"When you think of a title for a book, you are forced to think of something short and evocative, like, well, 'The Virtual Community,' even though a more accurate title might be: 'People who use computers to communicate, form friendships that sometimes form the basis of communities, but you have to be careful to not mistake the tool for the task and think that just writing words on a screen is the same thing as real community.'" - HLR

We know the rules of community; we know the healing effect of community in terms of individual lives. If we could somehow find a way across the bridge of our knowledge, would not these same rules have a healing effect upon our world? We human beings have often been referred to as social animals. But we are not yet community creatures. We are impelled to relate with each other for our survival. But we do not yet relate with the inclusivity, realism, self-awareness, vulnerability, commitment, openness, freedom, equality, and love of genuine community. It is clearly no longer enough to be simply social animals, babbling together at cocktail parties and brawling with each other in business and over boundaries. It is our task--our essential, central, crucial task--to transform ourselves from mere social creatures into community creatures. It is the only way that human evolution will be able to proceed.

M. Scott Peck
*The Different Drum: Community-Making and Peace*

**Introduction**

"Daddy is saying `Holy moly!' to his computer again!"

Those words have become a family code for the way my virtual community has infiltrated our real world. My seven-year-old daughter knows that her father congregates with a family of invisible friends who seem to gather in his computer. Sometimes he talks to them, even if nobody else can see them. And she knows that
these invisible friends sometimes show up in the flesh, materializing from the next block or the other side of the planet.

Since the summer of 1985, for an average of two hours a day, seven days a week, I've been plugging my personal computer into my telephone and making contact with the WELL (Whole Earth 'Lectronic Link) -- a computer conferencing system that enables people around the world to carry on public conversations and exchange private electronic mail (e-mail). The idea of a community accessible only via my computer screen sounded cold to me at first, but I learned quickly that people can feel passionately about e-mail and computer conferences. I've become one of them. I care about these people I met through my computer, and I care deeply about the future of the medium that enables us to assemble.

I'm not alone in this emotional attachment to an apparently bloodless technological ritual. Millions of people on every continent also participate in the computer-mediated social groups known as virtual communities, and this population is growing fast. Finding the WELL was like discovering a cozy little world that had been flourishing without me, hidden within the walls of my house; an entire cast of characters welcomed me to the troupe with great merriment as soon as I found the secret door. Like others who fell into the WELL, I soon discovered that I was audience, performer, and scriptwriter, along with my companions, in an ongoing improvisation. A full-scale subculture was growing on the other side of my telephone jack, and they invited me to help create something new.

The virtual village of a few hundred people I stumbled upon in 1985 grew to eight thousand by 1993. It became clear to me during the first months of that history that I was participating in the self-design of a new kind of culture. I watched the community's social contracts stretch and change as the people who discovered and started building the WELL in its first year or two were joined by so many others. Norms were established, challenged, changed, reestablished, rechallenged, in a kind of speeded-up social evolution.

The WELL felt like an authentic community to me from the start because it was grounded in my everyday physical world. WELLites who don't live within driving distance of the San Francisco Bay area are constrained in their ability to participate in the local networks of face-to-face acquaintances. By now, I've attended real-life WELL marriages, WELL births, and even a WELL funeral. (The phrase "in real life" pops up so often in virtual communities that regulars abbreviate it to IRL.) I can't count the parties and outings where the invisible personae who first acted out their parts in the debates and melodramas on my computer screen later manifested in front of me in the physical world in the form of real people, with faces, bodies, and voices.

I remember the first time I walked into a room full of people IRL who knew many intimate details of my history and whose own stories I knew very well. Three months after I joined, I went to my first WELL party at the home of one of the WELL's online moderators. I looked around at the room full of strangers when I walked in. It was one of the oddest sensations of my life. I had contended with these people, shot the invisible breeze around the electronic watercooler, shared alliances and formed bonds, fallen off my chair laughing with them, become livid with anger at some of them. But there wasn't a recognizable face in the house. I had never seen them...
before.

My flesh-and-blood family long ago grew accustomed to the way I sit in my home office early in the morning and late at night, chuckling and cursing, sometimes crying, about words I read on the computer screen. It might have looked to my daughter as if I were alone at my desk the night she caught me chortling online, but from my point of view I was in living contact with old and new friends, strangers and colleagues:

I was in the Parenting conference on the WELL, participating in an informational and emotional support group for a friend who just learned his son was diagnosed with leukemia.

I was in MicroMUSE, a role-playing fantasy game of the twenty-fourth century (and science education medium in disguise), interacting with students and professors who know me only as "Pollenator."

I was in TWICS, a bicultural community in Tokyo; CIX, a community in London; CalvaCom, a community in Paris; and Usenet, a collection of hundreds of different discussions that travel around the world via electronic mail to millions of participants in dozens of countries.

I was browsing through Supreme Court decisions, in search of information that could help me debunk an opponent's claims in a political debate elsewhere on the Net, or I was retrieving this morning's satellite images of weather over the Pacific.

I was following an eyewitness report from Moscow during the coup attempt, or China during the Tiananmen Square incident, or Israel and Kuwait during the Gulf War, passed directly from citizen to citizen through an ad hoc network patched together from cheap computers and ordinary telephone lines, cutting across normal geographic and political boundaries by piggybacking on the global communications infrastructure.

I was monitoring a rambling real-time dialogue among people whose bodies were scattered across three continents, a global bull session that seems to blend wit and sophomore locker-room talk via Internet Relay Chat (IRC), a medium that combines the features of conversation and writing. IRC has accumulated an obsessive subculture of its own among undergraduates by the thousands from Adelaide to Arabia.

People in virtual communities use words on screens to exchange pleasantries and argue, engage in intellectual discourse, conduct commerce, exchange knowledge, share emotional support, make plans, brainstorm, gossip, feud, fall in love, find friends and lose them, play games, flirt, create a little high art and a lot of idle talk. People in virtual communities do just about everything people do in real life, but we leave our bodies behind. You can’t kiss anybody and nobody can punch you in the nose, but a lot can happen within those boundaries. To the millions who have been drawn into it, the richness and vitality of computer-linked cultures is attractive, even addictive.

There is no such thing as a single, monolithic, online subculture; it's more like an ecosystem of subcultures, some frivolous, others serious. The cutting edge of
scientific discourse is migrating to virtual communities, where you can read the electronic pre-preprinted reports of molecular biologists and cognitive scientists. At the same time, activists and educational reformers are using the same medium as a political tool. You can use virtual communities to find a date, sell a lawnmower, publish a novel, conduct a meeting.

Some people use virtual communities as a form of psychotherapy. Others, such as the most addicted players of Minitel in France or Multi-User Dungeons (MUDs) on the international networks, spend eighty hours a week or more pretending they are someone else, living a life that does not exist outside a computer. Because MUDs not only are susceptible to pathologically obsessive use by some people but also create a strain on computer and communication resources, MUDding has been banned at universities such as Amherst and on the entire continent of Australia.

Scientists, students, librarians, artists, organizers, and escapists aren't the only people who have taken to the new medium. The U.S. senator who campaigned for years for the construction of a National Research and Education Network that could host the virtual communities of the future is now vice president of the United States. As of June 1993, the White House and Congress have e-mail addresses.

Most people who get their news from conventional media have been unaware of the wildly varied assortment of new cultures that have evolved in the world's computer networks over the past ten years. Most people who have not yet used these new media remain unaware of how profoundly the social, political, and scientific experiments under way today via computer networks could change all our lives in the near future.

I have written this book to help inform a wider population about the potential importance of cyberspace to political liberties and the ways virtual communities are likely to change our experience of the real world, as individuals and communities. Although I am enthusiastic about the liberating potentials of computer-mediated communications, I try to keep my eyes open for the pitfalls of mixing technology and human relationships. I hope my reports from the outposts and headquarters of this new kind of social habitation, and the stories of the people I've met in cyberspace, will bring to life the cultural, political, and ethical implications of virtual communities both for my fellow explorers of cyberspace and for those who never heard of it before.

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 important, political leverage. But the technology will not in itself fulfill that 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. The odds are always good that big power and big money will find a way to control access to virtual communities; big power and big money always found ways to control new communications media when they emerged in the past. The Net is still out of control in fundamental ways, but it might not stay that way for long. What we know and do now is important because it is still possible for people around the world to make sure this new sphere of vital human discourse remains open to the citizens of the planet before the political and
economic big boys seize it, censor it, meter it, and sell it back to us.

The potential social leverage comes from the power that ordinary citizens gain when they know how to connect two previously independent, mature, highly decentralized technologies: It took billions of dollars and decades to develop cheap personal computers. It took billions of dollars and more than a century to wire up the worldwide telecommunication network. With the right knowledge, and not too much of it, a ten-year-old kid today can plug these two vast, powerful, expensively developed technologies together for a few hundred dollars and instantly obtain a bully pulpit, the Library of Congress, and a world full of potential coconspirators.

Computers and the switched telecommunication networks that also carry our telephone calls constitute the technical foundation of computer-mediated communications (CMC). The technicalities of CMC, how bits of computer data move over wires and are reassembled as computer files at their destinations, are invisible and irrelevant to most people who use it, except when the technicalities restrict their access to CMC services. The important thing to keep in mind is that the worldwide, interconnected telecommunication network that we use to make telephone calls in Manhattan and Madagascar can also be used to connect computers together at a distance, and you don’t have to be an engineer to do it.

*The Net* is an informal term for the loosely interconnected computer networks that use CMC technology to link people around the world into public discussions.

*Virtual communities* are social aggregations that emerge from the Net when enough people carry on those public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace.

*Cyberspace,* originally a term from William Gibson's science-fiction novel *Neuromancer,* is the name some people use for the conceptual space where words, human relationships, data, wealth, and power are manifested by people using CMC technology.

Although spatial imagery and a sense of place help convey the experience of dwelling in a virtual community, biological imagery is often more appropriate to describe the way cyberculture changes. In terms of the way the whole system is propagating and evolving, think of cyberspace as a social petri dish, the Net as the agar medium, and virtual communities, in all their diversity, as the colonies of microorganisms that grow in petri dishes. Each of the small colonies of microorganisms--the communities on the Net--is a social experiment that nobody planned but that is happening nevertheless.

We now know something about the ways previous generations of communications technologies changed the way people lived. We need to understand why and how so many social experiments are coevolving today with the prototypes of the newest communications technologies. My direct observations of online behavior around the world over the past ten years have led me to conclude that whenever CMC technology becomes available to people anywhere, they inevitably build virtual communities with it, just as microorganisms inevitably create colonies.

I suspect that one of the explanations for this phenomenon is the hunger for
community that grows in the breasts of people around the world as more and more informal public spaces disappear from our real lives. I also suspect that these new media attract colonies of enthusiasts because CMC enables people to do things with each other in new ways, and to do altogether new kinds of things—just as telegraphs, telephones, and televisions did.

Because of its potential influence on so many people's beliefs and perceptions, the future of the Net is connected to the future of community, democracy, education, science, and intellectual life—some of the human institutions people hold most dear, whether or not they know or care about the future of computer technology. The future of the Net has become too important to leave to specialists and special interests. As it influences the lives of a growing number of people, more and more citizens must contribute to the dialogue about the way public funds are applied to the development of the Net, and we must join our voices to the debate about the way it should be administered. We need a clear citizens' vision of the way the Net ought to grow, a firm idea of the kind of media environment we would like to see in the future. If we do not develop such a vision for ourselves, the future will be shaped for us by large commercial and political powerholders.

The Net is so widespread and anarchic today because of the way its main sources converged in the 1980s, after years of independent, apparently unrelated development, using different technologies and involving different populations of participants. The technical and social convergences were fated, but not widely foreseen, by the late 1970s.

The wide-area CMC networks that span continents and join together thousands of smaller networks are a spinoff of American military research. The first computer network, ARPANET, was created in the 1970s so that Department of Defense-sponsored researchers could operate different computers at a distance; computer data, not person-to-person messages, were the intended content of the network, which handily happened to serve just as easily as a conduit for words. The fundamental technical idea on which ARPANET was based came from RAND, the think tank in Santa Monica that did a lot of work with top-secret thermonuclear war scenarios; ARPANET grew out of an older RAND scheme for a communication, command, and control network that could survive nuclear attack by having no central control.

**Closed World?** Computer conferencing emerged, also somewhat unexpectedly, as a tool for using the communication capacities of the networks to build social relationships across barriers of space and time. A continuing theme throughout the history of CMC is the way people adapt technologies designed for one purpose to suit their own, very different, communication needs. And the most profound technological changes have come from the fringes and subcultures, not the orthodoxy of the computer industry or academic computer science. The programmers who created the first computer network installed electronic mail features; electronic mail wasn't the reason ARPANET was designed, but it was an easy thing to include once ARPANET existed. Then, in a similar, ad hoc, do-it-yourself manner, computer conferencing grew out of the needs of U.S. policymakers to develop a communications medium for dispersed decision making. Although the first computer conferencing experiments were precipitated by the U.S. government's wage-price freeze of the 1970s and the consequent need to disseminate
up-to-date information from a large number of geographically dispersed local headquarters, computer conferencing was quickly adapted to commercial, scientific, and social discourse.

The hobbyists who interconnect personal computers via telephone lines to make computer bulletin-board systems, known as BBSs, have home-grown their part of the Net, a true grassroots use of technology. Hundreds of thousands of people around the world piggyback legally on the telecom network via personal computers and ordinary telephone lines. The most important technical attribute of networked BBSs is that it is an extremely hard network to kill--just as the RAND planners had hoped. Information can take so many alternative routes when one of the nodes of the network is removed that the Net is almost immortally flexible. It is this flexibility that CMC telecom pioneer John Gilmore referred to when he said, "The Net interprets censorship as damage and routes around it." This way of passing information and communication around a network as a distributed resource with no central control manifested in the rapid growth of the anarchic global conversation known as Usenet. This invention of distributed conversation that flows around obstacles--a grassroots adaptation of a technology originally designed as a doomsday weapon--might turn out to be as important in the long run as the hardware and software inventions that made it possible.

The big hardwired networks spend a lot more money to create high-speed information conduits between high-capacity computing nodes. Internet, today's U.S. government-sponsored successor to ARPANET, is growing in every dimension at an astonishing pace. These "data superhighways" use special telecommunication lines and other equipment to send very large amounts of information throughout the network at very high speeds. ARPANET started around twenty years ago with roughly one thousand users, and now Internet is approaching ten million users.

The portable computer on my desk is hundreds of times less expensive and thousands of times more powerful than ARPANET's first nodes. The fiber-optic backbone of the current Internet communicates information millions of times faster than the first ARPANET. Everything about Internet has grown like a bacterial colony--the raw technical capacity to send information, the different ways people use it, and the number of users. The Internet population has grown by 15 percent a month for the past several years. John Quarterman, whose book The Matrix is a thick guide to the world's computer networks, estimates that there are nine hundred different networks worldwide today, not counting the more than ten thousand networks already linked by the Internet "network of networks."

Real grassroots, the kind that grow in the ground, are a self-similar branching structure, a network of networks. Each grass seed grows a branching set of roots, and then many more smaller roots grow off those; the roots of each grass plant interconnect physically with the roots of adjacent plants, as any gardener who has tried to uproot a lawn has learned. There is a grassroots element to the Net that was not, until very recently, involved with all the high-tech, top-secret doings that led to ARPANET--the BBSers.

The population of the grassroots part of the Net, the citizen-operated BBSs, has been growing explosively as a self-financed movement of enthusiasts, without the benefit of Department of Defense funding. A BBS is the simplest, cheapest infrastructure
for CMC: you run special software, often available inexpensively, on a personal computer, and use a device known as a modem to plug the computer into your regular telephone line. The modem converts computer-readable information into audible beeps and boops that can travel over the same telephone wires that carry your voice; another modem at the other end decodes the beeps and boops into computer-readable bits and bytes. The BBS turns the bits and bytes into human-readable text. Other people use their computers to call your BBS, leave and retrieve messages stored in your personal computer, and you have a virtual community growing in your bedroom. As the system operator (sysop) of the BBS, you contribute part of your computer's memory and make sure your computer is plugged into the telephone; the participants pay for their own communication costs.

*Boardwatch* magazine estimates that sixty thousand BBSs operated in the United States alone in 1993, fourteen years after the first BBSs opened in Chicago and California. Each BBS supports a population of a dozen to several hundred, or even thousands, of individual participants. There are religious BBSs of every denomination, sex BBSs of every proclivity, political BBSs from all parts of the spectrum, outlaw BBSs, law enforcement BBSs, BBSs for the disabled, for educators, for kids, for cults, for nonprofit organizations--a list of the different flavors of special-interest BBSs is dozens of pages long. The BBS culture has spread from the United States to Japan, Europe, Central and South America.

Each BBS started out as a small island community of a few people who dialed into a number in their area code; by their nature, like a small-wattage radio station, BBSs are localized. But that's changing, too. Just as several different technologies converged over the past ten years to create CMC--a new medium with properties of its own--several different online social structures are in the process of converging and creating a kind of international culture with properties of its own.

Technical bridges are connecting the grassroots part of the network with the military-industrial parts of the network. The programmers who built the Net in the first place, the scholars who have been using it to exchange knowledge, the scientists who have been using it for research, are being joined by all those hobbyists with their bedroom and garage BBSs. Special "gateway" computers can link entire networks by automatically translating communications from the mechanical languages used in one network to the languages (known as protocols) used in another network. In recent years, the heretofore separate groups of Internet and BBS pioneers worked together to gateway the more than ten thousand computers of the worldwide FidoNet, the first network of small, private BBSs, with Internet's millions of people and tens of thousands of more powerful computers.

The Net and computer conferencing systems are converging too, as medium-size computer conferencing communities like the WELL join Internet. When the WELL upgraded to a high-speed connection to Internet, it became not just a community-in-progress but a gateway to a wider realm, the worldwide Net-at-large. Suddenly, the isolated archipelagos of a few hundred or a few thousand people are becoming part of an integrated entity. The small virtual communities still exist, like yeast in a rapidly rising loaf, but increasingly they are part of an overarching culture, similar to the way the United States became an overarching culture after the telegraph and telephone linked the states.
The WELL is a small town, but now there is a doorway in that town that opens onto the blooming, buzzing confusion of the Net, an entity with properties altogether different from the virtual villages of a few years ago. I have good friends now all over the world who I never would have met without the mediation of the Net. A large circle of Net acquaintances can make an enormous difference in your experience when you travel to a foreign culture. Wherever I've traveled physically in recent years, I've found ready-made communities that I met online months before I traveled; our mutual enthusiasm for virtual communities served as a bridge, time and again, to people whose language and customs differ significantly from those I know well in California.

I routinely meet people and get to know them months or years before I see them--one of the ways my world today is a different world, with different friends and different concerns, from the world I experienced in premodern days. The places I visit in my mind, and the people I communicate with from one moment to the next, are entirely different from the content of my thoughts or the state of my circle of friends before I started dabbling in virtual communities. One minute I'm involved in the minutiae of local matters such as planning next week's bridge game, and the next minute I'm part of a debate raging in seven countries. Not only do I inhabit my virtual communities; to the degree that I carry around their conversations in my head and begin to mix it up with them in real life, my virtual communities also inhabit my life. I've been colonized; my sense of family at the most fundamental level has been virtualized.

I've seen variations of the same virtualization of community that happened to me hitting other virtual groups of a few hundred or a few thousand, in Paris and London and Tokyo. Entire cities are coming online. Santa Monica, California, and Cleveland, Ohio, were among the first of a growing number of American cities that have initiated municipal CMC systems. Santa Monica's system has an active conference to discuss the problems of the city's homeless that involves heavy input from homeless Santa Monica citizens who use public terminals. This system has an electronic link with COARA, a similar regional system in a remote province of Japan. Biwa-Net, in the Kyoto area, is gatewayed to a sister city in Pennsylvania. The Net is only beginning to wake up to itself.

Watching a particular virtual community change over a period of time has something of the intellectual thrill of do-it-yourself anthropology, and some of the garden-variety voyeurism of eavesdropping on an endless amateur soap opera where there is no boundary separating the audience from the cast. For the price of a telephone call, you can take part in any kind of vicarious melodrama you can dream of; as a form of escape entertainment, the Minitel addicts in Paris and the MUDders of Internet and the obsessive IRC participants on college campuses everywhere have proved that CMC has a future as a serious marketplace for meterable interactive fantasies.

CMC might become the next great escape medium, in the tradition of radio serials, Saturday matinees, soap operas--which means that the new medium will be in some way a conduit for and reflector of our cultural codes, our social subconscious, our images of who "we" might be, just as previous media have been. There are other serious reasons that ordinary nontechnical citizens need to know something about this new medium and its social impact. Something big is afoot, and the final shape has not been determined.
In the United States, the Clinton administration is taking measures to amplify the Net's technical capabilities and availability manyfold via the National Research and Education Network. France, with the world's largest national information utility, Minitel, and Japan, with its stake in future telecommunications industries, have their own visions of the future. Albert Gore's 1991 bill, the High Performance Computing Act, signed into law by President Bush, outlined Gore's vision for "highways of the mind" to be stimulated by federal research-and-development expenditures as a national intellectual resource and carried to the citizens by private enterprise. The Clinton-Gore administration has used the example of the ARPA (Advanced Research Projects Agency) venture of the 1960s and 1970s that produced the Net and the foundations of personal computing as an example of the way they see government and the private sector interacting in regard to future communications technologies.

In the private sector, telecommunication companies, television networks, computer companies, cable companies, and newspapers in the United States, Europe, and Japan are jockeying for position in the nascent "home interactive information services industry." Corporations are investing hundreds of millions of dollars in the infrastructure for new media they hope will make them billions of dollars. Every flavor of technological futurist, from Alvin Toffler and John Naisbitt to Peter Drucker and George Gilder, base utopian hopes on "the information age" as a techno-fix for social problems. Yet little is known about the impact these newest media might have on our daily lives, our minds, our families, even the future of democracy.

CMC has the potential to change our lives on three different, but strongly interinfluential, levels. First, as individual human beings, we have perceptions, thoughts, and personalities (already shaped by other communications technologies) that are affected by the ways we use the medium and the ways it uses us. At this fundamental level, CMC appeals to us as mortal organisms with certain intellectual, physical, and emotional needs. Young people around the world have different communication proclivities from their pre-McLuhanized elders. MTV, for example, caters to an aesthetic sensibility that is closely tuned to the vocabulary of television's fast cuts, visually arresting images, and special effects. Now, some of those people around the world who were born in the television era and grew up in the cellular telephone era are beginning to migrate to CMC spaces that better fit their new ways of experiencing the world. There is a vocabulary to CMC, too, now emerging from millions and millions of individual online interactions. That vocabulary reflects something about the ways human personalities are changing in the age of media saturation.

The second level of possible CMC-triggered change is the level of person-to-person interaction where relationships, friendships, and communities happen. CMC technology offers a new capability of "many to many" communication, but the way such a capability will or will not be used in the future might depend on the way we, the first people who are using it, succeed or fail in applying it to our lives. Those of us who are brought into contact with each other by means of CMC technology find ourselves challenged by this many-to-many capability--challenged to consider whether it is possible for us to build some kind of community together.
The question of community is central to realms beyond the abstract networks of CMC technology. Some commentators, such as Bellah et al. (Habits of the Heart, The Good Society), have focused on the need for rebuilding community in the face of America's loss of a sense of a social commons.

Social psychologists, sociologists, and historians have developed useful tools for asking questions about human group interaction. Different communities of interpretation, from anthropology to economics, have different criteria for studying whether a group of people is a community. In trying to apply traditional analysis of community behavior to the kinds of interactions emerging from the Net, I have adopted a schema proposed by Marc Smith, a graduate student in sociology at the University of California at Los Angeles, who has been doing his fieldwork in the WELL and the Net. Smith focuses on the concept of "collective goods." Every cooperative group of people exists in the face of a competitive world because that group of people recognizes there is something valuable that they can gain only by banding together. Looking for a group's collective goods is a way of looking for the elements that bind isolated individuals into a community.

The three kinds of collective goods that Smith proposes as the social glue that binds the WELL into something resembling a community are social network capital, knowledge capital, and communion. Social network capital is what happened when I found a ready-made community in Tokyo, even though I had never been there in the flesh. Knowledge capital is what I found in the WELL when I asked questions of the community as an online brain trust representing a highly varied accumulation of expertise. And communion is what we found in the Parenting conference, when Phil's and Jay's children were sick, and the rest of us used our words to support them.

The third level of possible change in our lives, the political, derives from the middle, social level, for politics is always a combination of communications and physical power, and the role of communications media among the citizenry is particularly important in the politics of democratic societies. The idea of modern representative democracy as it was first conceived by Enlightenment philosophers included a recognition of a living web of citizen-to-citizen communications known as civil society or the public sphere. Although elections are the most visible fundamental characteristics of democratic societies, those elections are assumed to be supported by discussions among citizens at all levels of society about issues of importance to the nation.

If a government is to rule according to the consent of the governed, the effectiveness of that government is heavily influenced by how much the governed know about the issues that affect them. The mass-media-dominated public sphere today is where the governed now get knowledge; the problem is that commercial mass media, led by broadcast television, have polluted with barrages of flashy, phony, often violent imagery a public sphere that once included a large component of reading, writing, and rational discourse. For the early centuries of American history, until the telegraph made it possible to create what we know as news and sell the readers of newspapers to advertisers, the public sphere did rely on an astonishingly literate population. Neil Postman, in his book about the way television has changed the nature of public discourse, Amusing Ourselves to Death, notes that Thomas Paine's Common Sense sold three hundred thousand copies in five months in 1775. Contemporary observers have documented and analyzed the way mass media ("one
to many" media) have "commoditized" the public sphere, substituting slick public relations for genuine debate and packaging both issues and candidates like other consumer products.

The political significance of CMC lies in its capacity to challenge the existing political hierarchy's monopoly on powerful communications media, and perhaps thus revitalize citizen-based democracy. The way image-rich, sound-bite-based commercial media have co-opted political discourse among citizens is part of a political problem that communications technologies have posed for democracy for decades. The way the number of owners or telecommunication channels is narrowing to a tiny elite, while the reach and power of the media they own expand, is a converging threat to citizens. Which scenario seems more conducive to democracy, which to totalitarian rule: a world in which a few people control communications technology that can be used to manipulate the beliefs of billions, or a world in which every citizen can broadcast to every other citizen?

Ben Bagdikian's often-quoted prediction from *The Media Monopoly* is that by the turn of the century "five to ten corporate giants will control most of the world's important newspapers, magazines, books, broadcast stations, movies, recordings and videocassettes." These new media lords possess immense power to determine which information most people receive about the world, and I suspect they are not likely to encourage their privately owned and controlled networks to be the willing conduits for all the kinds of information that unfettered citizens and nongovernmental organizations tend to disseminate. The activist solution to this dilemma has been to use CMC to create alternative planetary information networks. The distributed nature of the telecommunications network, coupled with the availability of affordable computers, makes it possible to piggyback alternate networks on the mainstream infrastructure.

We temporarily have access to a tool that could bring conviviality and understanding into our lives and might help revitalize the public sphere. The same tool, improperly controlled and wielded, could become an instrument of tyranny. The vision of a citizen-designed, citizen-controlled worldwide communications network is a version of technological utopianism that could be called the vision of "the electronic agora." In the original democracy, Athens, the agora was the marketplace, and more--it was where citizens met to talk, gossip, argue, size each other up, find the weak spots in political ideas by debating about them. But another kind of vision could apply to the use of the Net in the wrong ways, a shadow vision of a less utopian kind of place--the Panopticon.

Panopticon was the name for an ultimately effective prison, seriously proposed in eighteenth-century Britain by Jeremy Bentham. A combination of architecture and optics makes it possible in Bentham's scheme for a single guard to see every prisoner, and for no prisoner to see anything else; the effect is that all prisoners act as if they were under surveillance at all times. Contemporary social critic Michel Foucault, in *Discipline and Punish*, claimed that the machinery of the worldwide communications network constitutes a kind of camouflaged Panopticon; citizens of the world brought into their homes, along with each other, the prying ears of the state. The cables that bring information into our homes today are technically capable of bringing information out of our homes, instantly transmitted to interested others. Tomorrow's version of Panoptic machinery could make very effective use of the
same communications infrastructure that enables one-room schoolhouses in Montana to communicate with MIT professors, and enables citizens to disseminate news and organize resistance to totalitarian rule. With so much of our intimate data and more and more of our private behavior moving into cyberspace, the potential for totalitarian abuse of that information web is significant and the cautions of the critics are worth a careful hearing.

The wise revolutionary keeps an eye on the dark side of the changes he or she would initiate. Enthusiasts who believe in the humanitarian potential of virtual communities, especially those of us who speak of electronic democracy as a potential application of the medium, are well advised to consider the shadow potential of the same media. We should not forget that intellectuals and journalists of the 1950s hailed the advent of the greatest educational medium in history--television.

Because of its potential to change us as humans, as communities, as democracies, we need to try to understand the nature of CMC, cyberspace, and virtual communities in every important context--politically, economically, socially, cognitively. Each different perspective reveals something that the other perspectives do not reveal. Each different discipline fails to see something that another discipline sees very well. We need to think together here, across boundaries of academic discipline, industrial affiliation, nation, if we hope to understand and thus perhaps regain control of the way human communities are being transformed by communications technologies.

We can't do this solely as dispassionate observers, although there is certainly a strong need for the detached assessment of social science. Community is a matter of emotions as well as a thing of reason and data. Some of the most important learning will always have to be done by jumping into one corner or another of cyberspace, living there, and getting up to your elbows in the problems that virtual communities face.

I care about what happens in cyberspace, and to our freedoms in cyberspace, because I dwell there part of the time. The author's voice as a citizen and veteran of virtual community-building is one of the points of view presented in this book: I'm part of the story I'm describing, speaking as both native informant and as uncredentialed social scientist. Because of the paucity of first-person source material describing the way it feels to live in cyberspace, I believe it is valuable to include my perspective as participant as well as observer. In some places, like the WELL, I speak from extensive experience; in many of the places we need to examine in order to understand the Net, I am almost as new to the territory as those who never heard about cyberspace before. Ultimately, if you want to form your own opinions, you need to pick up a good beginner's guidebook and plunge into the Net for yourself. It is possible, however, to paint a kind of word-picture, necessarily somewhat sketchy, of the varieties of life to be found on the Net.

Much of this book is a tour of widening circles of virtual communities as they exist today. I believe that most citizens of democratic societies, given access to clearly presented information about the state of the Net, will make wise decisions about how the Net ought to be governed. But it is important to look in more than one corner and see through more than one set of lenses. Before we can discuss in any depth the way CMC technology is changing us as human beings, as communities,
and as democracies, we need to know something about the people and places that make the Net what it is.

Our journey through the raucous immensity of Usenet, the subcultures of the MUDs and IRC channels, the BBSs, mailing lists, and e-journals, starts with a glimpse over my shoulder at the WELL, the place where cyberspace started for me. The ways I've witnessed people in the virtual community I know best build value, help each other through hard times, solve (and fail to solve) vexing interpersonal problems together, offer a model--undoubtedly not an infallible one--of the kinds of social changes that virtual communities can make in real lives on a modestly local scale. Some knowledge of how people in a small virtual community behave will help prevent vertigo and give you tools for comparison when we zoom out to the larger metropolitan areas of cyberspace. Some aspects of life in a small community have to be abandoned when you move to an online metropolis; the fundamentals of human nature, however, always scale up.

read on to

**Chapter One:**
The Heart of the WELL

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