



What Larry Doesn't Get: A Libertarian Response to
Lessig's Code and
Other Laws of Cyberspace

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**What Larry Doesn't Get:
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As I was preparing this essay and organizing my thoughts about Lawrence Lessig's *Code and Other Laws of Cyberspace*,² I was asked to speak at a panel discussion about the problem of unwanted and unsolicited e-mail ("spam") at Prof. Lessig's home institution, Harvard Law School's Berkman Center for Internet and Society.³

The discussion focussed on one particular anti-spam institution, the "Mail Abuse Prevention System" (MAPS); Paul Vixie, the developer and leader of MAPS, was also a participant at this event. MAPS attacks the problem of spam by coordinating a kind of group boycott by Internet service providers (ISPs). It operates, roughly, as follows.⁴ The managers of MAPS create a list -- the "Realtime Blackhole List" (RBL) -- of ISPs who are, in their view, fostering the distribution of spam. MAPS has its own definition of "fostering the distribution of spam"; it means, for example, providing "spam support services" (*e.g.*, hosting web pages that are listed as destination addresses in bulk emails, providing e-mail forwarders or auto-responders that can be used by bulk emailers), or allowing "open-

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²Lawrence Lessig, "Code and Other Laws of Cyberspace" (1999) (hereinafter *Code*).

³My thanks go to Jonathan Zittrain, Executive Director of the Berkman Center, for inviting me to this event; those interested can view the "scribe's notes" of this discussion at <<http://cyber.law.harvard.edu/is99/scribes10.html>>, and the event itself in realvideo at <<http://cyber.law.harvard.edu/is99/class10>>.

⁴See, generally, "Maps Realtime Blackhole List" <<http://maps.vix.com/rbl/>> (last visited Nov. 19, 1999); "Mail Abuse Prevention System" <<http://mail-abuse.org/>> (last visited Nov. 19, 1999).

mail relay" (*i.e.*, allowing mail handling servers to be used by non-subscribers, which allows bulk emailers to "launder" email by launching it from a site to which they cannot be traced).⁵ MAPS makes the RBL list available to other ISPs on a subscription basis.⁶ The ISPs who subscribe to the RBL can, if they choose, set their mail handlers to delete all email originating from, or going to, an address appearing on the list; the blackholed address, in a sense, disappears from the Internet as far as the subscribing ISP (and its customers) are concerned.⁷

The timing was propitious. Lessig, it happens, has made it very clear that he doesn't like the RBL at all. In one of the columns that he writes periodically for the *Industry Standard*, he castigates members of what he called the "self-righteous spam police," and he offered his opinion that "fundamental policy questions about how the Net will work" should not be in the hands of these "vigilantes."⁸ Should network policy be subject to this kind of "policy-making by the 'invisible hand'?"

*"The answer is obvious, even if the solution is not. This is not how policy should be made. We know this, but we don't know what could replace it. We imagine policy decisions made in a context where dissent can be expressed without punishment, where collective decisions can be made. But no such context exists in cyberspace, nor in our imagination about what cyberspace might become."*⁹

⁵See "MAPS RBL Candidacy," <<http://maps.vix.com/rbl/candidacy.html>> (last visited Nov. 19, 1999).

⁶There is currently no charge to subscribe to the RBL. See "MAPS RBL Participants," <<http://maps.vix.com/rbl/participants.html>> (last visited Nov. 19, 1999).

⁷For instance, suppose I use the facilities of Temple University to send and receive email over the Internet. Assume that the ISP XYZ is placed on the RBL, and that Temple is a subscriber to the RBL. If Temple implements the "boycott" of XYZ in its mail handling software, any email that I send to *janedoe@xyz.com*, and any email that is addressed to me from *janedoe@xyz.com*, will be deleted before delivery.

⁸ Lawrence Lessig, "The Spam Wars," *The Industry Standard*, December 31, 1998 <<http://www.thestandard.com/articles/display/0,1449,3006,00.html>>.

⁹*Id.* (emphasis supplied).

Now, my take on the RBL is quite different than Lessig's.¹⁰ The MAPS "vigilantes" [bad] can just as easily be characterized as "activists" [good], and the kind of "bottom-up," uncoordinated, decentralized process of which the RBL is a part¹¹ strikes me as a perfectly reasonable way to make "network policy" and to "answer fundamental policy questions about how the Net will work."

What I found most puzzling is not that Lessig and I disagreed; we have engaged in a public and private conversation about law and governance in cyberspace over the past several years,¹² and we have disagreed before. It is that Lessig apparently considers this alternate view not merely incorrect, but *self-evidently* incorrect. Lessig had placed a "Do Not Enter" sign at the entrance to one path through the jungle of cyberspace policy -- a path that I think looks pretty interesting -- without any real

¹⁰See David G. Post, "Of Horses, Black Holes, and Decentralized Law-Making in Cyberspace," (Vand. J. Ent. L., forthcoming 2000) <<http://www.temple.edu/lawschool/dpost/blackhole.html>>.

¹¹ Many other organizations compete with MAPS's efforts to reduce or eliminate what they regard as "spam." The Open Relay Behavior Modification System (ORBS) focuses its efforts on identifying and providing a list of mail servers which permit third-party relay. See "Orbs" <<http://www.orbs.org/>> (last visited Nov. 19, 1999). The Network Abuse Clearinghouse forwards complaints about spam and other network related issues to the appropriate network administrator. See "Abuse.Net: Home Page" <<http://www.abuse.net/>> (last visited Nov. 19, 1999). WWW.SPAM.ABUSE.NET provides a wealth of information on current efforts to curb spam, as well as practical methods and practices to reduce spam on a given network or spam being passed through a given server. See "Fight Spam on the Internet!" <<http://www.spam.abuse.net/>> (last visited Nov. 19, 1999). The Forum for Responsible & Ethical E-Mail educates system administrators in ways to reduce spam, educates end-users about how to reduce spam, and lobbies governmental bodies to pass legislation to reduce spam. See "Forum for Responsible and Ethical E-Mail" <<http://www.spamfree.org/>>. (last visited Nov. 19, 1999). The Coalition Against Unsolicited Commercial E-Mail (CAUCE) primarily concerns itself with lobbying governments to pass legislation restricting spam. See "Coalition Against Unsolicited E-Mail" <<http://www.cauce.org/>> (last visited Nov. 19, 1999). Finally, The Blacklist of Internet Advertisers keeps an regularly updated list of advertisers it deems to have violated netetiquette by engaging in such practices as sending unsolicited bulk e-mail. See "Blacklist of Internet Advertisers" <<http://www-math.uni-paderborn.de/%Eaxel/BL/>> (last visited Nov. 19, 1999).

¹² See, e.g., See, e.g., David G. Post and David R. Johnson, "'Chaos Prevailing on Every Continent': a New Theory of Decentralized Decision-making in Complex Systems," 73 Chicago-Kent Law Review 1055 (1998) (available online at <<http://www.temple.edu/lawschool/dpost/chaos/chaos.htm>>, responding to Lawrence Lessig, "The Zones of Cyberspace," 48 Stan. L. Rev. 1403 (1996), responding to David R. Johnson and David G. Post, "Law and Borders: The Rise of Law in Cyberspace," 48 Stan. L. Rev. 1367 (1996).

explanation of why he had done so.¹³

Code, and Other Laws of Cyberspace is that explanation. The theme of *Code* -- or at least one major theme of a book filled with complex, interlocking argument -- is precisely the one that Lessig articulated in his column: that "policy-making by the invisible hand" will create a cyberspace in which we will not want to live. There is "no reason," he states at the very beginning of the book,

". . . to believe that the grounding for liberty in cyberspace will simply emerge. In fact, as I will argue, quite the opposite is the case. *[W]e have every reason to believe that cyberspace, left to itself, will not fulfill the promise of freedom.* Left to itself, cyberspace will become a perfect tool of control. . . . [T]he argument of this book is that *the invisible hand of cyberspace is building an architecture for cyberspace that is quite the opposite of what it was at its birth.* The invisible hand, through commerce, is constructing an architecture that perfects control . . ."¹⁴

Code is, in short, a dense and multi-layered indictment of the invisible hand. Good lawyer that he is, Lessig's argument has the feel of inevitability that the best arguments always have, marching logically and even inexorably from its premises to its conclusion: the accused is guilty as charged. Why then, he asks with frustration and even despair, don't the net.libertarians -- those "for whom this point should be most important" -- "get it"?¹⁵ How can they "believe liberty will take care of itself"?¹⁶ Why

¹³ This is not meant as criticism; having myself written a fair number of short "popularized" columns about complex issues of cyberspace law over the past several years, I am well aware of the difficulties of sustaining a complete and fully specified argument within the draconian word-length constraints under which Lessig was undoubtedly operating.

¹⁴*Code, supra* note 2, at 5-6 (emphasis added).

¹⁵*Id.*, at 58. The final chapter of *Code* is entitled "What Declan Doesn't Get." Declan refers to Declan McCullagh, a "smart, if young, libertarian" who writes for Wired News and runs a popular listserve, and "whose first reaction to any suggestion that involves government is scorn." *Id.*, at 231. See also <<http://www.what-declan-doesnt-get.com>> (last visited Dec. 15, 1999).

¹⁶*Id.*, at 58.

do they seem almost "proud" to "leave things to the invisible hand,"?¹⁷ Why don't they see that if we just "do nothing" the invisible hand is poised to bring us a cyberspace that is "less free" than it is today?¹⁸ How can they be so obtuse?

Although I have not been appointed the designated spokesman for the libertarian position -- something of an oxymoron, that -- I am someone who has, let us say, more sympathy than Lessig for that position, and I'm happy to take Lessig up on his challenge. I want to suggest here that some of us do *get* it -- we even admire it and learn much from it. But we don't *buy* it. It is not that we fail to understand or appreciate the logic of Lessig's argument; it is that we do not accept the premises on which that argument is based, premises that are, I suggest below, not quite as self-evidently true as Lessig might have us believe. One can, in other words, start from a very different set of premises and march, just as inexorably, perhaps, to a conclusion that at least casts some reasonable doubt on the defendant's guilt.

THE IS OF IT. Let us, then, take a careful look at Lessig's argument. He first sets the context: what do we need to know about this new place in order to think clearly about law and governance there? Lessig does not subscribe to the "cyberspace is just like real-space" school of thought; he recognizes that one cannot understand law and governance in cyberspace unless one acknowledges that "something fundamental has changed,"¹⁹ that "cyberspace presents something new for those who think about regulation and freedom[, and demands] a new understanding of how regulation works and of what regulates life there."²⁰

¹⁷*Id.*, at 234.

¹⁸*Id.*, at 109.

¹⁹*Id.*, at 126.

²⁰*Id.*, at 6.

That something new is the "code" of the book's title. The regulation of human behavior takes place through a complex interaction among four forces, four different "regulators." Three are familiar: law, markets, and social norms.²¹ The fourth regulator is what Lessig calls "architecture," the combined constraints of physics, and nature, and technology that in the aggregate define the contours of the place(s) where human behavior occurs and the thing(s) through which it is expressed. With regard to his smoking example,²² he writes:

"Finally, there are the constraints created, we might say, by the technology of cigarettes, or by the technologies affecting their supply. Unfiltered cigarettes present a greater constraint on smoking than filtered cigarettes if you are worried about your health. Nicotine-treated cigarettes are addictive and therefore create a greater constraint on smoking than untreated cigarettes. Smokeless cigarettes present less of a constraint because they can be smoked in more places. Cigarettes with a strong odor present more of a constraint because they can be smoked in fewer places. In all of these ways, how the cigarette is affects the constraints faced by a smoker. How it is, how it is designed, how it is built—in a word, its *architecture*."²³

Each of these constraints is a "distinct modality of regulation."²⁴ The constraints are distinct, yet highly

²¹ See *id.*, at 85 - 99. Lessig illustrates this point using the example of smoking: "If you want to smoke," he asks, "what constraints do you face? What factors regulate your decision to smoke or not?" *Id.*, at 87. The law is one constraint, for there may be laws that prohibit sales to persons under eighteen, or laws that prohibit smoking in certain places. Norms also constrain, norms that say that one doesn't light a cigarette in a private car without first asking permission of the other passengers, or that one needn't ask permission to smoke at a picnic, or that others can ask you to stop smoking at a restaurant. And the market, too, is a constraint, inasmuch as the price/quality characteristics of the offerings in the market for cigarettes affects your ability and willingness to smoke. *Id.*

²²See note [21], *supra*.

²³*Code, supra* note 2, at (emphasis in original).

²⁴"Changes in any one [of these four regulators] will affect regulation of the whole. Some constraints will support others; some may undermine others. . . . The constraints are distinct, yet they are plainly interdependent. . . . Technologies can undermine norms and laws; they can also support them. Some constraints make others possible; others make some impossible. Constraints work together, though they function differently and the effect of each is distinct. Norms constrain through the stigma that a community imposes; markets constrain through the price that

interdependent. Regulation of an individual's behavior is the "sum of these four constraints,"²⁵ and a complete picture of regulatory action must consider all four.

What makes cyberspace a new place is that *its* architecture is, uniquely, defined by its *code* -- the design of the hardware and software elements that populate this new place, and of the communication protocols that allow these elements to interact with one another.

"[A]n analog for architecture regulates behavior in cyberspace —*code*. The software and hardware that make cyberspace what it is constitute a set of constraints on how you can behave . The substance of these constraints may vary, but they are experienced as conditions on your access to cyberspace . In some places (online services such as [America Online], for instance) you must enter a password before you gain access; in other places you can enter whether identified or not. In some places the transactions you engage in produce traces that link the transactions (the “mouse droppings”) back to you; in other places this link is achieved only if you want it to be. In some places you can choose to speak a language that only the recipient can hear (through encryption); in other places encryption is not an option. The code or software or architecture or protocols set these features; they are features selected by code writers; they constrain some behavior by making other behavior possible, or impossible. . . . In this sense, it too is regulation, just as the architectures of real-space codes are regulations."²⁶

It is the *architecture* of these cyber-place(s) that, to a great extent, determines what they *are*, and the architecture of those places is constituted by their code. Lessig embarks on a lengthy anthropology of life in America Online (AOL) to illustrate this point, and it is well worth quoting in

they exact; architectures constrain through the physical burdens they impose; and law constrains through the punishment it threatens. We can call each constraint a “regulator,” and we can think of each as a distinct modality of regulation." *Code, supra* note 2, at 87 - 88.

²⁵*Id.*, at 88.

²⁶*Id.*, at 89 (emphasis in original; citations omitted).

detail:

"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. . . . 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 *per-sonae* 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 Stray-Cat 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 Stray Cat?"²⁷

It is the code/architecture of this particular cyber-place that gives visitors this "fantastic power of pseudonymity," a power to construct their own identity that "the 'code writers' of real space simply do not give."²⁸ This is not an isolated example; other features of the code/architecture of AOL similarly determine other aspects of life there:

"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

²⁷*Id.*, at 66 - 70.

²⁸*Id.*, at 68. You can, as Lessig points out, "try in real-space to live the same range of multiple lives 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." *Id.*

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. 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.

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 [is] part of the constitution that is AOL—again, a part constituted by its code [that] gives some but not others the power to watch.”²⁹

Lessig argues -- most persuasively -- that these features of AOL's code/architecture *matter* deeply for the kind of life that can be lived there and the experiences that one can have there.³⁰ Particular architectures allow certain values to flourish while making others difficult or impossible to achieve; they enable certain ways of living while disabling others; they can give expression to some human potentialities while silencing others. Architectures are always like this, he observes, but they are more powerful in cyberspace than elsewhere, for the codes of cyberspace have power that no real-space architectures -- indeed, that no other regulator in real-space -- can match. *Code can achieve a kind of perfection of control that will render it, in cyberspace, the most powerful regulator of all.*

²⁹*Id.*, at 68 - 69.

³⁰See *id.*, at 69 - 71; *id.*, at 82 - 83 ("How Architectures Matter and Spaces Differ").

This point, familiar enough to those who have read Lessig's other works on the law of cyberspace³¹ but no less significant for that, is without question of the deepest importance for our thinking about governance and regulation in cyberspace. Lessig asks us to consider the "problems that perfection makes."³² He illustrates with respect to the set of interests protected in real-space by copyright law:

"Today, when you buy a book, you may do any number of things with it. You can read it once or 100 times. You can lend it to a friend. You can Xerox pages in it or scan it into your computer. You can burn it, use it as a paper weight or you can sell it. You can store it on your shelf and never once open it."³³

Some of these things you can do "because the law explicitly gives you th[e] right," and some of these things you can do because the architecture of real-space makes it well-nigh impossible to stop you from doing them.³⁴ A book seller "might sell you the book at one price if you promise to read it once, and at a different price if you want to read it 100 times, but there is no way for the seller really to know whether you have obeyed the contract."³⁵ The book seller could commission a police officer to follow you around to enforce this particular bargain, but only at prohibitive cost.

The code/architecture(s) of cyberspace are, however, not so limited. Although there is "very

³¹See, e.g., Lawrence Lessig, "Reading the Constitution in Cyberspace," 45 Emory L.J. 869 (1996); Lawrence Lessig, "Intellectual Property And Code," 11 St. John's J. L. Comm. 635 (1996); Lawrence Lessig, "The Zones of Cyberspace," 48 Stan. L. Rev. 1403 (1996); Lawrence Lessig, "Constitution And Code," 27 Cumb. L. Rev. 1 (1996/97); Lawrence Lessig, "Commons And Code," 9 Fordham I. P., Media & Ent. L.J. 405 (1999); Lawrence Lessig*Lawrence Lessig, "The Limits in Open Code: Regulatory Standards and the Future of the Net," 14 Berkeley Tech. L.J. 759 (1999).

³²*Code, supra* note 2, at 139.

³³*Id.*, at 128.

³⁴*Id.*

³⁵*Id.*

little in the code as it exists now that regulates the distribution of and access to material on the Net,"³⁶ the codes can be designed so as to give far greater protection to these works than real-space architectures allow. Various technologies -- "trusted systems" -- permit a far more "fine-grained control over the access and use of protected material than law permits, and they can do so without the aid of law."³⁷ The code of trusted systems can regulate "whether you read a work once or one hundred times, whether you can cut and paste from it or only read it without copying; whether you can send it as an attached document to a friend or keep it on your machine; whether you can delete it from your hard disk or not; whether you use it in another work, for another purpose, or not."³⁸ The power to regulate access to and use of copyrighted material thus is "about to be perfected, . . . giving holders of copyrighted property the biggest gift of protection they have ever known."³⁹

So where does that leave us? In a world dominated by code -- a world whose contours, and whose values, are shaped by the code. A world in which code can do much of "the work that the law used to do . . . far more effectively than the law did."⁴⁰ A world in which "[c]ode can, and increasingly will, displace law."⁴¹ A world in which "effective regulatory power [shifts] from law to code, from

³⁶ See *id.*, at 127 ("Given the present code of the Internet, you can't control well who copies what. If you have a copy of a copyrighted photo, rendered in a graphics file, you can make unlimited copies of that file with no effect on the original. When you make the one-hundredth copy, nothing indicates that it is the one-hundredth copy rather than the first. There is very little in the code as it exists now that regulates the distribution of and access to material on the Net.").

³⁷*Id.*, at 129.

³⁸*Id.*, at 128.

³⁹*Id.*, at 127.

⁴⁰*Id.*, at 130.

⁴¹*Id.*, at 126.

sovereigns to software."⁴² A world in which code "displaces law by codifying the rules, making them more efficient than they were just as rules. . . ."⁴³

Lessig is undoubtedly correct⁴⁴: this is a large, and a most fundamental, change:

"[C]yberspace demands a new understanding of how regulation works and of what regulates life there. It compels us to look beyond the traditional lawyer's scope -- beyond laws, regulations, and norms. . . . In cyberspace we must understand how code regulates -- how the software and hardware that make cyberspace what it is regulate cyberspace as it is. As William Mitchell puts it, this code is cyberspace's 'law.' *Code is law.*"⁴⁵

That is, one might say, the anthropology, the *is*, of it. To call this portion of Lessig's argument a *tour de force* renders it insufficient praise; the exposition here is truly dazzling, and Lessig has without question made a deeply important contribution to our understanding of law in this strange new place.

THE OUGHT OF IT. What, though, of the "ought"? The question remains: If one agrees with Lessig -- and I do agree with Lessig -- that this is what law looks like in cyberspace, how should we make that law? What kind of "policy-making" is best in a world constituted like this? What about MAPS and the RBL?

Lessig begins his normative inquiry just where the libertarians do: by asking what, in this particular time and place and in this new world, "is the threat to liberty, and how can we resist it?"⁴⁶ How, he asks, can we best ensure that this is a world where human liberty can flourish? Or, rather, he

⁴²*Id.*, at 206.

⁴³*Id.*, at 130.

⁴⁴Read, "I agree with him."

⁴⁵*Id.*, at 6 (emphasis in original).

⁴⁶*Id.*, at 85.

asks how we can best ensure that this *remains* a world where human liberty can flourish, for he recognizes that the net as it has come down to us -- what he calls "Net95" -- has a truly remarkable "architecture of liberty"⁴⁷:

"The architecture of cyberspace makes regulating behavior difficult, because those whose behavior you're trying to control could be located in any place (meaning outside of your place) on the Net. Who someone is, where he is, and whether law can be exercised over him there—all these are questions that government must answer if it is to impose its will. But these questions are made impossibly difficult by the architecture of the space—at least as it was."⁴⁸

These features of the code/architecture of Net95 "do not disable something important from the Net as it was; they enable something important about the Net as it was—liberty. They are virtues of a space where control is limited, and they help constitute that space."⁴⁹ The "constitution of Net95 is unregulability; these features of its code make it so."⁵⁰ For example, it is the code/architecture of cyberspace, and not the First Amendment, that has been "the real protector of speech there,"⁵¹ for it is the code/architecture that "protects against prior restraint just as the Constitution did—by ensuring that strong controls on information can no longer be achieved."⁵² Through the code/architecture of the net

⁴⁷*Id.*, at 30.

⁴⁸*Id.*, at 19-20.

⁴⁹*Id.*, at 28.

⁵⁰ *Id.*

⁵¹*Id.*, at 166 - 67 ("[O]n top of this list of protectors of speech in cyberspace is architecture. Relative anonymity, decentralized distribution, multiple points of access, no necessary tie to geography, no simple system to identify content, tools of encryption -- all these features and consequences of the Internet protocol make it difficult to control speech in cyberspace.")

⁵²*Id.*, at 170, citing Floyd Abrams, "First Amendment Postcards from the Edge of Cyberspace," 11 St. John's J. Legal Comm. 693 (1996).

we have managed to "export[] to the world a First Amendment *in code* more extreme than our own First Amendment *in law*."⁵³

But that is Net95. The code/architecture of cyberspace can change. What cyberspace *is* is not what cyberspace has to be. The "possible architectures of something that we would call 'the Net' are many, and the character of life within those different architectures is diverse."⁵⁴ It is not cyberspace's "nature" to be the way it is, or to have the code/architecture it has; we built it that way, and we can build it in a different way. The unregulability of Net95, the freedom-enhancing values that the net embodies, are functions of the code/architecture of Net95, and values very different from the freedom-enhancing ones in today's code/architecture can be embedded in tomorrow's.

And, he goes on, they will be. Cyberspace, now so largely free from control, will, if we "do nothing,"⁵⁵ become a place of *perfect* control, an Orwellian space devoid of the very values of liberty and free expression built into Net95 and that we hold sacred.⁵⁶ Why? What will cause this to happen?

Two forces, Lessig suggests, are arrayed to bring this far-less-pleasant world into being. First, the governments of the world, caught off guard by the explosive growth of the net, will arise from their slumber.⁵⁷ They will come to realize (if they have not realized already) that the code/architecture of cyberspace holds the key to reasserting their power, and the power of their laws, in this seemingly un-

⁵³*Id.*, at 167 (emphasis in original).

⁵⁴ *Id.*, at 25.

⁵⁵ *Id.*, at 109.

⁵⁶Michael Fromkin makes a similar point when he points to what he calls the "great looming Internet irony: what was intended and promoted as the great anarchistic, liberating, democratizing technology may in fact spur a reaction so strong as to make the world significantly less democratic." A. Michael Fromkin, "The Empire Strikes Back," 73 Chi.-Kent L. Rev. 11101, 1114 (1998).

⁵⁷ See *id.*, chapter 5 ("Regulating Code").

regulable place. Given the code/architecture of the net as it is, it is difficult for government to regulate behavior on the net; but given the code/architecture of the net, it is "not hard for the government to take steps to alter, or supplement, the architecture of the Net [to] make behavior on the Net more regulable."⁵⁸ Liberty "depends on regulation remaining expensive"⁵⁹; the current architecture of cyberspace makes regulation expensive; governments will therefore force the architecture to be altered to make regulation less expensive; this will allow them to re-assert control over activities in cyberspace. If the governments of the world can't regulate conduct directly because of the code/architecture of cyberspace, they will "regulate the regulability" of cyberspace, forcing changes in that code that will make it a much more regulable place.⁶⁰

This, one might note, is surely *not* what the libertarians "don't get"; this portion of *Code* reads like a kind of libertarian manifesto. Nor does this argument explain Lessig's objections to the RBL; the code/architecture that the proprietors of MAPS have in mind -- elimination of open mail relay systems - - is not government-backed or government-endorsed in any way (precisely why the libertarians find it attractive).

There must be more to Lessig's argument. And there is. The second of the forces bringing about change in cyberspace brings us to the heart of the matter. Even if the governments of the world are for some reason unable or unwilling to build a code/architecture of perfect control, Lessig continues,

⁵⁸*Id.*, at 43-44.

⁵⁹*Id.*, at 56 ("Cost for the government is liberty for us. The higher the cost of a regulation, the less likely it will be pursued as a regulation. Liberty depends on the regulation remaining expensive.")

⁶⁰See *id.* at 198 - 99 ("[R]eal-space sovereigns will come to see that the power of another sovereign is wired into their telephones, and they will struggle . . . as the rules and norms of this other sovereign affect the behavior of their citizens in their space. They have the tools at their disposal to resist the architecture of the Net to protect their regulatory power.").

the forces of commerce will do it for them.⁶¹ To flourish in cyberspace, commerce requires "architectures of identity"⁶² -- architectures that "enable identification to enable commerce."⁶³ With or without government action, these architectures will be added to the net to make it serve commerce more efficiently; with or without government action, regulability (and the concomitant loss of liberty) will be the by-product of these changes.⁶⁴

Take, for instance, the current battle over the distribution of MP3 audio files.⁶⁵ In an earlier time -- last year -- MP3 was the rage; music enthusiasts by the thousands built websites where every imaginable form of music was available for free downloading. "'Free music' joined the list of free stuff that the Internet would serve."⁶⁶ But already the story has changed:

"The recording industry is pushing a standard that would make it easier to control the distribution of these files; Congress has passed a statute that makes it a felony to produce software that evades this control; and one company that produces Sony Walkman-like machines to play MP3 files has already announced plans to enable its machine to comply with these standards of control."⁶⁷

Lessig's target here is the code/architecture itself; he is equally concerned about efforts by

⁶¹See *id.*, chapter 4 ("Architectures of Control") ("the Net is being remade to fit the demands of commerce [and] [r]egulability will be a by-product of these changes.").

⁶²*Id.*, at 33 - 35.

⁶³ *Id.*, at 30.

⁶⁴See *id.*, at 58 ("Market forces encourage architectures of identity to facilitate online commerce. Government needs to do very little—indeed, nothing at all—to induce just this sort of development. The market forces are too powerful; the potential here is too great. If anything is certain, it is that an architecture of identity will develop on the Net—and thereby fundamentally transform its regulability.").

⁶⁵Lessig discusses this example in his Preface. *Id.*, at x.

⁶⁶ *Id.*

⁶⁷*Id.*

govenment -- "Congress has passed a statute" -- and by private parties -- "[t]he recording industry is pushing a standard" -- to build these control architectures and to use them to regulate our activities in cyberspace.⁶⁸

This portion of *Code*, once again, has much to teach the libertarians; efforts to impose control over conduct in cyberspace can and will come from many diverse directions, and eternal vigilance is, after all, the price of liberty.

But Lessig's view of "commerce" is, it turns out, an unusual, even a startling, one. There's a small, but I think telling, moment early on in the book where he writes, apropos of government's power to regulate the code of the net:

"In a world where the code writers were the sort of people who governed the Internet Engineering Task Force of a few years ago, government's power to regulate code would be slight. The underpaid heroes who built the Net have ideological reasons to resist government's mandate. They are not likely to yield to its threats. And unlike some commercial interests, they do not have millions riding on a single architecture winning out in the end. Thus, they would provide an important check on the government's power over the architectures of cyberspace. *But as code writing becomes commercial—as it becomes the product of a smaller number of large companies—the government's ability to regulate it increases.*"⁶⁹

As code writing becomes commercial, it becomes the product of a smaller number of large companies? Why is that? Lessig writes of this concentration of economic power as if it were somehow foreordained, an inevitable consequence of commercialization. He has, for example, a propensity

⁶⁸Lessig thinks very little of the distinction that the law on occasion draws between "public" and "private" action. See *id.*, at 186 - 87, 213 - 221 (developing argument that Constitutional limitations should be applied to private conduct as well as to "state action").

⁶⁹*Id.*, at 52 (emphasis supplied).

towards use of the singular when describing the noisome effects of commerce; the forces of commerce will deploy "an architecture of security,"⁷⁰ "a general architecture of trust [that] makes possible secure and private transactions";⁷¹ encryption will be at the "core of any such architecture,"⁷² there are "many plans for deploying this architecture,"⁷³ for such "[a]n architecture" would "provide security greater than the best security in real-space";⁷⁴ unless and until "such an architecture is established," online commerce will not fully develop.⁷⁵

Commerce drives towards uniformity. While the nations of the world "argue about what regulation there should be," commerce is moving cyberspace towards

... a fairly unified regulation through code while law remains in flux. . . . Just as there was a push toward convergence on a simple set of network protocols, there will be a push toward convergence on a uniform set of rules to govern network transactions. This set of rules will include not the law of trademark that many nations have, but a unified system of trademark, enforced by a single committee; not a diverse set of policies governing privacy, but a single set of rules, implicit in the architecture of Internet protocols; not a range of contract law policies, implemented in different ways according to the values of different states, but a single, implicit set of rules decided through click-wrap agreements and enforced where the agreement says."

That's a rather strong premise, it seems to me, and it appears to undergird much of Lessig's argument about what we have to fear. I say "appears," because as a proposition it is not always

⁷⁰*Id.*, at 40.

⁷¹*Id.*

⁷²*Id.*

⁷³*Id.*

⁷⁴*Id.*

⁷⁵*Id.*

explicitly stated (or defended); but much of what Lessig writes makes little sense without it. For instance, he writes of the deployment of "trusted systems" for intellectual property:

"[W]hat happens when code protects the interests now protected by copyright law? What happens when . . . what the law protects as intellectual property can be protected through code? Should we expect that any of the limits [now provided by copyright law] will remain? Should we expect code to mirror the limits that the law imposes? Fair use? Limited term? Would private code build these "bugs" into its protections?

The point should be obvious: when intellectual property is protected by code, nothing requires that the same balance be struck. Nothing requires the owner to grant the right of fair use. She might, just as a bookstore allows individuals to browse for free, but she might not. Whether she grants this right depends on whether it profits her. Fair use becomes subject to private gain."⁷⁶

Why is that so -- that word again! -- "obvious"? True, if there are a "small[] number of large companies" dominating the production and distribution of intellectual property, "nothing requires" them to provide consumers with the ability to browse for free. And if there are a "small[] number of large companies" dominating the production and distribution of intellectual property, when the "controls . . . are built into the systems," there is "no choice . . . about whether to obey these controls."

But if there are many different architectures, then there *is* choice about whether to obey these controls. If there are multiple architectures from which to choose, it is no longer correct to say that "nothing requires" booksellers to provide users the ability to browse for free; the market for bookstores, the existence of competing bookstores, and consumers' desire to browse do so. It's hardly nothing; these are the very same things that "require[]" the real-space booksellers that Lessig mentions to allow

⁷⁶*Id.*, at 135 (emphasis supplied).

you to browse for free.⁷⁷ And if there are diverse architectures of privacy, of identity, of content protection, laid before the public, why is it so obvious that we will end up choosing the one(s) that deny us the things that Lessig (and I) think are so important?⁷⁸

Lessig's notion that the invisible hand of commerce somehow drives towards uniformity may, I suppose, be correct,⁷⁹ but it is surely not *self-evidently* correct. The invisible hand may have many deficiencies, but the one thing it does best -- far better than any alternative of which I am aware -- is to place before members of the public a diverse set of offerings in response to the diverse needs and preferences of that public. And it seems to be working rather well, thank you very much. When I gaze about the net, even at those portions of the net that have been invaded by the forces of "commerce," I see something that looks more like the chaos of unchecked growth and diversity than it does uniformity and regularity; its not just that new websites, and new architectures with them, seem to be sprouting like mushrooms after a spring rain, they actually *are* sprouting like mushrooms after a spring rain.⁸⁰

⁷⁷ Similarly, Lessig writes that although you can "resist" the code imposed on you by America Online "just as you can resist cold weather by putting on a sweater,"

". . . you are not going to change how [the code] 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.*"

Id., at 70. But unless AOL is in a highly unusual and non-functioning market, you *do* have the power to "change AOL's code"; the market gives you -- consumers, in the aggregate -- that power, even without a "rally."

Lessig's colleague Andrew Shapiro, another member of this so-called "techno-realist" school of thought, seems to have a similar view of the uniformity towards which the forces of commerce inevitably tends. In *The Control Revolution* (1999), a book that echoes many of the themes in *Code*, he writes that the Net's "potential for individual empowerment and unfettered citizen interaction" won't be fulfilled "unless [it] is characterized by a strong degree of diversity and fortuity" -- *id.*, at 203 -- as if that weren't already the case.

⁷⁸ See Tom W. Bell, "Fair Use Vs. Fared Use: The Impact of Automated Rights Management on Copyright's Fair Use Doctrine," 76 N. C. L. Rev. 557 (1998) (making this argument with specific reference to fair use).

⁷⁹ I am not unaware of the idea that the codes of cyberspace may be subject to powerful "network externalities" which can, in some circumstances, promote "winner-take-all" markets. See, generally, Mark A. Lemley & David McGowan, Legal Implications of Network Economic Effects, 86 Calif. L. Rev. 479 (1998).

⁸⁰See Albert Reka, Hawoong Jeong, and Albert-Laszlo Barabasi, "Diameter of the World-Wide Web," 401 Nature 130 (1999); Bernardo A. Huberman and Lada A. Adamic, "Growth dynamics of the World-Wide Web," 401 Nature 131

Let me be clear on this point; libertarians "get" the point that concentrations of power are dangerous and are to be resisted. Lessig is free, of course, to make the assumption that, left to themselves, the forces of commerce produce such concentrations of power. But that hardly satisfies his burden of persuasion on this point, and he should not be surprised that those who find that assumption unreasonable are skeptical of his program.

But to be fair to Lessig, this is not the primary foundation of his indictment of the invisible hand. Even if the invisible hand were somehow able to provide that multiplicity of code/architectures for this new world, it is still guilty; even if the invisible hand were to provide us with choices among the different possible code/architectures of cyberspace, it is the wrong mechanism for us to make those choices. The argument here goes like this: (a) These code/architectures of cyberspace embed fundamental, sometimes even "constitutional," values; (b) to choose among them is, therefore, to make deeply important choices among different values; and (c) the choice among values is the very stuff of politics, not markets.

Ordinarily, when we describe competing collections of values, and the choices we make among them, we call these choices "political." They are choices about how the world will be ordered and about which values will be given precedence.

Choices among values, choices about regulation, about control, choices about the definition of spaces of freedom—all this is the stuff of politics. Code codifies values, and yet, oddly, most people speak as if code were just a question of engineering. Or as if code is best left to the

(1999) (demonstrating that the growth of websites, and of links among websites, follow quite precisely the mathematical distribution that characterizes growth in biological populations); see, generally, David G. Post and Michael B. Eisen, "How Long is the Coastline of the Law? Thoughts on the Fractal Nature of Legal Systems" (Journal of Legal Studies, forthcoming) <<http://www.temple.edu/lawschool/dpost/fractals.pdf>> (discussing the general significance of these "power law" distributions for the study of social and biological systems).

market. Or best left unaddressed by government.

But these attitudes must be mistaken. *Politics is that process by which we collectively decide how we should live.* That is not to say a space where we collectivize—a collective can choose a libertarian form of government. The point is not the substance of the choice. The point is about politics is process. Politics is the process by which we *reason* [emphasis in original] about how things ought to be."⁸¹

We should not accept "the idea that *any part* of what defines the world as it is, is removed from politics."⁸² We need, he says, "a plan";⁸³ the "architecture of cyberspace is up for grabs" -- note again the use of the singular⁸⁴ -- and, "depending upon who grabs it, there are several different ways it could turn out."⁸⁵ There are *choices* to be made; "[c]learly[,] some of these choices are collective -- about how we collectively will live in this space";⁸⁶ we can stand by and "do nothing" as these choices are made "by others," or we can "try to imagine a world where [these choices] can be made collectively, and responsibly."⁸⁷

And this, he tells us, is just what governments are for; governments, properly constituted, are the means by which we make, fairly and equitably (one hopes), collective decisions of this kind. We need more, not less, government in cyberspace if those collective values are to prevail:

⁸¹*Code, supra* note 2, at 59 (emphasis supplied).

⁸²*Id.* (emphasis supplied).

⁸³*Id.*, at 222.

⁸⁴ See text at notes 69 - 74, *supra*.

⁸⁵*Id.*, at 219.

⁸⁶*Id.*

⁸⁷*Id.*, at 220.

"We stand on the edge of an era that demands we make fundamental choices about what life in this space . . . will be like. These choices will be made; there is no nature here to discover. And when they are made, the values we hold sacred will either influence our choices or be ignored. The values of free speech, privacy, due process, and equality define who we are. If there is no government to insist upon these values, who will do it?"⁸⁸

Here, then, is the heart of the heart of the matter. This, finally, explains Lessig's aversion to MAPS, and to the RBL, and to the whole "policy making by the invisible hand" enterprise; it is not reasoned, it is not deliberative, it is not made by a process in which collective values are expressed.

The source of our disagreement here is clear. I have no quarrel with the notion that the code/architectures of cyberspace embed fundamental values, and I have no quarrel with the notion that each of us, confronting the design of these new cyberplaces, faces a choice among different values. It does indeed matter, as Lessig says, whether the code of a cyber-place permits us to be anonymous or not, tracks our mouse droppings or not, allocates to us one screen name or ten, allows us to gather in groups of 20 or 50 or 500, or exposes us to many or to no random encounters.

But I do quarrel with the notion that because there are choices to be made among value-laden architectures, these are "political" decisions that should necessarily be subject to "collective" decision-making. Consider, by way of counter-example, the original, and still probably the most powerful, value-laden code/architecture of them all: the English language. The semantic and syntactic structures of English (and of all natural languages) are deep *architectural* constraints on our social life, as the critics (and, indeed, Lessig himself⁸⁹) have been fond of pointing out (and, as it should in fairness be noted, the

⁸⁸*Id.*

⁸⁹See Lawrence Lessig, "The Regulation of Social Meaning," 62 U. Chi. L. Rev. 943 (1995).

anthropologists have known for a while⁹⁰). Language is indeed much more than "a way of communicating propositions about the world," it is a "a constitutive social activity," a means by and within which we "construct social reality."⁹¹ Like the network protocols they so closely resemble,⁹² these semantic and syntactic structures embed important and often fundamental values throughout.

We have, therefore, each of us, *choices* to make, choices about how our own personal architectures of social reality will be constituted. The "network externalities" in any linguistic system are powerful, for we each gain communicative power the larger and more inter-operable the rules we adopt. But the world persists in presenting us with an imposing array of diverse and distinctive linguistic variants; linguistic communities, and sub-communities, and sub-sub-communities, each with its own shared architecture, form and dissolve all around us, all the time. We can (and should) argue about the ways in which particular structures constrain our social worlds; we can (and should) subject the "political" consequences and meanings of these code/architectures to discussion, debate, and deliberation; we can (and should) think carefully about which communities we want to join and which to avoid.

But now *I* get to assert the obvious. I take it as obvious that we do not, and that we should not, subject those semantic and syntactic structures *to the collective* for decision-making. English will

⁹⁰The classic statements of this view -- that every language binds the thoughts of its speakers by the involuntary patterns of its grammar, and that we experience the world as we do because the structures of our language predisposes us towards certain interpretations of phenomena in the world -- are in Edward Sapir, *Language: An Introduction to the Study of Speech* (1921), "Selected Writings of Edward Sapir" in *Language, Culture and Personality* (David G. Mandelbaum ed., 1958), and the works of Benjamin Whorf, see J.B. Carroll, ed., *Language, Thought, and Reality: Selected Writings of Benjamin Lee Whorf* (MIT Press, 1956).

⁹¹Lessig, "The Regulation of Social Meaning," *supra* note 88, at 976.

⁹² We should not lose sight of the fact that when we talk of the codes of cyberspace we are talking, when all is said and done, about truly *linguistic* constructs, built out of the new languages -- java, HTML, C++, and the like -- of the digital age.

evolve, best, not by subjecting it to a series of decisions by the collective empowered to impose its will on all, but by a series of individual and sub-group decisions aggregated together. We do not have, and we do not want, the Ministry of Semantic Propriety, or our elected representatives, or specially-constituted board of experts, or even the law professors, to make a "plan" about the proper direction(s) that English may take and to make decisions for us in accordance with that plan. We do not, in fact, have, or need, a "plan" at all. We are, and should be, deeply suspicious of those who claim to have such a plan, and positively terrified of those who assert that they need to enlist the coercive powers of the State to implement that plan. If there is a serious alternative to the invisible hand that is suitable for this task, I am not aware of what it is.

Interestingly enough, Lessig disagrees -- or so I read his earlier work, where he argues that the construction of language is indeed a "collective enterprise," that linguistic change "requires a collective effort" to solve the "collective action problem," and that the "collective must act together" in order to "effect [linguistic] reform."⁹³ This is not the place to continue that argument; my goal here is merely to point out that it is there, and that it is, at bottom, the basis for our disagreements about cyberspace, and about MAPS.

For it is true: I am as dubious about the need for more politics to help devise the plan for the codes of cyberspace as I am dubious about the need for more politics to help devise the plan for the codes of English. This is not to advocate "doing nothing"; it is to defend the idea that decisions about the contours of the language we speak are best made by individuals and not by collectives. This is not to view English as "the product of something alien—something we cannot direct because we cannot direct anything[,] something instead that we must simply accept, as it invades and transforms our

⁹³ Lessig, *supra* note 88, at 1000, 1007.

lives"⁹⁴; rather, it is to express the belief that the shape of the English language will best emerge not through politics and political processes, but as the aggregate outcome of uncoerced individual decisions. This is not "knee-jerk antigovernment rhetoric,"⁹⁵ that "pathology of modern politics" that is "so disgusted with self-government that [its] automatic response to government is criticism."⁹⁶ If there is a "patholog[ical]" position here it is, I suggest, the contrary one, for the history of "collective control" over the use and deployment of natural languages is an ugly one; ask the Armenians, or the Basques, or the Irish, or the Navajo.

Perhaps I am wrong, but I think I am not alone in that view. And that Lessig could do worse than starting here if he is interested in uncovering why so people seem not to get his argument.

Common Ground

This is a large, and perhaps unbridgeable, gap between two very different ways of looking at the world. To those for whom liberty is a paramount value, calls for "collective action" are fraught with peril, because they necessarily involve the use of coercive force to bind some portion of the polity to act in ways that others think necessary for the common good. As Lessig himself points out, sometimes the values of the collective are "values of liberty," and sometimes they are not, for sometimes they "deny or restrict liberty in the name of some other value that is weighed more strongly than liberty."⁹⁷ Not comforting words, to many. Before we sign on to subject ourselves to the collective will and the collective judgement, we'd like to know how this collectivization process will itself be constrained. Lessig recognizes that it must be constrained, that there must be spheres of life that remain free from the

⁹⁴*Code, supra* note 2, at 233.

⁹⁵*Id.*, at x.

⁹⁶*Id.*, at 209.

⁹⁷ *Id.*, at 209.

collective will,⁹⁸ but he does not really tell us what they are or how those constraints will work.

I do not want to suggest that this leaves no common ground between the two positions, for that is clearly not the case. The true path, inevitably, if anti-climactically, lies somewhere in between the rather more extreme positions to which rhetoric often confines us. The conscientious libertarian recognizes that there are times when collective action is required to promote the common welfare; that the government, while not always the answer, is not always the enemy; and that while deliberation can be de-liberating,⁹⁹ it need not always be so.

Architectures of liberty *are* of fundamental importance; they arise only as the product of human action; they have always been, and will always be, under attack from many directions; if we, in the aggregate, "do nothing," we will get nothing (or worse) in return. On these points, we agree. There is thus a building project at hand; cyberspace needs architectures where deliberation and reason and freedom can flourish, because -- we both believe -- people want to live in communities where deliberation and reason and freedom can flourish. We can disagree about the extent to which the coercive power of the State needs to be invoked in order to get those communities built and to get people to live there. But we do not disagree about the need to build them. So let the building begin (or is it "continue"?).

⁹⁸See *id.*, at 208 ("I am not a statist. I don't think the best of us is given to us from top-down. There is a proper space for collective life, and an important space for private life. A good constitution helps us navigate that balance.").

⁹⁹ Talk about the architecture(s) of English! As it turns out, the seeming opposition between "liberation" and "deliberation" is just an ironic semantic coincidence. The two words appear to have been derived independently from different roots, the former from the Latin *liber*, to set free (and related to the Roman goddess of growth, *Liber*), the latter from the Latin *librare*, to balance (hence *Libra*, the scales). See Eric Partridge, *Origins: A short Etymological Dictionary of Modern English* (MacMillan, 1958).