

The aim in the end is to see what is at stake, what is possible, and what limits there are on what is possible. The argument is not against regulation; the argument is against a particularly narrow, and useless, conception of regulation. Once we have a better view of how regulation works, we will see more clearly how we might choose the space cyberspace should be.

S I X

c y b e r s p a c e s

CYBERSPACE IS NOT A PLACE. IT IS MANY PLACES. THE CHARACTER OF THESE MANY places is not identical. They instead differ in ways that are fundamental. These differences come in part from differences in the people who populate these places. But demographics alone won't explain the variance. Something more is going on.

Here is a test. Read the following passage, and ask yourself whether the description rings true for you:

I believe virtual communities promise to restore to Americans at the end of the twentieth century what many of us feel was lost in the decades at the beginning of the century—a stable sense of community, of place. Ask those who've been members of such a virtual community, and they'll tell you that what happens there is more than an exchange of electronic impulses in the wires. It's not just virtual barn raising. . . . It's also the comfort from others that a man like Phil Catalfo of the WELL can experience when he's up late at night caring for a child suffering from leukemia, and he logs on to the WELL and pours out his anguish and fears. People really do care for each other and fall in love over the Net, just as they do in geographic communities. And that "virtual" connectedness is a real sign of hope in a nation that's increasingly anxious about the fragmentation of public life and the polarization of interest groups and the alienation of urban existence.¹

There are two sorts of reactions to talk like this. To those who have been in this place for some time, such talk is extremely familiar. These people have been on nets from the start. They moved to the Internet from more isolated communities—from a local BBS (bulletin board service), or as Mike Godwin (the author of the passage) likes to put it, from a "tony" address like "The WELL." For them the Net is a space for conversation, connections, and exchange, a wildly promising location for making life in real space different.

But if you are a recent immigrant to this "space" (the old-timers call you "newbies"), you are likely to be impatient with talk like this. When people talk about "community," about special ways to connect, or about the amazing power of this space to alter lives, you are likely to ask, "What is this idea of cyberspace as a place?" For newbies, those who have simply e-mailed or surfed the World Wide Web, the "community" of the Net is an odd sort of mysticism. How can anyone think of these pages full of advertisements and spinning Mickey Mouse icons as a community, or even as a space? To the sober newbie, this just sounds like hype high on java.²

Newbies are the silent majority of today's Net.³ However much we romanticize the old days when the Net was a place for conversation and exchange, this is not its function for most of its users now. Certainly, the world is into "chat," but even ignoring the large portion of that space devoted to sex, chat is not the stuff the WELL was made of. Most people do not understand what chat or a MOO really is—maybe they have heard talk about them, but they do not understand what they are about. They do not understand what life in the community of the WELL, or a MOO, is really like.

In its feel, cyberspace has changed.⁴ How it looks, what you can do there, how you are connected there—all this has changed. Why it has changed is a complicated question—a complete answer to which I can't provide. Cyberspace has changed in part because the people—who they are, what their interests are—have changed, and in part because the capabilities provided by the space have changed.

But part of the change has to do with the space itself. Communities, exchange, and conversation all flourish in a certain type of space; they are extinguished in a different type of space.⁵ My hope is to illuminate the differences between these two environments.

The next sections describe different cyber-places. The aim is an intuition about how to think through the differences that we observe. This intuition, in turn, will help us see something about where cyberspace is moving.

THE VALUES OF A SPACE

Spaces have values.⁶ They express these values through the practices or lives that they enable or disable. Differently constituted spaces enable and disable differently. This is the first idea that we must make plain. Here is an example.

At the start of the Internet, communication was through text. Media such as USENET newsgroups, Internet Relay Chat, and e-mail all confined exchange to text—to words on a screen, typed by a person (or so one thought).

The reason for this limitation is fairly obvious: the bandwidth of early Net life was very thin. In an environment where most users connected at 1,200 baud, if they were lucky, graphics and streaming video would have taken an unbearably long time to download, if they downloaded at all. What was needed was an efficient mode of communication—and text is one of the most efficient.⁷

Most think of this fact about the early Net as a limitation. Technically, it was. But this technical description does not exhaust its normative description as an architecture that made possible a certain kind of life. From this perspective, limitations can be features; they can enable as well as disable. And this particular limitation enabled classes of people who were disabled in real-space life.

Think about three such classes—the blind, the deaf, and the "ugly."* In real space these people face an extraordinary array of constraints on their ability to communicate. The blind person in real space is constantly confronted with architectures that presume he can see; he bears an extraordinary cost in retrofitting real-space architectures so that this presumption is not totally exclusionary. The deaf person in real space confronts architectures that presume she can hear; she too bears an extraordinary cost in retrofitting these architectures. The "ugly" person in real space (think of a bar or a social club) confronts architectures of social norms that make his appearance a barrier to a certain sort of intimacy. He endures extraordinary suffering in conforming to these architectures.

In real space these three groups are confronted with architectures that disable them relative to "the rest of us." But in cyberspace, in its first iteration, they did not.

The blind could easily implement speech programs that read the (by definition machine-readable) text and could respond by typing. Other people on the Net would have no way of knowing that the person typing the message was blind, unless he claimed to be. The blind were equal to the seeing.

The same with the deaf. There was no need to hear anything in this early Internet. For the first time many of the deaf could have conversations, or exchanges, in which the most salient feature was *not* that the person was deaf. The deaf were equal to the hearing.

And the same with the "ugly." Because your appearance was not transmitted with every exchange, the unattractive could have an intimate conversation with others that was not automatically defined by what they looked like. They could flirt or play or be sexual without their bodies (in an extremely underappreciated sense) getting in the way. This first version of the Net made these people equal to "the beautiful." In a virtual chat room, stunning eyes, a captivating smile or impressive biceps don't do it. Wit, engagement, and articulateness do.

The architecture of this original cyberspace gave these groups something that they did not have in real space. More generally, it changed the mix of benefits and burdens that people faced—the literate were enabled and the attractive disabled relative to real space. Architectures produced these enablings and disablings.

*It is an important fact about us that it is awkward even to use such a word—"ugly"—as if it describes objective features of humans. I acknowledge the complexity here, and the importance of the escape from humiliation that some parts of society give and other parts of society do not. But we cannot assume away the burdens that the unattractive suffer relative to the less unattractive. My claim is not that these are at the level of starvation, or death; my claim is not about their significance. My only aim is to link what I believe is a disadvantage to features of a space.

Early Net

I've told this story as if it matters only to those who in real space are "disabled." But of course, "disabled" is relative.⁸ It is more accurate to say that the space changes the meaning of the enabled. A friend—a strikingly beautiful and powerful woman, married, and successful—described for me why she spends hours in political chat spaces, arguing with others about all sorts of political topics:

You don't understand what it's like to be me. You have lived your whole life in a world where your words are taken for their meaning; where what you say is heard for what it says. I've never had a space, before this space, where my words were taken for what they meant. Always, before, they were words of "this babe," or "wife," or "mother." I could never speak as I. But here, I am as I speak.

Clearly, the space is enabling her, even though one would not have said that in real space she was "disabled."⁹

Over time, as bandwidth has expanded, this architecture has changed. So has the mix of benefits and burdens changed. When graphics entered the Net through the World Wide Web, the blind became "blind" again. As sound files or speech in Avatar spaces have been created, the deaf have become "deaf" again. And as chat rooms have started segregating into spaces where videocams capture real images of the people chatting, and spaces where there is just text, the video-unappealing are again unappealing.¹⁰ As the architectures change, definitions of who is "disabled" change as well.

My point is not to argue that the Net should not change—though of course, if it can change in ways that minimize the disabling effect of sound and graphics, then it no doubt should.¹¹ However important, my point is not really about the "disabled" at all. I use this example simply to highlight a link—between these structures of code and the world this code enables. Codes constitute cyberspaces; spaces enable and disable individuals and groups. The selections about code are therefore in part a selection about who, what, and, most important, what ways of life will be enabled and disabled.

CYBER-PLACES

We can build on this point by looking at a number of communities that are constituted differently and that constitute different forms of life, and by considering what makes these differences possible.

America Online

America Online (AOL) is an online service provider—the largest in the world with some twelve million subscribers in 1998.¹² With twice the population of Massachusetts (at least), AOL describes itself as a "community." A large community perhaps, but a community nonetheless.

This community has a constitution—not in the sense of a written document (though there is that as well), but in the sense of a way of life that defines life for those who live there. Its founding vision was that community would make this place sing. So from its start, AOL's emphasis has been on enabling people to interact, through chat, bulletin boards, and e-mail. Earlier providers, obsessed with providing content or advertising, limited or ignored the possibilities for interaction and exchange, but AOL saw interaction as the stuff that makes cyberspace different. It built itself on building a community, establishing itself as a place where people could say what they wanted.¹³

This interaction is governed by the rules of the place. Some of these rules are formal, others customary. Among the formal are express terms to which every member subscribes upon joining AOL. These terms regulate a wide range of behaviors in this space, including the behavior of AOL members anywhere on the Internet.¹⁴

Increasingly, these rules have become controversial. AOL policies have been called "Big Brother" practices. Arguments that get heated produce exchanges that are rude. But rudeness, or offensiveness, is not permitted in AOL's community. When these exchanges are expunged, claims of "censorship" arise.¹⁵

My aim here, however, is not to criticize these rules of netiquette. AOL also has other rules that regulate AOL members—rules expressed not in contracts but rather through the very architectures of the space. These rules constitute the most important part of AOL's constitution, yet they are probably the part considered last when we think about what regulates behavior in this cyber-place.

So consider some examples:

As a member of AOL you can be any one of five people. This is just one amazing feature of the space. When you start an account on AOL, you have the right to establish up to five identities, through five different "screen names" that in effect establish five different accounts. Some users, of course, use the five screen names to give other family members access to AOL. But not everyone uses an AOL account like this. Think about the single woman, signing up for her first AOL account. AOL gives her up to five identities that she can define as she wishes—five different personae she can use in cyberspace.

What does that mean? A screen name is just a label for identifying who you are when you are on the system. It need not (indeed, often cannot) be your own name. If your screen name is "StrayCat," then people can reach you by sending e-mail to "straycat@aol.com." If you are online, people can try to talk to you by paging StrayCat on the AOL system; a dialogue would then appear on your screen asking whether you want to talk to the person who paged you. If you enter a chat room, the list of residents there will add you as "StrayCat."

But who is StrayCat? Here is a second dimension of control. StrayCat is who StrayCat says she is. She can choose to define herself as no one at all. If she chooses to place a description of herself in the members' directory, that description can be as complete or incomplete as she wishes. It can be true or false, explicit or vague, inviting or not. A member stumbling across StrayCat, then, in a chat room set up for

OUT
JAMES

stamp collectors could get her profile and read that StrayCat lives in Cleveland and is single and female. What happens next is anyone's guess.

Yet this need only be one of StrayCat's five identities. Let's say there is a different persona that StrayCat likes to have when she wanders through chat rooms. She can then select another screen name and define it in the directory as she wishes. Perhaps when StrayCat is having a serious discussion in a newsgroup or political list she prefers to speak as herself. She could then select a screen name close to her own name and define it according to who she really is. At other times StrayCat may like to pretend to be a man—engaging in virtual cross-dressing, and all that might bring with it. One of her screen names could then be a man's. And so on. The point is the multiplicity that AOL allows, and the freedom this multiplicity permits.

No one except StrayCat needs to know which screen names are hers. She is not required to publish the full list of her identities, and no one can find out who she is (unless she breaks the rules). (After revealing to the U.S. Navy the name of one of its members so that the Navy could prosecute the person for being a homosexual, AOL adopted a very strict privacy policy that promises never to allow a similar transgression to happen again.)¹⁶

So in AOL you are given a fantastic power of pseudonymity that the "code writers" of real space simply do not give. You could, of course, try in real space to live the same range of multiple lives, and to the extent that these lives are not incompatible or inconsistent, you could quite often get away with it. For instance, you could be a Cubs fan during the summer and an opera buff during the winter. But unless you take extraordinary steps to hide your identity, in real space you are always tied back to you. You cannot simply define a different character; you must make it, and more important (and difficult), you must sustain its separation from your original identity.

That is a first feature of the constitution of AOL—a feature constituted by its code. A second is tied to speech—what you can say, and where.

Within the limits of decency, and so long as you are in the proper place, you can say what you want on AOL. But beyond these limits, speech on AOL is constrained in a more interesting way. Not the constraint of rules. My point instead is about the range of permissible speech governed by the character of the potential audience. There are places in AOL where people can gather; there are places where people can go and read messages posted by others. But there is no space where everyone gathers at one time, or even a space that everyone must sooner or later pass through. There is no public space where you could address all members of AOL. There is no town hall or town meeting where people can complain in public and have their complaints heard by others. There is no space large enough for citizens to create a riot. The owners of AOL, however, can speak to all. Steve Case, the "town mayor," writes "chatty" letters to the members.¹⁷ AOL advertises to all its members and can send everyone an e-mail. But only the owners and those they authorize can do so. The rest of the members of AOL can speak to crowds only where they notice a crowd. And never to a crowd greater than twenty-three.

This is another feature of the constitution of the space that AOL is, and it too is a feature defined by code. That only twenty-three people can be in a chat room at once is a choice of the code engineers. While their reasons could be many, the effect is clear. One can't imagine easily exciting members of AOL into public action. One can't imagine easily picketing the latest pricing policy. There are places to go to complain, but you have to take the trouble to go there yourself. There is no place where members can complain en masse.

Real space is different in this respect. Much of free speech law is devoted to preserving spaces where dissent can occur—spaces that can be noticed, and must be confronted, by nondissenting citizens.¹⁸ In real space there are places where people can gather, places where they can leaflet. People have a right to the sidewalks, public streets, and other traditional public forums. They may go there and talk about issues of public import or otherwise say whatever they want. Constitutional law in real space protects the right of the passionate and the weird to get in the face of the rest. But no such design is built into AOL.¹⁹

This is not to romanticize the power of real-space public forums. We have become such a nonpolitical society that if you actually exercised this constitutionally protected right, people would think you a nut. If you stood on a street corner and attacked the latest tax proposal in Congress, your friends would be likely to worry—and not about the tax proposal. There are exceptions—events can make salient the need for protest—but in the main, though real space has fewer controls through code on who can speak where, it has many more controls through norms on what people can say where. Perhaps in the end real space is much like AOL—the effective space for public speech is limited, and often unimportant. That may well be. But my aim here is to identify the feature and to isolate what is responsible for it. And once again, it turns out to be a feature built into the code.

A third feature of AOL's constitution also comes from its code. This is traceability. While members are within the exclusive AOL content area (in other words, when they're not using AOL as a gateway to the Internet), AOL can (and no doubt does) trace your activities and collect information about them. What files you download, what areas you frequent, who your "buddies" are—all this is available to AOL. These data are extremely valuable; they help AOL structure its space to fit customer demand. But gaining the ability to collect these data required a design decision. This decision too was part of the constitution that is AOL—again, a part constituted by its code. It is a decision that gives some but not others the power to watch.

AOL is not exclusive in this enabling capacity. It shares the power. One wonderful feature of the online space is something called "buddy lists." Add someone to your buddy list, and when he comes online you hear the sound of a creaking door and are notified that he is online. (The "buddy" need not know he is being watched, though he can, if he knows, block the watching.) If that person goes into a chat area and you "locate" him, you will be told in what chat area he is. This power, given to ordinary users, can have complicated consequences. (Imagine sitting at work with

your buddy feature turned on, watching your spouse come online, enter a chat area, and—you get the point.) This ability to monitor is built into the space. Individuals can turn it off, at least for a single watcher, but only if they know about it and think to change it.

Consider one final feature of the constitution of AOL, closely linked to the last: commerce. In AOL you can buy things. You can buy things and download them, or buy things and have them sent to your home. When you buy, you buy with a screen name. And when you buy with a screen name, AOL knows (even if no one else does) just who you are. It knows who you are, it knows where you live in real space, and most important, it knows your credit card number and the security it provides.

AOL knows who you are—this is a feature of its design. All your behavior on AOL is watched; all of it is monitored and tracked back to you as a user. AOL promises not to collect data about you individually, but it certainly collects data about you as part of a collective. And with this collective, and the link it provides back to you, AOL is a space that can better, and more efficiently, sell to you.

These four features mark AOL space as different from other places in cyberspace. It is easier for AOL to identify who you are, and harder for individuals to find out who you are; easier for AOL to speak to all its “citizens” as it wishes, and harder for dissidents to organize against AOL’s views about how things ought to be; easier for AOL to market, and harder for individuals to hide. AOL is a different normative world; it can create this different world because it is in control of the architecture of that world. Members in that space face, in a sense, a different set of laws of nature; AOL makes those laws.

My aim is not to criticize the creation of this world or to say that it is improper. No doubt AOL makes promises to its members that are designed to allay some of the concern that this control creates, and no doubt if the place became oppressive, the market would provide plenty of alternatives.

Rather my objective is to impart a sense of what makes AOL the way it is. It is not just written rules; it is not just custom; it is not just the supply and demand of a knowing consuming public. What makes AOL is in large part the structure of the space. You enter AOL and you *find* it to be a certain universe. This space is constituted by its code. You can resist this code—you can resist how you find it, just as you can resist cold weather by putting on a sweater. But you are not going to change how it is. You do not have the power to change AOL’s code, and there is no place where you could rally AOL members to force AOL to change the code. You live life in AOL subject to its terms; if you do not like them, you go elsewhere.

These features of the AOL space have important implications for how it is regulated. Imagine there is a problem on AOL that AOL wants to stop. It wants to prevent or at least control a certain behavior. What tools does AOL have?

First, it has all the tools that any club, fraternity, or “community” might have. It can announce rules for its members (and AOL certainly does). Or it can try to stigmatize the behavior, to use the norms of the community to help regulate the problem. This AOL does as well. Alternatively, if the problem comes from the overuse of

a particular resource, then the managers at AOL can price that resource differently, exacting a tax to reduce its usage, or a different price for those who use it too much.

But AOL has something more at hand. If AOL does not like a certain behavior, then in at least some cases it can regulate that behavior by changing its architecture. If AOL is trying to control indecent language, it can write routines that monitor language usage; if there is improper mixing between adults and kids, AOL can track who is talking to whom; if there is a virus problem caused by people uploading infected files, it can run the files automatically through virus checkers; if there is stalking or harassing or threatening behavior, AOL can block the connection between any two individuals.

In short, AOL can deal with certain types of problems by changing its code. Because the universe that AOL members know (while in AOL) is defined by this code, AOL can use the code to regulate its members.

Think a bit about the power I am describing—and again, I am not complaining or criticizing or questioning this power, only describing it. As you move through this space that AOL defines—entering a chat area, posting a message to a bulletin board, entering a discussion space, sending instant-messages to another person, watching or following other people, uploading or downloading files from sites, turning to certain channels and reading certain articles, or obsessively paging through a space looking for pictures of a certain actor or actress—as you do any of these things, AOL is, in an important sense, *there*. It is as if the system gives you a space suit that you use to navigate the space but that simultaneously monitors your every move.

In principle, the potential for control is extraordinary. Imagine AOL slowing the response time for a certain kind of service it wants to discourage, or channeling the surfer through ads that it wants customers to see, or identifying patterns of behavior that its monitors would watch, based on the fear that people with patterns like X are typically dangerous to people of type Y. I do not think AOL engages in activities like these, and I am not even saying that there would be anything wrong if it did. But it is important to note that the potential for control in this “community” is unlimited—not in the sense that AOL could make life miserable (since people would then leave), but in the sense that it has a regulatory tool that others, in both real space and other cyberspaces, do not. Its power is, of course, checked by the market, but it has a tool of control that others in the market, but outside cyberspace, do not have.

In principle, then, AOL must choose. Every time AOL decides that it wants to regulate a certain kind of behavior, it must select from among at least four modalities—rules, norms, prices, or architecture. And when selecting one of these four modalities, selecting architecture as a regulator will often make the most sense.

✦ Counsel Connect

David Johnson began Counsel Connect (CC) in 1992 as an online lawyers’ cooperative. The idea was simple: give subscribers access to each other; let them engage in conversations with each other; and through this access and these conversations,

value would be created. Lawyers would give and take work; they would contribute ideas as they found ideas in the space. A different kind of law practice would emerge—less insular, less exclusive, more broadly based.

I thought the idea amazing, though many thought it nuts. For a time the system was carried by Lexis; in 1996 it was sold to American Lawyer Media, L.P.; in 1997 it migrated to the Internet and remains there today. It boasts thousands of subscribers, though it is hard to know how many of them contribute to the discussion online. Many no doubt simply watch the discussions of others, perhaps linking three or four discussion groups of their particular interest, plus a few of more general interest.

This is how the more interesting feature of the space is designed: legal topics are divided into discussion groups, with each group led by a discussion leader. The leader is not a moderator; he or she has no power to cancel a post. The leader is there to inspire conversation—to induce others to speak by being encouraging or provocative.

There are today some ninety groups in this space. The poster of a particular message may have it removed, but if the poster does not remove it, it stays—at first in the list of topics being discussed, and later in an archive that can be searched by any member.

Members pay a fee to join and get an account with their real name on it. Postings use members' real names, and anyone wondering who someone is can simply link to a directory. Members of CC must be members of the bar, unless they are journalists. Others have no right to access; the community here is exclusive.

Postings in the space look very much like postings in a USENET newsgroup. A thread can be started by anyone, and replies to a thread are appended to the end. Because messages do not move off the system, you can easily read from the start of a thread to its end. The whole conversation, not just a snippet, is preserved to be read.

These features of CC space were obviously designed. The architects of the space chose to enable certain features and to disable others. We can list here some of the effects of these choices.

First, there is the effect of being required to use your own name. You are more likely to think before speaking and to be careful about being right before saying something definitive. You are constrained by the community, which will judge what you say, and in this community you cannot escape from being linked to what you have said. Responsibility is a consequence of this architecture, but so is a certain inhibition. Does a senior partner at a leading law firm really want to ask a question that will announce his ignorance about a certain area of law? Names cannot be changed to protect the ignorant, so they will often simply not speak.

Second, there is an effect from forcing all discussion into threads. Postings are kept together; a question is asked, and the discussion begins from the question. If you want to contribute to this discussion, you must first read through the other postings before responding. Of course, this is not a technical requirement—you certainly have a choice not to read. But if you do not read through the entire thread,

you could well be repeating what another has said and so reveal that you are speaking without listening. Again, the use of real names ties members' behavior to the norms of the community.

Third, there is the effect of reputation: the reputation you build in this space is based on the kind of advice you give. Your reputation survives any particular post and is, of course, affected by any subsequent posts. These posts are archived and searchable. If you say one thing about topic X and then the opposite later on, you are at least open to a question about consistency.

Fourth, there is the effect of tying reputation to a real name in a real community of professionals. Misbehaving here matters elsewhere. CC thus gets the benefit of that community—it gets the benefit, that is, of the norms of a particular community. These norms might support relatively productive community behavior—more productive, that is, than the behavior of a group whose members are fundamentally mixed. They might also support punishing those who deviate from appropriate behavior. Thus, CC gets the benefit of community sanction to control improper behavior, whereas AOL must rely on its own content police to ensure that people stay properly on topic.

We can describe the world of CC that these features constitute in two different ways, just as we can describe the world AOL constitutes in two different ways. One is the life that CC's features make possible—highly dialogic and engaged, but monitored and with consequences. The other is the regulability by the manager of the life that goes on in the CC space. And here we can see a significant difference between this space and AOL.

CC can use the norms of a community to regulate more effectively than AOL can. CC benefits from the norms of the legal community; it knows that any misbehavior will be sanctioned by that community. There is, of course, less "behavior" in this space than in AOL (you do fewer things here), but such as it is, CC behavior is quite significantly regulated by the reputations of members and the consequences of using their real names.

These differences together have an effect on CC's ability to regulate its members. They enable a regulation through modalities other than code. They make behavior in CC more regulable by norms than behavior in AOL is. CC in turn may have less control than AOL does (since the controlling norms are those of the legal community), but it also bears less of the burden of regulating its members' behavior. Limiting the population, making members' behavior public, tying them to their real names—these are the tools of self-regulation in this virtual space.

But CC is like AOL in an important way. Neither is a democracy. Management in both cases controls what will happen in the space—again, not without constraint, for the market is an important constraint. But in neither place do "the people" have the power to control what goes on. Perhaps they do, indirectly, in CC more than AOL, since it is the norms of "the people" that regulate behavior in CC. But these norms cannot be used against CC directly. The decisions of CC and AOL managers

may be affected by market forces—individuals can exit, competitors can steal customers away. But voting doesn't direct where either CC or AOL goes.

That's not the case with the next cyber-place. At least, not anymore.

L a m d a M O O

LamdaMOO is a virtual reality. It is a text-based virtual reality. People from across the world (today close to six thousand of them) link to this space and interact in ways that the space permits. The reality is the product of this interaction. Individuals can participate in the construction of this reality—sometimes for upwards of eighty hours a week. For some this interaction is the most sustained human contact of their entire lives. For most it is a kind of interaction unmatched by anything else they know.

In the main, people just talk here. But it is not the talk of an AOL chat room. The talk in a MUD is in the service of construction—of constructing a character and a community. You interact in part by talking, and this talking is tied to a name. This name, and the memories of what it has done, live in the space, and over time people in the space come to know the person by what these memories recall.

The life within these MUDs differ. Elizabeth Reid describes two different "styles"²⁰—social-style MUD and an adventure or game-style MUD. Social MUDs are simply online communities where people talk and build characters or elements for the MUD. Adventure MUDs are games, with (virtual) prizes or power to be won through the deployment of skill in capturing resources or defeating an enemy. In either context, the communities survive a particular interaction. They become virtual clubs, though with different purposes. Members build reputations through their behavior in these clubs.

You get a character simply by joining the MOO (though in LamdaMOO the waiting list for a character extends over many months). When you join the space, you define the character you will have. At least, you define certain features of your character. You select a name and a gender (no gender is an option as well) and describe your character. Some descriptions are quite ordinary (Johnny Manhattan is "tall and thin, pale as string cheese, wearing a neighborhood hat").²¹ Others, however, are quite extraordinary. (Legba, for instance, is a Haitian trickster spirit of indeterminate gender, brown-skinned and wearing an expensive pearl gray suit, top hat, and dark glasses.)²²

Julian Dibbell broke the story of this space to the nonvirtual world in an article in the *Village Voice*.²³ The story that was the focus of Dibbell's article involved a character called Mr. Bungle who, it turns out, was actually a group of NYU undergraduates sharing this single identity. Bungle entered a room late one evening and found a group of characters well known in that space. The full story cannot be told any better than Dibbell tells it. For our purposes, the facts will be enough.²⁴

Bungle had a special sort of power. By earning special standing in the LamdaMOO community, he had "voodoo" power; he could take over the voices and actions of other characters and make them appear to do things they did not really do. This Bungle did that night to a group of women and at least one person of ambigui-

ous gender. He invoked this power, in this public space, and took over the voices of these people. Once they were in his control, Bungle "raped" these women, violently and sadistically, and made it seem as if they enjoyed the rape.

The "rape" was virtual in the sense that the event happened only on the wires. "No bodies touched," as Dibbell describes it.

Whatever physical interaction occurred consisted of a mingling of electronic signals sent from sites spread out between New York City and Sidney, Australia.

... He commenced his assault entirely unprovoked at, or about 10 P.M. Pacific Standard Time. ... [H]e began by using his voodoo doll to force one of the room's occupants to sexually service him in a variety of more or less conventional ways. That this victim was exu. ... He turned his attentions now to Moon-dreamer ... forcing her into unwanted liaisons with other individuals present in the room. ... His actions grew progressively violent. ... He caused Moon-dreamer to violate herself with a piece of kitchen cutlery. He could not be stopped until at last someone summoned Iggy ... who brought with him a gun of near wizardly powers, a gun that didn't kill but enveloped its targets in a cage impermeable even to a voodoo doll's powers.²⁵

Rape is a difficult word to use in any context, but particularly here. Some will object that whatever happened in this virtual space, it has nothing to do with rape. Yet even if "it" was not "rape," all will see a link between rape and what happened to these women there. Bungle used his power over these women for his own (and against their) sexual desire; he sexualized his violence and denied them even the dignity of registering their protest.

For our purposes, whether what happened here was really rape is beside the point. What matters is how the community reacted. The community was outraged by what Bungle had done, and many thought something should be done in response.

They gathered then, this community of members of LamdaMOO, in a virtual room at a set time, to discuss what to do. Some thirty showed up, the largest meeting the community had known. Some thought that Bungle should be expelled—"toaded," as it is described, killed for purposes of the MOO. Others thought that nothing should be done; Bungle was certainly a creep, but the best thing to do to creeps was simply to ignore them. Some called on the Wizards of the space—the creators, the gods—to intervene to deal with this character. The Wizards declined: their job, they replied, was to create the world; the members had to learn to live within it.

There was really no law that governed what Bungle had done. No real-space law reached sexual pranks like this, and neither did any explicit rule of LamdaMOO.²⁶ This troubled many who wanted to do something. Invoking real-space ideals about fair notice and due process, these people argued that Bungle could not be punished for violating rules that did not exist at the time.

Two extremes eventually emerged. One side urged vigilantism: Bungle was a miscreant, and something should be done about him. But what shouldn't be done, they argued, was for LamdaMOO to respond by creating a world of regulation. LamdaMOO did not need a state; it needed a few good vigilantes. It needed people who would enforce the will of the community without the permanent intrusion of some central force called the state. Bungle should be expelled, killed, or "toaded"—and someone would do it. If only the group resisted the call to organize itself into a state.

The other side promoted just one idea: democracy. With the cooperation of the Wizards, LamdaMOO should establish a way to vote on rules that would govern how people in the space behaved. Any question could be made the subject of a ballot; there was no constitution limiting the scope of what democracy could decide. An issue decided by the ballot would be implemented by the Wizards. From then on, it would be a rule.

Both extremes had their virtues. Both invited certain vices. The anarchy of the first risked chaos. It was easy to imagine the community turning against people with little or no warning; one imagined vigilantes roaming the space, unconstrained by any rules, "toading" people whose crimes happened to strike them as "awful." For those who took this place less seriously than real space, this compromise was tolerable. But what was tolerable for some was intolerable to others—as Bungle had learned.

Democracy seemed natural, yet many resisted it as well. The idea that politics could exist in LamdaMOO seemed to sully the space. The thought that ideas would have to be debated and then voted on was just another burden. Sure, rules would be known and behavior could be regulated, but it all began to seem like work. The work took something from the fun the space was to have been.

In the end, both happened. The debate that evening wound down after almost three hours. No clear resolution had found its way in. But a resolution of sorts did occur. As Dibbell describes it:

It was also at this point, most likely, that TomTraceback reached his decision. TomTraceback was a wizard, a taciturn sort of fellow who'd sat brooding on the sidelines all evening. He hadn't said a lot, but what he had said indicated that he took the crime committed against exu and Moondreamer very seriously, and that he felt no particular compassion toward the character who had committed it. But on the other hand he had made it equally plain that he took the elimination of a fellow player just as seriously, and moreover that he had no desire to return to the days of wizardly intervention. It must have been difficult, therefore, to reconcile the conflicting impulses churning within him at that moment. In fact, it was probably impossible, for . . . as much as he would have liked to make himself an instrument of the MOO's collective will, [he surely realized that under the present order of things] he must in the final analysis either act alone or not act at all. So TomTraceback acted alone.

He told the lingering few players in the room that he had to go, and then he went. It was a minute or two before 10 P.M. He did it quietly and he did it privately, but all anyone had to do to know he'd done it was to type the *@who* command, which was normally what you typed if you wanted to know a player's present location and the time he last logged in. But if you had run a *@who* on Mr. Bungle not too long after TomTraceback left emmeline's room, the database would have told you something different.

"*Mr_Bungle*," it would have said, "is not the name of any player."

The date, as it happened, was April Fool's Day, but this was no joke: Mr. Bungle was truly dead and truly gone.²⁷

When the Wizards saw this, they moved to the other extreme. With no formal decision by the citizens, the Wizards called forth a democracy. Starting May 1, 1993,²⁸ any matter could be decided by ballot, and any proposition receiving at least twice as many votes for as against would become the law.²⁹ Many wondered whether this was an advance or not.

There is a lot to think about in this story, even in my savagely abridged version.³⁰ But I want to focus on the sense of loss that accompanied the Wizards' decision. There is a certain romance tied to the idea of establishing a democracy—Kodak commercials with tearful Berliners as the Wall comes down and all that. The romance is the idea of self-government and of establishing structures that facilitate it. But LamdaMOO's move to self-government, through structures of democracy, was not just an achievement. It was also a defeat. The space had failed. It had failed, we could say, to self-regulate. It had failed to engender values in its population sufficient to avoid just the sort of evil Bungle had perpetrated. The debate marked the passage of the space from one kind of place to another. From a space self-regulated to a space regulated by self.

It might seem odd that there would be a place where the emergence of democracy would so depress people. But this kind of reaction is not uncommon in cyberplaces. Katie Hafner and Matthew Lyon tell a story of the emergence of a "widget" called the FINGER command on UNIX, that would allow users to see when the last time another user had been on the computer, and whether she had read her mail. Some thought (not surprisingly, I should think) that this command was something of an invasion of privacy. Whose business was it when I was last at my machine, and why should they get to know whether I have read my mail?

A programmer at Carnegie Mellon University, Ivor Durham, changed the command to give the user the power to avoid this spying finger. The result? "Durham was flamed without mercy. He was called everything from spineless to socially irresponsible to a petty politician, and worse—but not for protecting privacy. He was criticized for monkeying with the openness of the network."³¹

The values of the UNIX world were different. They were values embedded in the code of UNIX. To change the code was to change the values, and members of the community fought that change.

So too with the changes to LamdaMoo. Before the balloting, LamdaMoo was regulated through norms. These regulations of social structures were sustained by the constant policing of individual citizens. They were the regulations of a community; the rise of democracy marked the fall of this community. Although norms would no doubt survive the establishment of a democracy, their status was forever changed. Before the democracy, a struggle over which norms should prevail could be resolved only by consensus—by certain views prevailing in a decentralized way. Now such a struggle could be resolved by the power of a majority—not through what a majority *did*, but through how they voted.

I've romanticized this bizarre little world far more than I intended. I do not mean to suggest that the world of LamdaMOO before democracy was necessarily better than the one after. I want only to mark a particular change. Like CC, and unlike AOL, LamdaMOO is a place where norms regulate. But unlike CC, LamdaMOO is now a place where members have control over restructuring the norms.

Such control changes things. Norms become different when ballots can overrule them. And code becomes different when ballots can order Wizards to change the world. These changes mark a movement from one kind of normative space to another, from one kind of regulation to another.

In all three of these cyber-places, code is a regulator. But there are important differences among the three. Norms have a relevance in CC and LamdaMOO that they do not in AOL; democracy has a relevance in LamdaMOO that it does not have in CC or AOL. And monitoring has a relevance in AOL that it does not have in LamdaMOO or CC (since neither of the latter two use data about individuals for commercial purposes, either internal or external to the organization). Code constitutes these three communities; as Jennifer Mnookin says of LamdaMoo, "politics [is] implemented through technology."³² Differences in the code constitute them differently, but some code makes community thicker than others. Where community is thick, norms can regulate.

The final space in this survey is also constituted by code, though in this case the "management" has less ability to change its basic architecture. This code is net code—a protocol of the Internet that is not easily changed by a single user. At least it was not easy for me.

. l a w . c y b e r

His name was IBEX, and no one knew who he was. I probably could have figured it out—I had the data to track him down—but after he did what he did, I did not want to know who he was. He was probably a student in the very first class about cyberspace that I taught, and I would have failed him, for I was furious about what he had done. The class was "The Law of Cyberspace"; version one of that class was at Yale.

I say version one because I had the extraordinary opportunity to teach that class at three extraordinary law schools—first at Yale, then at the University of Chicago, and finally at Harvard. These were three very different places, with three very different student bodies, but one part of the course was the same in each place. Every year a "newsgroup" was associated with the class—an electronic bulletin board where students could post messages about questions raised in the course, or about anything at all. These postings began conversations—threads of discussion, one message posted after another, debating or questioning what the earlier message had said.

These newsgroups constituted what philosophers might call "dialogic communities." They were spaces where discussion could occur, but where what was said was preserved for others to read, as in CC. That was the dialogic part. The community was what was made over time as people got to know each other—both in this space and in real space. One year students in the class and students outside the class (who had been watching the .law.cyber discussions develop) had a party; another year the students outside the class were invited to attend one class. But over the three years, at three different schools, it was clear that three communities had been made. Each was born on a particular date, and each lived for at least a couple of months.

My story here comes from Yale. Yale is an odd sort of law school, though odd in a good way. It is small and filled with extremely bright people, many of whom do not really want to be lawyers. It fashions itself as a community, and everyone from the dean on down (not a "Yale" way to describe things) strives continuously to foster and sustain this sense of community among the students. To a large extent, it works—not in the sense that there is perpetual peace, but in the sense that people everywhere are aware of this sense of community. Some embrace it, others resist it, but the resistance, like an embrace, says that something is there. One does not resist the community of people on a Greyhound bus.

One extraordinary feature of the Yale Law School is "the Wall." The Wall is a place where people can post comments about whatever in the world they want to say. A letter can be posted about gay rights at Yale, or a protest about Yale's treatment of unionized workers. Political messages are posted as well as points about law. Each posting makes additional ones possible—either scribbled on the original post or appended underneath the post.

An extraordinary sign for any visitor, the Wall is located right at the center of the law school. In the middle of a fake Gothic structure is a stone space with scores of papers posted in random fashion. Around the posts stand wandering students, reading what others have said. This is Yale's speakers' corner, though the speakers are writers, and the writing is substantive. There is little to be gained on the Wall through rhetoric; to gain respect there, you must say something of substance.

One rule, however, governs this space. All postings must be signed; any posting without a signature is removed. Originally, no doubt, the rule meant that the posting be signed by the person who wrote it. But because this is Yale, where no rule can exist without a thousand questions raised, a custom has emerged whereby an anony-

mous post can be signed by someone not its author ("Signed but not written by X"). That signature gives the post the pedigree it needs to survive on the Wall.

The reasons for this rule are clear, but so too are its problems. Let's say you want to criticize the dean for a decision he has made. The dean, however sweet, is a powerful person. You might well prefer to post a message without your name attached to it. Or say you are a student with political views that make you an outsider. Posting a message with those views and your signature might draw the scorn of your classmates. Free speech is not speech without consequence, and scorn, or shame, or ostracism, are likely consequences of lots of speech.

Anonymity, then, is a way around this dilemma. With anonymity, you can say what you want without fear. In some cases, for some people, the right to speak anonymously makes sense.

Still, a community might want to resist this right. Just as anonymity might give you the strength to state an unpopular view, it can also shield you if you post an irresponsible view. Or a slanderous view. Or a hurtful view. You might want to question the policies of the dean, or you might want falsely to accuse a fellow student of cheating. Both utterances benefit from anonymity, but the community has good reason to resist utterances like the second.

As far as I know, IBEX never said anything on the Wall. Instead, he spoke in the newsgroup associated with my class. By design, the newsgroup was open to anyone at Yale who wanted to speak. Unlike the Wall, however, the technology allowed users to call themselves whatever they wanted. "IBEX," of course, was a pseudonym. For purposes of the Wall, a pseudonym was just like anonymous speech—you had to use your real name. But in a newsgroup a pseudonymous posting is quite different from an anonymous posting. Over time you can come to know the character of a pseudonym. In the class that year, along with IBEX, we had SpeedRacer, MadMacs, Cliff-Claven, Aliens, blah, and Christopher Robbin. While members of the class might know who these participants were (we all knew who MadMacs was, but only a few of us knew SpeedRacer), each pseudonym had a character whether people knew who they were or not.

The character of IBEX was bad. This much was clear from the start. Before IBEX appeared, life in the space flourished. At first people were timid, but polite. Brave souls would post an idea or a joke. The conversation would continue around the idea or joke for a bit. After a couple of weeks the conversation would become quite intense. Patterns of exchange began. People had questions; others had answers. People stumbled as they spoke, but they were beginning, slowly, to speak.

Some things about how they spoke were immediately noticeable. First, women spoke more in this space than they did in class. Maybe not more in a statistically significant sense, but more.³³ Second, helpers quickly developed, and those who received their help. Soon a class developed online—a real class that identified itself as such and spoke as a class in a way that a teacher dreams of in real space, and in a way I had never known.

Why this happened I could not really say. Una Smith may have been a catalyst. I said that I taught this course three times. Each time (without my intervention at all) there was an Una Smith participating in the newsgroup. At Yale she was a real person, but after Yale I thought of her as a type. She was always a woman from outside the class; she was always extremely knowledgeable about the Net and about USENET; and she always wandered into my (virtual) class and began telling the others how they should behave. When someone violated a norm of the Net, Una would correct them. Often this instruction was not taken terribly well (these were, after all, law students). Soon the class would rally to defend the instructed and to challenge her to defend her rules. And of course, expert that she was, she usually had an answer that did defend the rules she had dictated. This exchange soon became a focus of the class. Una had drawn their anger, and the class gained cohesiveness as a result.

About a month and a half into the course, the group reached an apex of sorts. It became the best it would be. I remember the moment well. Early on a spring afternoon I noticed that someone had posted the first line of a poem. By the end of the day, without any coordination, the class had finished the poem. There had been rhythm to the exchanges; now there was rhyme. Things hummed in the newsgroup, and people were genuinely surprised about this space.

It was then that IBEX appeared. I think it was just after we had discussed anonymity in class, so maybe his later claims to have been serving a pedagogical role were true. But he appeared after one of our classes—appeared, it seemed, just to issue an attack on another member of the class. Not an attack on his ideas, but on him. So vicious and so extensive was this attack that when I read it, I didn't know quite how to understand it. Could it have been real?

Almost immediately, conversation in the group died. It just stopped. No one said anything, as if everyone were afraid that the monster that had entered our space would turn his fury on one of them next. Until, that is, the victim responded, with an answer that evinced the wounds of the attack. IBEX's words had cut. The victim was angry and hurt, and he attacked back.

But his salvo only inspired another round of viciousness, even more vile than the first. With this, other members of the class could not resist joining in. IBEX was attacked by a string of characters in the class as cowardly for hiding behind a pseudonym and as sick for what he had said. None of this had any effect. IBEX came back, again and again, with an ugliness that was as extreme as it was unrelenting.

The space had been changed. Conversation fell off, people drifted away. Some no doubt left because they were disgusted with what had happened; others did not want to be IBEX's next target. There was a brief period of life in the space as people rallied to attack IBEX. But as he came back again and again, each time more vicious than the last, most simply left the space. (One time IBEX came back to protest that he had been wronged; in the week before, he claimed, he had not posted anything, but someone wearing the white sheet of IBEX had posted in IBEX's name, so that he, the real IBEX, had been defamed. The class had little sympathy.)

But it was not just the online class that changed. As we met face to face each week I felt the atmosphere bend. People felt the creature in the room, though no one could believe he was a student at the Yale Law School. This was their classmate, hiding behind a smile, or a joke, in real space, but vicious in cyberspace. And the very idea that this evil was hidden under a smile changed how people felt about smiles.

Some called this the "David Lynch effect," an allusion to the film producer who portrays the rot of society just under freshly painted facades. We felt in that class the rot of our community just under the surface of smiling and functional students. There was a (relatively tame) Jake Baker in our midst. The space had permitted behavior that destroyed community—community that the space itself had created. Community had been created in part through the ability to hide—to hide behind a benign pseudonym; to hide hesitation, or editing, in the writing; to hide your reaction; to hide that you were not paying attention. These anonymities had made the community what it was. But the same anonymity that created the community gave birth to IBEX as well, and thus took the community away.

HOW ARCHITECTURES MATTER AND SPACES DIFFER

I said this at the start, but now it should have some real meaning: cyberspace is not a place; it is many places. Its places don't have one nature; the places of cyberspace have many different "natures." These natures are not given, they are made. They are set (in part at least) by the architectures that constitute these different spaces. These architectures are themselves not given; these architectures of code are set by the architects of cyberspace—code writers.

The spaces I have described *here* are different. These differences have been the purpose of my description. My aim has been to remind you of the different character that these places have, and to remind you again of the reasons that these places have these differences.

In some places there is community—that is, a set of norms that are self-enforcing within the group. Features such as visibility (as opposed to anonymity) and nontransience help create those norms; anonymity, transience, and diversity make it harder to create community.

In places where community is not fully self-enforcing, norms are supplemented either by rules imposed through code or by rules recognized through democratic procedures. These supplements may further some normative end, but at times they are in tension with the goal of community building.

If we had to simplify this diversity of spaces by finding one dimension along which we could rank them, that dimension might be their amenability to outside control. "Community" in the sense that I've used the word means a group able to enforce its own norms among its members. In this, the groups I've discussed are

universally vulnerable—.law.cyber being the most vulnerable. But as we move from .law.cyber to CC to LamdaMOO to AOL, the ability to enforce a norm on the group from the outside increases. In .law.cyber, people within the space can argue all they want about introducing a new norm or changing an existing one, but a norm becomes a group norm only if the whole group comes to see it as valuable, and so adopts it. No external control is possible.

The possibility of external control is greater in CC, though CC and AOL share a market constraint. In both, management can change the code to bring about a particular end, but if that end is too far removed from what most members think the space is about, they may simply leave. As a result, AOL has more control than CC; because the range of behavior on AOL is wider, the range of possible rules in this space is greater as well.

In LamdaMOO the story is more complicated. Nothing really binds people to a particular MOO. (There are thousands, and most are free.) But because characters in a MOO are earned rather than bought, and because this takes time and characters are not fungible, it becomes increasingly hard for members of a successful MOO to move elsewhere. They have the right to exit, but in the sense that Soviet citizens had the right to exit—namely, with none of the assets they had built in their particular world.

The members of a MOO are in a sense the most vulnerable to changes imposed from the outside. Because the world of the MOO is (like AOL) completely constricted by code (whether collectively or individually), it is here that the control has the potential to be the greatest.

TRADE-OFFS OF CONTROL

Our look at these contrasting spaces should give depth to the idea that architecture matters and highlight the different ways in which the code of a cyberspace might enable or disable certain forms of life. Cyberspaces differ not only in the amount of regulation that each permits; they also differ in the values they embrace and the kind of regulation they permit. Some spaces can be regulated by norms; code can change that. Some places cannot be regulated by norms; sometimes code can change that as well. The regulating norms can be those of real space as well as of cyberspace. And, as we saw in the discussion of Jake Baker, the architecture of cyberspace may permit an escape from the regulations of real space into a space regulated very differently. The choices are rich, but they are *choices*.³⁴

If we let the invisible hand work unimpeded, these choices will be made according to the set of interests that are expressed by commerce on the Net. In some cases, certainly, those interests will be constrained by government. But now we must think specifically about how we could structure the choices we will confront and how we could resolve the conflicts of values these spaces will present.

Our choices in each case are two. We can try to make cyberspace the same as real space, investing it with the same values, or we can give cyberspace values and properties that are fundamentally different.

There is no general answer as to which choice we should make. But if we decide we should preserve values from real space, we need a way to think about how. And if we decide we should change values from real space, then change them to what?

The next chapter is about how we might constitute values differently. It is grounded in a broader sense of this idea of "regulation." Using this broader sense, we will see what control might be possible. And in chapter 8, we will see some of the limits on that control.

Both chapters are about how we might exercise choice. This chapter has been about the differences in cyberspaces that these choices make. In part 3, we will consider which differences we should want and which we should avoid. We will, in other words, practice this choice.

S E V E N

what things regulate

JOHN STUART MILL WAS AN ENGLISHMAN, THOUGH ONE OF THE MOST INFLUENTIAL political philosophers in America in the nineteenth century. His writings ranged from important work on logic to a still striking text, *The Subjection of Women*. But his continuing influence comes from a relatively short book titled *On Liberty*. Published in 1859, this powerful argument for individual liberty and diversity of thought represents an important view of liberal and libertarian thinking in the second half of the nineteenth century.

"Libertarian," however, has a specific meaning for us. It associates with arguments against government.¹ Government, in the modern libertarian's view, is the threat to liberty; private action is not. Thus, the good libertarian is focused on reducing government's power. Curb the excesses of government, the libertarian says, and you will have ensured freedom for your society.

Mill's view was not so narrow. He was a defender of liberty and an opponent of forces that suppressed it. But those forces were not confined to government. Liberty, in Mill's view, was threatened as much by norms as by government, as much by stigma and intolerance as by the threat of state punishment. His objective was to argue against these private forces of coercion. His work was a defense against liberty-suppressing norms, because in England at the time these were the real threat to liberty.

Mill's method is important, and it should be our own. It asks, What is the threat to liberty, and how can we resist it? It is not limited to asking, What is the threat to liberty *from government*? It understands that more than government can threaten liberty, and that sometimes this something more can be private rather than state action. Mill was not so concerned with the source. His concern was with liberty.

Threats to liberty change. In England norms may have been the problem in the late nineteenth century; in the United States in the first two decades of the twentieth century it was state suppression of speech.² The labor movement was founded on the idea that the market is sometimes a threat to liberty—not just because of low wages, but