information, global finance, capitalism, the logic of the market, the structures of cables and wires, monitors, and SIM cards. It has argued that cybercultures must be treated as embedded in and connected to the real and the material world, where questions of economy, race/class/gender identities, politics, and power are crucial.

It has situated cybercultures within the contexts of the information society and globalization. It has provided a brief sketch of the key issues in cyberculture studies: globalization and technocapitalism, materiality and corporeality, the digital divide, e-governance, civil society, governing cyberspace, identity, race, class, gender and sexuality, space and geography, risk, the mediapolis and the space of the Other, and aesthetics. Finally, it has outlined the key approaches to cybercultures: ethnographies of cyberspace, *apparatgeist* theory, and cultural studies.

NOTES

- 1 A different situation arises when online relationships and identities shift to real time. People playing roles in cyberspace reveal themselves to be somebody else. This feature of cyberspace has come in for criticism and is a source of anxiety, especially with pedophiliacs and rapists masquerading as different people and meeting potential victims offline.
- 2 Following Anthony Giddens (1979) I treat power here as relational, as the transformative ability of an individual/group/institution to utilize the agency of others – human, animal, and machine – to further one's ends.
- 3 Incidentally, Asian Americans cannot be treated as disadvantaged. Rather, they are deemed to be privileged users of the Net and are targeted as markets for web-based commerce. Yet even here a differential exists – they are treated as targets for *commerce* rather than as empowered communities (Nakamura 2005).
- 4 David Bell, in his introduction to the second edition of *The Cybercultures Reader* (2007: 3–4), lists 19 parameters within which we can read cybercultures!