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CLIMBING THE WALLS OF YOUR ELECTRONIC CAGE

*Steven Hetcher**

CODE: AND OTHER LAWS OF CYBERSPACE. By *Lawrence Lessig*. New York: Basic Books. 1999. Pp. xii, 297. Cloth, \$30; paper, \$15.

Space. The final frontier. Not so, say the doyennes of the first-generation Internet community, who view themselves as the new frontiersmen and women staking out a previously unexplored territory — cyberspace. Numerous metaphors in the Internet literature picture cyberspace as a new, previously unexplored domain. Parallels are frequently drawn to the American colonies, the Western frontier, or outer space. In *Code: And Other Laws of Cyberspace*, Lawrence Lessig¹ says, “Cyberspace is a place. People live there.”² In this place, we will build a “new society” (p. 4). A sense of this background is helpful in appraising Lessig’s claims.

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1. Currently, Jack N. and Lillian R. Berkman Professor for Entrepreneurial Legal Studies, Harvard Law School. In the fall of 2000, Professor Lessig joins the faculty at Stanford Law School.

2. P. 190; see also Dan Rosen, *Surfing the Sento*, 12 BERKELEY TECH. L.J. 213, 216 (1997) (discussing the possible “founding fathers of a new cybernation”); Luke A. Walker, *ICANN’s Uniform Domain Name Dispute Resolution Policy*, 15 BERKELEY TECH. L.J. 289, 289 (2000) (calling cyberspace the latest new frontier). Elsewhere Lessig has written:

While they are in that place, cyberspace, they are also here. They are at a terminal screen, eating chips, ignoring the phone. They are downstairs on the computer, late at night, while their husbands are asleep. They are at work, or at cyber cafes, or in a computer lab. They live this life there, while here. And then at some point in the day, they jack out, and are only here. They step up from the machine, in a bit of a daze; they turn around. They have returned.

Lawrence Lessig, *The Zones of Cyberspace*, 48 STAN. L. REV. 1403, 1403 (1996) (footnote omitted).

He argues that “we” need a “constitution” for cyberspace.³ This seems reasonable, a new social compact for a new society.⁴

While Lessig has his legal training in the U.S. system, as a former law clerk to Justice Antonin Scalia and a recognized American constitutional law scholar, in *Code*, he uses the word “constitution” in its British rather than its American sense.⁵ For the British, a constitution is an unwritten common understanding about fundamental social values and social practices that merits institutional protection from the vicissitudes of ordinary politics.⁶ The purview of Lessig’s project, then, is constitutional theory understood as the theory of social order, a broader inquiry than the top-down, text-based American constitutional theory.⁷

3. See p. 5 (“We build a world where freedom can flourish not by removing from society any self-conscious control; we build a world where freedom can flourish by setting it in a place where a particular kind of self-conscious control survives. We build liberty, that is, as our founders did, by setting society upon a certain *constitution*.”). Lessig appears to use “we” to mean both Americans and some undefined larger group: “We should understand that we are part of a worldwide political battle; that we have views about what rights should be guaranteed to all humans, regardless of their nationality; and that we should be ready to press these views in this new political space opened up by the Net.” P. 205.

4. I would argue instead that we have a constitution for cyberspace already. It is the one written on parchment and displayed at the National Archives. Things are, of course, complicated by the fact that the Internet is a global phenomenon. But just because a phenomenon is global does not mean that the Constitution cedes jurisdiction over those elements that have significant impact within the United States. The Internet is revolutionary, but physical borders still matter, and will continue to, for the foreseeable future. See Jack Goldsmith, *Regulation of the Internet: Three Persistent Fallacies*, 73 CHI.-KENT L. REV. 1119, 1124 (1998). In general, Lessig agrees that real space jurisdiction matters for cyberspace regulation. P. 190.

5. See p. 5 (“But by ‘constitution’ I don’t mean a legal text. . . . Rather, as the British understand when they speak of their constitution, I mean an *architecture* — not just a legal text but a way of life — that structures and constrains social and legal power, to the end of protecting fundamental *values* — principles and ideals that reach beyond the compromises of ordinary politics.”).

6. See p. 217 (“[T]he Constitution was drawn at a time when basic architectures were set. The framers *found* the laws of nature . . . they were not made by government or man.”); see also H.L.A. HART, *THE CONCEPT OF LAW* 56-57, 88-90, 102-03 (2d ed. 1994); Thomas B. McAfee, *Prolegomena to a Meaningful Debate of the “Unwritten Constitution” Thesis*, 61 U. CIN. L. REV. 107, 166 n.192 (1992) (citing J.W. GOUGH, *FUNDAMENTAL LAW IN ENGLISH CONSTITUTIONAL HISTORY* 174-91 (1995)).

7. Lessig speaks of code and commerce as, “[t]wo forces of social order.” P. ix; see also, e.g., RUSSELL HARDIN, *TRUST AND TRUSTWORTHINESS* (forthcoming Jan. 2001); JON ELSTER, *THE CEMENT OF SOCIETY: A STUDY OF SOCIAL ORDER* (1989). Lessig has been a contributor to the new social norms legal literature, which places legal regulation within the broader context of overall social regulation. See generally, e.g., Lawrence Lessig, *The Law of the Horse: What Cyberlaw Might Teach*, 113 HARV. L. REV. 501 (1999); Lawrence Lessig, *The Limits in Open Code: Regulatory Standards and the Future of the Net*, 14 BERKELEY TECH. L.J. 759 (1999); Lawrence Lessig, *Commons And Code*, 9 FORDHAM INTELL. PROP., MEDIA & ENT. L.J. 405 (1999); Lawrence Lessig, *The Zones of Cyberspace*, 48 STAN. L. REV. 1403 (1996); Lawrence Lessig, *Intellectual Property And Code*, 11 ST. JOHN’S J. LEGAL COMMENT. 635 (1996); Lawrence Lessig, *Reading the Constitution in Cyberspace*, 45 EMORY

Lessig implores us to begin the search for a way of life in cyberspace that protects “fundamental values” (p. 6). Either we do so very soon, he insists, or we risk locking ourselves into an architecture of computer code that will destroy liberty,⁸ as a by-product of promoting the interests of global electronic commerce.⁹ Given the libertarian leanings of the Internet community,¹⁰ it is ironic, Lessig observes, that the forces of the market, Adam Smith’s invisible hand, will wield the hammer.¹¹ After all, it is the libertarian creed that markets create liberty, not destroy it. According to Lessig, the overly zealous commitment to libertarianism on the part of the first-generation community blinds them to this threat, however.

While Lessig paints a foreboding picture of the dark clouds of oppression gathering on the online horizon, he notes as well that a brighter future is possible.¹² Code is by nature mutable and may be used to secure a constitutional structure for cyberspace that promotes political freedom. Lessig contends that we as a society have yet to realize that a choice must be made with regard to the degree of liberty we want in cyberspace (pp. 6-7). The goal is to choose — from among all the possible cyberspaces — the one with an architectural code that best promises to support liberty and other fundamental values we choose to import into cyberspace (p. 6).

Lessig goes so far as to say “[c]ode is law” (pp. 6, 59). Taken at face value, this is an extraordinary claim, given the dominance of posi-

L.J. 869 (1996); Lawrence Lessig, *Post Constitutionalism*, 94 MICH. L. REV. 1422 (1996) (book review).

8. See p. 6 (“[W]e see that much of the ‘liberty’ present at cyberspace’s founding will vanish in its future.”).

9. See p. x (“[A] future of control in large part exercised by technologies of commerce, backed by the rule of law.”).

10. Lay-libertarian sentiment is aptly characterized in the following well-known phrase: “We believe in: rough consensus and running code.” P. 4. The phrase was coined by one of the founders of the Internet, David Clark of MIT, in describing the philosophy of setting Internet standards. See Gary C. Kessler, *IETF — History, Background, and Role in Today’s Internet* (visited June 22, 2000) <http://www.vtac.com/Tutorials/ietf_hx.html>. This strong libertarian stance has the implication that a position such as Richard Epstein’s would make him a “Red.” See Lawrence Lessig, *Real-World Libertarians and the Net* (visited June 22, 2000) <<http://slate.msn.com/code/BookClub/BookClub.asp?Show=1/17/00&idMessage=4391&idBio=139>> [hereinafter Lessig, *Real-World Libertarians and the Net*]; Richard Epstein, *Libertarianism is not Anarchism* (visited June 22, 2000) <<http://slate.msn.com/code/BookClub/BookClub.asp?Show=1/17/00&idMessage=4391&idBio=139>>.

11. See p. 6 (“[T]he argument of this book is that the invisible hand of cyberspace is building an architecture that is quite the opposite of what it was at cyberspace’s birth. . . . This book is about that change, and about how we might prevent it.”); see also RUSSELL HARDIN, *COLLECTIVE ACTION* 6-15 (1982) (discussing the “back of the invisible hand”).

12. See p. 6 (“We can build, or architect, or code cyberspace to protect values that we believe are fundamental, or we can build, or architect, or code cyberspace to allow those values to disappear.”).

tivism in modern jurisprudence.¹³ Whatever Lessig's overall jurisprudence of cyberspace, one thing is certain; conceiving of code as law makes the choice of code political. Indeed, for Lessig, as for his intellectual forebears, code is quintessentially political.¹⁴ One of the book's most important contributions is that it raises the basic and crucial proposition regarding the normativity of code to a new level of sophistication, demonstrating the applicability of the thesis to issues of privacy, speech, and other core constitutional values (pp. 109-209).

Lessig has written the first book devoted to the political theory of computer code. "Code," as the term is used by Lessig, refers, however, both to computer code — the code written by programmers — and to legal code — the code written by legislators. One of the book's *leitmotifs* is a comparison between the properties of computer code and those of legal code, or, as Lessig quips, "West Coast code" versus "East Coast code" (p. 53). The overarching similarity is that both regulate human behavior.

The regulation of human behavior, "regulability," is a second key topic of the book. Regulability refers to the "capacity of a government to regulate behavior within its proper reach."¹⁵ On the account Lessig develops, there are four important regulators of behavior: law, norms, architecture, and markets (pp. 87-89). Lessig argues that in cyberspace, network computer architecture is a "newly powerful regulator" of human behavior (p. 86). Nevertheless, a full account of the social order of cyberspace requires an examination of the interplay of all four regulatory forces.

Code's main normative thesis is that we must resist the migration toward a more regulable Internet. More specifically, Lessig argues for a "commons" in the key architectural code of cyberspace (p. 8). This commons will result if the application layer of the Internet is dominated by open source code (p. 100). Open source code is to be understood by contrast with closed source code. Simply understood, open code reveals its source and closed code does not. Because open code

13. See generally Jules L. Coleman, *Negative and Positive Positivism*, 11 J. LEGAL STUD. 139 (1982); Anthony J. Sebok, *Misunderstanding Positivism*, 93 MICH. L. REV. 2054 (1995). What Lessig appears to mean is that code is law in the sense of being a law of a nature for cyberspace. P. 70.

14. See STEVEN JOHNSON, *INTERFACE CULTURE: HOW NEW TECHNOLOGY TRANSFORMS THE WAY WE CREATE AND COMMUNICATE* (1997) ("All works of architecture imply a worldview, which means that all architecture is in some deeper sense political."); James Boyle, *Foucault in Cyberspace: Surveillance, Sovereignty, and Hardwired Censors*, 66 U. CIN. L. REV. 177 (1997); Mitchell Kapor, *The Software Design Manifesto* (visited June 23, 2000) <http://www.kei.com/homepages/mkapor/Software_Design_Manifesto.html>; Pamela Samuelson et al., *A Manifesto Concerning the Legal Protection of Computer Programs*, 94 COLUM. L. REV. 2308 (1994).

15. P. 19. For a similar but non-normative definition, see p. 14 where Lessig states, "[b]y 'regulable' I mean simply that a certain behavior is capable of regulation."

carries its source code along with the object code, modifications are more easily possible. Lessig is an unabashed proponent of the open source code movement, which he sees as revolutionary (p. 8). Open code will make cyberspace less regulable because it puts coding in the hands of more people, and, thus, code will be less subject to centralized control.¹⁶ Lessig conceptualizes the situation in constitutional terms. The citizenry will be safe from the tyranny of government only if the awesome potential for power held by code is distributed broadly among the programming world rather than concentrated in a small number of hands.¹⁷

Lessig's overall argument is spread throughout the book's seventeen chapters, which are divided into four parts. The main arguments of *Code*, which will be the focus of this Review, are set out in Parts 1 and 2, entitled "Regulability," and "Code and Other Regulators." Part 3, entitled "Applications," applies the arguments of Parts 1 and 2 to four important issues: intellectual property, privacy, free speech, and sovereignty. Part 4, entitled "Responses," outlines responses to actual and hypothetical objections to the book's main arguments.

Chapter One (as well as the Preface) provides a straightforward overview of the book. In Chapter Two, Lessig introduces the book's four themes and illustrates them by means of four stories; the themes are 1) Regulability, 2) Regulation by Code, 3) Competing Sovereigns, and 4) Latent Ambiguity.¹⁸ Lessig explains, "[m]y aim in the balance of this book is to work through the issues raised by these four themes" (p. 19). As Lessig says, he uses the four themes to "understand cyberspace as it is" and as "[he] believe[s] it is becoming" (p. 23).

Below, I first set out and evaluate the thirteen propositions (positive and normative) which I argue provide a logical foundation to Lessig's main themes. Since propositions are more specific than Lessig's "themes" (propositions have truth values, themes do not), this analytic device will facilitate clarity in the evaluation of the themes.

16. See *infra* text accompanying notes 65-74. Though Lessig is understandably coy, the implication for the Microsoft antitrust litigation is apparent. See *United States v. Microsoft Corp.*, 87 F. Supp. 2d 30 (D.D.C. 2000).

17. See p. 7 ("One part of this question of ownership is at the core of the current debate between open and closed source software. In a way that the American founders would have instinctively understood, 'free software' or 'open source software' — or 'open code' . . . is itself a check on arbitrary power.").

18. Pp. 19-23. Note that the first two themes, "Regulability," and "Regulation by code," correspond to the first two parts of the book, "Regulability," and "Code and Other Regulators."

BASIC PROPOSITIONAL STRUCTURE OF LESSIG'S ARGUMENT

The following set of propositions is meant to capture the interconnecting structure of the core arguments implicit in Lessig's four themes. In reading the propositions in the following summary form, note that they fall into a logical sequence. This sequence is implicit in the structure of *Code*. Lessig's themes "describe," rather than state propositions. Hence, they do not have truth values and consequentially lack logical connectivity.¹⁹

1. Net95 was unregulable.²⁰
2. Libertarians believe the Internet is unregulable by nature.
3. The Internet is regulable.

Therefore:

4. Libertarians hold a faulty conception regarding the nature of the Internet.
5. Code is the most important regulator of the Internet.
6. The Internet embodies values.
7. *Liberty is an important value that ought to be respected and promoted.*
8. There is an inverse correlation between regulability and liberty.

Therefore:

9. The Internet is diminishing in its capacity to promote liberty.

Therefore:

10. *The trend toward increased regulability of the Internet ought to be reversed.*
11. Open source code is less regulable than closed (proprietary) source code.

Therefore:

12. *Open source code ought to be promoted.*
13. We Need An Internet Constitution

The three statements above that are italicized (numbers 7, 10, and 12) are "normative"—that is, "ought" statements, not "is" statements. Hume's Law is sometimes stated as: An ought cannot be derived from

19. Themes "describe." P. 8. Lessig's themes are nevertheless adaptive, as they make the book more accessible to a wider audience, which is an important goal of the book. Lessig says that his audience is second-generation netizens. P. xi.

20. For a definition and discussion of "Net95," see *infra* text accompanying note 22.

an is.²¹ The proper conception of Hume's Law, however, is that an ought statement cannot be derived *merely* from an is statement. Lessig does not explicitly characterize his leading assertions as either positive or normative. As we work through the set of propositions that embody his argument, however, it will be important to pay attention to the connections he draws between the "ises" and the "oughts."

In the following discussion, I evaluate, independently and then in conjunction with each other, each of the thirteen propositions that together constitute the core arguments of the book.

1. *Net95 was Unregulable*

Lessig discusses what he refers to as "Net95," which is what the Internet was like, *circa* 1995.²² The most significant feature of Net95 was that it was a world that could not be controlled. It is this Internet that libertarians have in mind. Lessig sets out three structural elements that were conspicuously absent in Net95. These are "credentials," "labels" and "zones" (p. 28). As Lessig notes, these elements can either be seen as "features" or "imperfections," depending on whether one favors increased regulability of the Internet (p. 27).

Net95 lacked information about users' identities (p. 28). By identification, Lessig means all the true facts about a person, such as "your name, your sex, where you live, what your education is, your driver's license number . . ." (pp. 30-31). "Authentication" is the process by which aspects of your identity become known (p. 31). Net95 did not have an architecture that allowed people to authenticate personal facts that are not self-authenticating.²³ Some personal facts are self-authenticating. Lessig argues that in the physical world, many facts are self-authenticating or easily authenticated. In cyberspace, however, at least with regard to Net95, personal facts are not self-authenticating (pp. 32-33). For facts that are not self-authenticating,

21. DAVID HUME, A TREATISE OF HUMAN NATURE, 1739-40 (L.A. Selby-Bigge & P.H. Niddich eds., 2d ed., Oxford Univ. Press 1978); *see also* R.M. HARE, MORAL THINKING: ITS LEVELS, METHOD AND POINT 16 (1981) (discussing "Hume's Law").

22. *See* pp. 25-27. Lessig states that the computer network that previously existed at the University of Chicago exemplifies Net95. P. 27. He had direct acquaintance with this system, as he was teaching at the University of Chicago when this system was in place.

23. *See* p. 31.

"Authentication" is the process by which aspects of your identity become known. . . . If I walk into a bank, the teller will know a lot about me even if I don't say a thing: he will know I'm a puffy, middle-aged white guy with glasses and blondish hair; he will know I'm not big and not strong. . . . He will know all this whether I want to tell him or not. . . . Hiding usually does not hide itself very well; usually we reveal that we are hiding.

P. 31. Lessig gives the example of the University of Chicago system. The architecture required no credentials; thus, it was "both easy to hide that you [were] a dog and hard to prove that you were not." P. 33.

Lessig argues that new architectures are quickly evolving on the Internet that will make them capable of authentication. These are “credentials.” Lessig examines three forms of credentialing currently found on the Internet, which are “passwords,” “cookies,” and “digital certificates.”²⁴

A second feature that defined Net95 was an absence of labels. While it is true that the packets of data that sail across the Internet are labeled in the sense of having an Internet Protocol (IP) address,²⁵ beyond that, they could contain anything at all. Under Net95, there was no system for obtaining verifiable information about the data on the Net because such data traveled unlabeled.²⁶

The third core feature of Net95 — the absence of zones — tied the first two together. Because there was no simple way either to know who someone was or to classify data, there was no simple way to make access to data depend on who the user was, or on the data to which she or he wanted access. As Lessig says, under Net95, there was “no simple way to zone cyberspace.”²⁷

These three features in combination made Net95 largely unregulable, a dream telecosm by libertarian lights. Lessig accounts for this lack of regulability as an unintended consequence of the early exigen-

24. Pp. 34-35. Each of these three credentials provides a means to identify someone on the Internet. Typically, a “password” is a word or number that is kept secret. The user enters the password along with her account name in order to verify that the user is authorized to use the system. Manufacturers are experimenting with biometric devices such as thumbprint readers and retina scanners to link particular individuals to particular machines. P. 57. A “cookie” is a small bit of data entered by your browser to a “cookie file” on your hard drive. Websites that you visit initiate these cookies so that when you return to the site, they can recognize you because the cookie is sent by your browser to the website along with the request for the site. Like the above two technologies, “digital certificates” serve to identify you on the Internet. Digital certificates provide and certify more detailed information, however, such as citizenship, age, occupation, gender, etc.

25. IP addresses are the bits of data that allow packets of information to move from one place to another on the Net. They look like this: 394.64.85.666. Basically, IP addresses function like postal addresses, saying from where the packet is coming and to where the packet is going.

26. See p. 28 (“Pictures of flesh come across a screen, but the system cannot tell whether the pictures are medical photos or pornography. Data about bodily functions come across the wire, but the system cannot tell whether the data are from medical records or a novel Net95 had no requirement that data be labeled.”).

27. P. 28 (emphasis omitted). Lessig argues that zoning techniques will lead to previously unimagined abilities to regulate the Web. He writes:

The effect, in short, would be to zone cyberspace based on the qualifications carried by individual users. It would enable a degree of control of cyberspace that few have ever imagined. Cyberspace would go from being an unregulable space to, depending on the depth of the certificates in the space, the most regulable space imaginable.

P. 57 (emphasis omitted).

cies of the largely research-oriented academic community that developed the Internet.²⁸

2. *Libertarians Believe the Internet is Unregulable by Nature*

Chapter Three is entitled, "Is-isms," which, according to Lessig, is the fallacy of thinking that because something is a certain way, it must stay that way (p. 25). According to Lessig, this fallacy is widespread among, indeed characteristic of, the Internet community when it comes to their belief in the unregulability of the Internet (p. 4). Lessig compares what he calls the "libertarian utopianism" of the Net to what he found in Eastern Europe in the early 1990s.²⁹ This community sees the Internet as an unregulated space, and implicitly thinks its destiny is to remain that way.

3. *The Internet is Regulable*

As mentioned earlier, Lessig's first theme is "regulability." As the form of cognate chosen suggests, the book provides a discussion of "regulability" understood so as to be applicable to systems. With regard to the Internet, Lessig argues that while the Internet was unregulable in 1995, it is advancing rapidly toward a state of greater regulability. Lessig explores in detail the great extent to which each of the three features missing from Net95 can be laid onto the architecture of the Internet as it currently exists. Lessig argues convincingly that it will be in the interest of electronic commerce to code in all three of these features, credentials, labels, and zones, in order to create more sophisticated marketplaces in cyberspace (p. 42).

For the lay libertarians who peopled early cyberspace, the absence of these three features made for a free and open electronic space in which people could quietly come and go as they pleased. In this early period, the Internet was noncommercial and without markets. For the assembling titans of wired capitalism, however, the lack of credentials, labels, and zones are serious obstacles to their business models and accordingly must be overcome. Lessig argues that it is through technologies of identification and authentication that users will be credentialed, and data credentialed and labeled, such that cyberspace will be

28. See p. 33 ("This minimalism in design is intentional. It reflects both a political decision about disabling control and a technological decision about the optimal network design. The designers were not interested in advancing social control; they were concerned with network efficiency.").

29. See p. 4 ("As in post-Communist Europe, first thoughts about cyberspace tied freedom to the disappearance of the state. But here the bond was even stronger than in post-Communist Europe. The claim now was that government could not regulate cyberspace, that cyberspace was essentially, and unavoidably, free.") (emphasis omitted).

capable of being effectively zoned (p. 57). This process is already under way such that cyberspace becomes more regulable every day.³⁰

Computer code provides the means to make the Internet more regulable, and electronic commerce provides the incentive (p. 42). Lessig argues that the commercial development of the Internet is creating the main pressure pushing toward greater regulability. The above three features of Net95 each facilitate electronic commerce.³¹

Therefore:

4. *Libertarians Hold a Faulty Conception Regarding the Nature of the Internet*

As just discussed, Lessig demonstrates that while it is true that the Internet was unregulable in 1995, by the time he was completing the book in 1999, the Net had become substantially more regulable (pp. 43-60). Libertarians, however, think that the Net is unregulable by nature (p. 5). If Net95 was unregulable and Net99 is becoming regulable, then obviously the Net does not have an essential nature when it comes to regulability. Libertarians who think otherwise are simply wrong.

To evaluate the conclusion that Lessig draws in Proposition Four (that the libertarians are wrong regarding regulability), it is necessary to evaluate each of the premises—propositions one through three. Proposition one, that Net95 was unregulable, is in need of qualification. Lessig defines regulability as the “capacity of a government to regulate behavior within its proper reach” (p. 19). Note that this definition makes no requirement that regulability come by means of computer code for advanced methods of identification and authentication of the sort described by Lessig. In other words, regulability, as generically understood, allows scope for low-tech means of regulability as well as high-tech means of regulability.

Title II of the Digital Millennium Copyright Act (“DMCA”) provides a low tech means of increasing regulability.³² It creates safe harbors from copyright liability for Internet Service Providers (ISPs). Because ISPs play a leading role with regard to the Internet, creating safe harbors for many of their activities is an important instance of statutory regulation of the Internet. Yet, the means by which the safe

30. See Deborah M. Thaw, *The Net Makes Notaries More Necessary, Not Less*, BUS. WK., Dec. 13, 1999, at 18 (arguing that current business dealing demands identity assurance).

31. See p. 30 (“As the Net is being remade to fit the demands of commerce, architectures are being added to make it serve commerce more efficiently. Regulability will be a by-product of these changes.”).

32. Pub. L. No. 105-304, 112 Stat. 2860 (1998). Title II of the Act is known as the Online Copyright Infringement Liability Limitation Act.

harbor provisions work is low-tech, requiring none of the sophisticated architectural devices discussed by Lessig. Thus, low-tech means of Internet regulation may produce dramatic results in terms of regulability.³³ Low-tech means of regulability of this sort were available under Net95. Hence, it is not the case that Net95 was unregulable. Proposition one is incorrect.

Proposition two, which holds that libertarians think that the Net is unregulable, is also in need of qualification. When Lessig talks about libertarians, he is generally not referring to academic libertarians but rather to the large and influential cohort within the Internet community who are libertarian in their political views regarding the Internet.³⁴ With regard to this lay libertarian political community, Proposition two is correct. Lessig is right that it has been, and remains, common for Internet cognoscente to state that the Internet is not capable of regulation. And many others, who do not go quite this far, nevertheless maintain that government regulation of the Internet, while perhaps not impossible, is nevertheless a bad idea.

With regard to academic cyber-libertarianism, however, the picture is more scrambled. David Post and David Johnson hold the view that Lessig criticizes.³⁵ Richard Epstein, however, explicitly distinguishes

33. In fact, each of the statutes produced by the U.S. Congress thus far to regulate the Internet are best viewed as low-tech, non-code-based forms of regulation. See Anticybersquatting Consumer Protection Act, Pub. L. No. 106-113, 113 Stat. 1536, 1501A-545 (1999) (codified as scattered sections of 15 U.S.C.A. & 16 U.S.C.A. (West Supp. 2000)) [hereinafter Anticybersquatting Act]; No Electronic Theft ("NET") Act, Pub. L. No. 105-147, 111 Stat. 2678 (1997) (codified as scattered sections of 17 U.S.C., 18 U.S.C., 28 U.S.C. (1994 & Supp. III 1997)) [hereinafter NET Act]; Communications Decency Act of 1996, Pub. L. No. 104-104, § 509, 110 Stat. 133, 137-139 (1996) (codified as 47 U.S.C. § 230 (1994 & Supp. II 1996)) [hereinafter § 230 of the CDA]. This is true as well with regard to recent efforts by other countries, such as China, to regulate Internet use. The Chinese government recently stepped up efforts to censor the content that appears on the screens of computers in China. The government utilizes a variety of means to accomplish this result, many of which are distinctly low-tech, such as threatening to imprison those who post proscribed content:

They routinely block Web sites for some international media outlets and are training special police units to monitor Internet activity. Internet-cafe operators are charged with making sure users don't "endanger national security" while online. A final line of defense is the low-tech, tried and true method of scaring users into policing themselves by making examples of people who venture into banned territory. In December, a Shanghai court handed down a two-year jail term to a software vendor, Lin Hai, who sold 30,000 Chinese e-mail addresses to a U.S.-based online dissident journal.

Susan Lawrence, *Beijing Mounts Great Leap Online*, NAT'L POST, Mar. 3, 1999, available in WESTLAW, 1999 WL 13666980.

34. See p. 85 & n.1 (" 'Libertarian,' however, has a specific meaning for us. It associates with arguments against government." "Or more precisely, against a certain form of government regulation (in cyberspace).").

35. Lessig begins Chapter Three with the following epigram, which he says exemplifies the sort of libertarian view he has in mind: "The rise of an electronic medium that disregards geographical boundaries throws the law into disarray by creating entirely new phenomena that need to become the subject of clear legal rules but that cannot be governed, satisfactorily, by any current territorially based sovereign." P. 24 (quoting David R. Johnson

his flavor of libertarianism from Lessig's characterization.³⁶ We see then that Proposition two is true for the lay-libertarian community but only partially true for the academic-libertarian community.³⁷

As already stated, Proposition three is correct, the Net is indeed becoming more regulable. The question then is whether the conclusion stated in Proposition four follows from Propositions one through three, once Propositions one and two have been qualified. The answer is yes. While Net95 was not unregulable in the broad sense indicated by Lessig's definition of regulability, it was nevertheless difficult to regulate (or regulable only in a perhaps less effective low-tech sense), so Proposition one is close to true. And most, if not all, libertarians mistakenly thought the Net's unregulability was an immutable feature. So Proposition two is substantially true as well. Since Proposition three is correct in holding that the Internet is regulable, it follows that libertarians have an incorrect conception regarding the regulability of the Internet.

The conclusion Lessig draws in Proposition four is both logically valid and true. Lessig is not interested in making this point for its own sake. His larger concern is to argue that the common libertarian misconception is dangerous, as blindness to the problem entails inattention to the problem. Lessig writes,

"Let the Net take care of itself," is the slogan of our generation — and the current administration. But if we do, then the Net will become something very different from what it is just now. That's the argument of my book. Not an attack on ivory-tower Libertarianism. Nor even an attack

& David Post, *Law and Borders — The Rise of Law in Cyberspace*, 48 STAN. L. REV. 1367, 1375 (1996)).

36. See Epstein, *supra* note 10, ¶ 5 ("Rather, the libertarian is someone whose objective function starts with the goal of minimizing the use of force and fraud in human interactions [T]he libertarian is not an anarchist.").

37. In his subsequent exchange with Richard Epstein in *Slate* magazine, Lessig provides the following helpful summary of competing libertarian conceptions.

But there is "libertarianism" in the ivory tower and there is "libertarianism" on the ground. I recognize the species that Richard describes; I am a permanent resident of the ivory tower. But my book describes a present political attitude, not the ivory tower. It is about a present political reality, and a present rhetorical push. I am describing it because I have been watching it for the past six years. In that world, if someone argued (as Richard does above) that a "law of privacy" was needed, as well as law protecting trade secrets; that laws regulating libel and slander were necessary, as well as a law regulating blackmail; if one even raised the issue of taxation, or suggested that the government was needed to "secure the infrastructure," then one would not be a "libertarian." One would be a Red. The libertarian of the Net has a simple message, quite different from ivory-tower libertarianism. It is: Keep the government out.

See Lessig, *Real-World Libertarians and the Net*, *supra* note 10, ¶ 7.

on “sensible libertarianism.” But an attack on a certain do-nothingness that pervades our present political culture.³⁸

Lessig’s argument and conclusion here are important.

5. *Code is the Most Important Regulator of the Internet*

The second “theme” of the book is “regulation by code.” Lessig states that this second theme should be considered in conjunction with Theme one, “regulability.” In Lessig’s words, “the regulability described by the first theme depends on the code described in the second” (p. 20; emphasis omitted). Lessig nestles this account of regulation by code within a more general account of social regulation.³⁹

Lessig identifies four main forces affecting social regulation: law, markets, norms, and architecture (p. 88). Lessig says we should think of each as a distinct modality of regulation (p. 88). What the modalities have in common is that each serves as a “constraint” on behavior (p. 88). Laws constrain behavior by making certain activities illegal (p. 89). Markets constrain by making certain behaviors more expensive (p. 89). Norms constrain by making certain behaviors subject to informal yet often potent social sanctions (p. 235). Finally, code (architecture) constrains behavior by creating architectural structures that constrain behavior (pp. 89-90).

In cyberspace, code is the most important regulator (p. 86). As Lessig says, in the late twentieth century and into the twenty-first, it is code that should be our concern (p. 86). While the role of code is salient as never before, it is not Lessig’s argument that we focus exclusively on code. Rather, we need to implement a more general understanding of how regulation works, one that accounts for the increasingly important role played by code.⁴⁰

Code is an important regulator in cyberspace for the obvious but profound reason that code is what provides the raw material out of which cyberspace is built. Cyberspace simply would not exist without this code. Hume famously refers to causation as the cement of the universe.⁴¹ Picking up on this, Jon Elster refers to social norms as the cement of society.⁴² For Lessig, code is the cement of cyberspace. In

38. Lessig, *Real-World Libertarians and the Net*, *supra* note 10, ¶¶ 8-9.

39. Lessig develops this account more fully in the appendix to the book. *See* pp. 235-39.

40. In Chapter 7, in which Lessig lays out his account of social regulation, he provides a number of diagrams that are meant to capture the individual persons buffeted about by the four forces impinging from all four directions. In the center of these forces, the individual is represented by a “dot.” Curiously, Lessig refers to the dots (us) as “pathetic.” P. 86.

41. DAVID HUME, *AN ABSTRACT OF A TREATISE OF HUMAN NATURE* 32 (1740) (reprinted with an introduction by J.M. Keynes and P. Staffa, Cambridge University Press 1938).

42. *See generally* ELSTER, *supra* note 7.

fact, as Lessig reminds us, there is not one cyberspace possible but many, and the constitutive difference is code.⁴³

6. *The Internet Embodies Values*

According to Lessig, not only does code provide the raw materials, it also determines the normative character of cyberspace. One of the most important features of architectural code is that it is not value neutral. To the contrary, different architectures promote different values. Lessig writes, “[w]hat distinguishes different parts of cyberspace are the differences in the regulations effected through code. In some places life is fairly free, in other places controlled, and the difference between them is simply a difference in the architectures of control — that is, a difference in code” (p. 20).

One of the distinctive features of architectural code as a regulator is that it may promote or stifle values in a relatively invisible manner. Just as Robert Moses could use the height of highway overpasses to keep city buses (and, therefore, African Americans) away from the beaches of Long Island, so too, code writers can create architectures that have significant policy implications in peoples’ lives.⁴⁴ Lessig discusses a number of different sub-regions of cyberspace in order to show how values may be implicit in different architectural structures.

Lessig compares the computer networks at the University of Chicago and Harvard University. Chicago’s network was explicitly chosen to promote First Amendment free speech values. The network designers asked the Provost if the network should build in identification architecture (p. 26). The Provost, First Amendment scholar Geoffrey Stone, chose instead to promote free speech values by building anonymity into the system.⁴⁵ By contrast, Harvard chose to disallow anonymity by requiring that members of the university community register their machines.⁴⁶

43. P. 82 (“[C]yberspace is not *a* place; it is many places. Its places don’t have one nature; the places of cyberspaces have many different ‘natures.’ These natures are not given, they are made These architectures are themselves not given; these architectures of code are set by the architects of cyberspace — code writers.”).

44. See p. 92 & n.9 (citing ROBERT A. CARO, *THE POWER BROKER: ROBERT MOSES AND THE FALL OF NEW YORK* 318 (1974)).

45. See p. 83 (“At the University of Chicago, if you wanted access to the Internet, you simply connected your machine to jacks located throughout the university. Any machine with an Ethernet connection could be plugged into these jacks. Once connected, your machine had full access to the Internet — access, that is, that was complete, anonymous, and free.” (footnote omitted)).

46. See p. 26 (“You cannot connect your machine to the net at Harvard unless the machine is registered — licensed, approved, verified Once registered, all interactions with the network are monitored and identified to a particular machine”).

Lessig pays the most attention to the space owned by America Online ("AOL"). Like Walt Disney before him, AOL CEO, Steve Case, seeks to provide an environment in which the values that his organization favors may flourish. AOL has a number of architectural features that are relevant to the values that adhere in its space. Each AOL account is allowed five screen names (p. 67). This architectural feature promotes anonymous, indeed pseudonymous, online activity. As Lessig notes, anonymity may promote political expression (pp. 70-73). AOL's chat rooms, however, have a maximum of twenty-four participants, and, thus, it is not possible for members to address other members *en masse*.⁴⁷ In addition, AOL has a general code of conduct that constrains certain sorts of behavior such as obscenity (p. 67).

Consider next the online service Counsel Connect. The ninety or so discussion groups that comprise Counsel Connect each have discussion leaders (p. 72). By contrast to AOL, however, these discussion leaders do not have the ability to cancel postings (p. 72). Thus, Counsel Connect is more respectful of free speech than is AOL. Another distinct feature is that with Counsel Connect, the lawyer participants must use their real names (p. 73). The use of real names allows participants to develop reputations, such as the reputation as a good lawyer to whom another lawyer would refer business (p. 73).

Finally, consider the values that may be instantiated in MUDs and MOOs.⁴⁸ LamdaMOO is one of the older more well-established MOOs. It is a text-based virtual reality that is linked to over 5000 members from around the world. Upon entry into this virtual community, one is assigned a character, which can then build a life in this community. Communities survive particular interactions, which means that characters may develop reputations through their behavior in various settings. Thus, in LamdaMOO, people are anonymous (like AOL) but can develop reputations (like Counsel Connect).⁴⁹

47. See p. 68 ("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.").

48. A MUD is typically defined as a multi-user dungeon or multi-user domain. A MOO is an object-oriented MUD. See generally SHERRY TURKLE, LIFE ON THE SCREEN: IDENTITY IN THE AGE OF THE INTERNET (1995).

49. See Jennifer L. Mnookin, *Virtual(l)y Law: The Emergence of Law in LambdaMOO*, 2 J. COMPUTER-MEDIATED COMM. 1 (1996) <<http://www.ascusc.org/jcmcl/vol2/issue1/lambda.html>>.

7. *Liberty is an Important Value that Ought to be Respected and Promoted*

Lessig clearly holds liberty to be an important value. He does not explicitly provide normative arguments to this effect, however, but rather assumes it to be so. This assumption is reasonable, given that Lessig is interested in studying the effects of increased regulability on fundamental values. Liberty certainly is a fundamental value, the word itself appearing in both the Declaration of Independence and the Constitution.⁵⁰

Nor does Lessig provide explicit arguments to support the normative conclusion that liberty ought to be respected and promoted. Given the moral logic of value statements, however, Lessig is justified to make this assumption, for to hold that a value is a value, is, other things equal, to hold that the value ought to be respected and promoted. This is simply the meaning of holding a value.

8. *There is an Inverse Correlation Between Regulability and Liberty*

A related theme of the book is that increased regulability will result in decreased liberty. Again, Lessig does not say much that directly establishes this point. Perhaps it simply seems obvious. Alternatively, he may see this proposition naturally following his conception of regulation, which is defined in terms of constraints (p. 217). More regulability means more constraints, which, by definition, means less freedom, as freedom is reasonably construed as an absence of constraints.⁵¹

Therefore:

9. *The Internet is Diminishing in its Capacity to Promote Liberty*

The logic of Lessig's argument, then, is that because electronic commerce is leading to increased regulability, and because increased regulability causes a loss of liberty, electronic commerce is causing the Internet to be a less free place. The argument has a proper form. Hence, unless one or more of the premises is false, Lessig's important conclusion should be accepted.

Let us begin with Proposition five, which holds that code is the most important regulator of cyberspace. This is an overstatement.

50. U.S. CONST. preamble & amend. V; THE DECLARATION OF INDEPENDENCE para. 2 (U.S. 1776).

51. While his focus is on liberty, Lessig contends that increased regulability will have an adverse impact on other values as well. He writes, "Perfect authentication would mean that others know for certain all the facts about you; happiness comes from others knowing a good deal less." P. 31.

Lessig does indeed provide strong reason to believe that code is an important regulator. He does not, however, say anything that would establish that it is the most important regulator. In particular, he does not pay attention to important non-architectural means of regulating the Internet, such as Title II of the DMCA and the other Internet-related statutes cited earlier, none of which regulates computer code.⁵² There is no reason to think that traditional methods of regulation, such as those recently employed by the American and Chinese governments, will not continue to be the predominant means to regulate cyberspace.⁵³ Given this fact, one is not compelled to accept the claim that code is the most important regulator of cyberspace without more evidence or argument.

Proposition six holds that the Internet embodies values. This bare proposition is uncontroversially true. Lessig's subtle discussion of the various contexts in which this is true serves, however, to highlight the importance of this claim, as the more we understand how the Internet embodies values, the better position we will be in to shape these values.

Proposition seven holds that liberty is an important value that ought to be respected and promoted. While some moral theories would reject this proposition, most mainstream moral theories indeed recognize the central importance of liberty, although there will of course be disagreement on whether liberty is ultimately grounded consequentially or deontologically.⁵⁴ Thus, Proposition seven is not in need of qualification.

Proposition eight holds that there is an inverse correlation between regulability and liberty. This premise is subject to question. The purported inverse correlation appears to be based on the claim that, as a general matter, the less e-commerce entities know about you the better off you will be.⁵⁵ While this claim is not analytically true, there are indeed many instances in which the possession of your information by

52. See *supra* text accompanying notes 32-33.

53. See *supra* note 33.

54. See generally JOHN STUART MILL, ON LIBERTY (Curran V. Shields ed., Bobbs-Merrill Co. 1956) (1859) (classic consequentialist defense of liberty); IMMANUEL KANT, THE METAPHYSICS OF MORALS (Mary Gregor trans. & ed., Cambridge Univ. Press 1996) (1797) (classic deontological defense of liberty). Nothing Lessig says in the book indicates conclusively whether he is a consequentialist or deontologist. Some of his remarks indicate sensitivity to welfarist concerns. See pp. 146-47. Generally speaking, however, the preoccupation with liberty and freedom sounds in deontology, as these are typically non-instrumentalist values by the lights of mainstream moral and political theory. It is reasonable to assume, then, that Lessig is some sort of deontologist who places great importance on the value of liberty. What is not clear is whether he is the sort of deontologist who thinks duties and rights can be traded off against consequentialist considerations, even if the former are not reducible to the latter.

55. See *supra* note 51.

others can hinder individual freedom. The most significant single example along these lines is Julie Cohen's argument that loss of the ability to read anonymously threatens the core First Amendment value of freedom of conscience and thought.⁵⁶

The relationship between regulability and freedom is more complex, however, than is suggested by Lessig's analysis. While it is true that you may be harmed by others' possession of your data, you may also be helped. *Code* would benefit from a discussion of the consumer surplus that may accrue to society due to increased regulability.⁵⁷ For example, casual empirical observation supports the claim that many people are happy to exchange personal information for benefits received in return. Grocery stores that offer discounts for card holders have no trouble establishing card-holder relationships despite the fact that this bargain entails the release of purchasing data to the store's sophisticated personal data-tracking system. Many people are quite happy to take part in this particular market in personal data.⁵⁸ It would be odd to contend that people who choose to do so are somehow less free than those who choose not to.⁵⁹ Freedom is measured in your ability to choose, not in what you choose.⁶⁰

56. See Julie E. Cohen, *A Right to Read Anonymously: A Closer Look at "Copyright Management" in Cyberspace*, 28 CONN. L. REV. 981, 1012 (1996) ("The freedom to read anonymously is just as much a part of our tradition, and the choice of reading materials just as expressive of identity, as the decision to use or withhold one's name."). In discussing the "Cohen Theorem," Lessig offers an example from when he was a student at an English university. While there, he made several purchases of Scotch as gifts. When he returned to school, a tutor asked him about his excessive purchasing of alcohol. Pp. 138-39 ("[N]ow that monitoring can occur, we must ask whether the latent right to read anonymously, given to us before by imperfections in technologies, should be a legally protected right.").

57. Note that the benefits need not be consequentialist goods whose benefit comes at the expense of liberty. One's access to online media may make one more enlightened, more autonomous, and, hence, freer.

58. See *Computer-Dating the Customer*, THE ECONOMIST, Mar. 4, 1995 at R7.

The bare fact that this practice exists does not show that it is efficient, however, as there may be market failure. While there may be market failure, there also may not be market failure. Lessig does not discuss which of these possibilities is more likely to be true.

59. See Susan Rose-Ackerman, *Inalienability and the Theory of Property Rights*, 85 COLUM. L. REV. 931, 932 (1985) (noting that "unencumbered market trades are desirable unless we can locate a valid reason for their restriction"); see also Michael A. Heller, *The Boundaries of Private Property*, 108 YALE L.J. 1163, 1199-1201 (1999) (discussing the role of restrictions on restraint of alienability).

Are Americans, in general, freer now than they were a hundred years ago? Even if this question is meaningful, the answer is certainly unclear. The answer would not be unclear, however, if there was a direct correlation between loss of informational privacy and loss of freedom, because we have dramatically less informational privacy than we had a century ago.

60. See generally GERALD DWORKIN, *THE THEORY AND PRACTICE OF AUTONOMY* (1988).

It will not be an adequate response to note that people trade away their data out of ignorance of the consequences. While this is no doubt true, it is also true that people not ignorant in this manner trade away their data. Lessig himself trades away data by his acceptance of cookies in his web browser.⁶¹ Plausibly, this shows that Lessig prefers the benefits he gets from unrestricted Internet browsing over the consequent loss to his informational privacy. While it is true that unless one provides some data, many interesting websites will be inaccessible, this does not make the provision of data in these circumstances any more coercive than when one is required to pay admission to enter a movie or ball game.⁶²

Lessig implicitly acknowledges the potential compatibility between liberty and regulability in the chapter entitled "Privacy" in Part Three of the book, in which he applies the book's earlier arguments in particular contexts. Lessig promotes a regime of user self-help to secure Internet privacy, such as might be supplied by emerging technologies such as P3P (p. 160). P3P allows client browsers to perform automatic electronic negotiations with websites, based on the privacy preferences of the user and the privacy policies of the website. Such transactions have the potential to make both users and websites better off.

We see, then, that on one plausible conception of freedom, the contractarian model, consumers may express their free desires when they bargain into a situation of increased regulability. This means that there is not a simple inverse correlation between regulability and freedom. Greater regulability may just mean an architecture that allows for more and better opportunities for bargaining.⁶³ Accordingly, the conclusion as stated in Proposition nine, that cyberspace is diminishing liberty, is not established. Nor has the negation of this proposition been established. More study into the relationship between regulability and liberty is needed.

61. See *supra* note 24; pp. 41-42 ("With one click, you can disable the deposit of cookies . . . [b]ut this privacy comes at a cost. Users who choose this option are either unable to use areas of the Net where cookies are required or forced constantly to choose whether a cookie will be deposited. Most find the hassle too great and simply accept cookies on their machine.").

62. Currently, much personal data gathering by websites is not conducted pursuant to consensual bargains. Rather, many websites either collect data without notice or use the data in a manner that is beyond the scope of the agreement. See Steven Hetcher, *The FTC as Privacy Norm Entrepreneur*, 53 VAND. L. REV. (forthcoming 2000).

63. In a free and fair market, for example, people may choose to carry digital credentials in order to conduct the sort of electronic commerce functions that are facilitated by these credentials.

10. *The Trend Toward Increased Regulability of the Internet Ought to be Reversed*

From the above set of propositions, Lessig draws a second normative conclusion. By combining the premise that liberty is a fundamental value that ought to be respected and promoted with the premise that cyberspace is becoming less free due to increased regulability, Lessig concludes that the trend toward increased regulability ought to be reversed (pp. 52, 56, 108).⁶⁴

By the lights of the discussion in the previous section, however, it should be clear that this conclusion does not follow because the premise holding that increased regulability leads to decreased freedom has not been established. Thus, it may not be necessary to reverse the trend toward greater regulability in order to promote liberty. What matters in terms of promoting liberty is that future states of greater regulability are the result of autonomous processes.

11. *Open Source Code is Less Regulable than Closed (Proprietary) Source Code*

Lessig argues that open code will be less subject to regulability than proprietary code.⁶⁵ Lessig claims that open source code will make top-down control harder but will allow for bottom-up control (p. 20). Lessig's argument for why open code will promote unregulability and hence liberty is simple but powerful. The basic idea is that important proprietary code will likely be owned by large commercial entities who will be easily susceptible to governmental attempts to alter code to serve governmental interests.⁶⁶ Lessig gives the example of

64. Depending on the underlying value theory one assumes, the fact that liberty is an important value will not be enough to draw any necessary practical inferences solely based on the existence of a serious threat to liberty. The reason is that by the lights of prominent and respected theories, a diminution in liberty may be morally permissible if it is the result of some moral or policy choice that pursues a distinct sort of benefit or sorts of benefits that, all things considered, balances out the liberty concern. If the proper normative account requires trade-offs, then Lessig must countenance the possibility that a diminution in liberty is justified by the fact that the proposed state of affairs promotes other values. This is more than a theoretical possibility, if we are to judge based on the current growth in the market in personal data, a significant and growing part of which is occurring pursuant to consensual practices. See Hetcher, *supra* note 62. Lessig has to respect the fact that mainstream Internet users today may not pine after Net95 the way that first-generation users did. Freedom may simply mean the autonomy to indulge even more conspicuously in the fatuous materialism that constitutes much of contemporary American life.

65. P. 107 ("To the extent that code is open code, the power of government is constrained . . . [W]hen the target of its regulation is plastic, it cannot rely on its target remaining as it wants.")

66. P. 52 ("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."). Lessig also writes "[t]he code is regulable only because the code writers can be con-

Communications Assistance for Law Enforcement Act of 1994 ("CALEA"),⁶⁷ the statute that forced phone companies to build in a backdoor to allow for governmental eavesdropping of digital telephone lines (pp. 44-45, 106).

Contrast this example of easy regulation of proprietary code with the results of a government attempt to create a backdoor into open code. Lessig provides an example involving Netscape (p. 106). The French government tried to get Netscape to alter its SSL encryption technology to allow a backdoor for police.⁶⁸ Because Netscape had made its source code public, however, it was pointless to comply with the French request (p. 106). Even if Netscape released a new module that was compliant, because the source code was open, other vendors would soon supply SSL without the modifications. In other words, because SSL is open source code, it is not easily regulable. Accordingly, open code deters censorship and, thus, promotes freedom. Lessig argues that this example is indicative of a general fact that it is much more difficult to regulate open code systems. Lessig's claim here is both significant and plausible.

Lessig sees open code as providing a "structural guarantee of constitutionalized liberty" (p. 7). According to Lessig, open code "functions as a type of separation of powers in the American Constitutional tradition" (p. 7). This remark may at first appear puzzling because code does not perform a separation of powers in the usual sense. The Constitution is conventionally understood to separate power in two fundamental respects: first, between the states and the federal government, and second, between the branches of the federal government.⁶⁹ Apparently, what Lessig has in mind is a separation of powers between governmental and nongovernmental social forces, in other words, between social norms and law. We see in this discussion how Lessig's four-part account of regulation and social order allows him to put meat on the bones of the concept of a British-style constitution for America.

Therefore:

trolled An unmovable, and unmoving, target of regulation, then, is a good start to regulability. And this statement has an interesting corollary: regulable code is closed code." P. 106.

67. Communications Assistance for Law Enforcement Act (CALEA), Pub. L. No. 103-414, 108 Stat. 4279 (1994) (codified as amended at 18 U.S.C. § 2522 (1994) and 47 U.S.C. §§ 229, 1001-1010 (1994 & Supp. II 1996)).

68. SSL is Netscape's protocol for exchanging encrypted data between the client's browser and the host's server.

69. See *Hayburn's Case*, 2 U.S. (2 Dall.) 409 (1792).

12. *Open Source Code Ought to be Promoted*

Because open source code is less regulable than closed source code, and regulability is inversely related to liberty, and liberty is a value that ought to be promoted, open source code ought to be promoted.⁷⁰ Subject to the qualifications noted above about the relationship between regulability and liberty, this is a valid argument, which moves from plausible premises to a plausible conclusion. And given how high the stakes are — liberty in cyberspace — an important conclusion as well.

13. *We Need An Internet Constitution*

Encouraging open source code is Lessig's main concrete prescription for promoting a constitutional regime for cyberspace that respects and promotes liberty.⁷¹ Lessig provides little by way of detail as to how a world of open source code might be accomplished. Unfortunately for his reader, Lessig may be precluded from doing so by a conflict of interest, as such a discussion could hardly fail to discuss Microsoft. Lessig does not discuss the Microsoft antitrust litigation that was ongoing at the time of the publication of the book. This is appropriate and expected given Lessig's ongoing role in the litigation.⁷²

There is a deep tension between open code and Microsoft's business model, which is that its software runs the world.⁷³ Microsoft's business model is precisely that there not be open source code but rather that the dominant (or exclusive) code of cyberspace be a proprietary Microsoft product. While the remark is often made offhand, it does, indeed, appear that Bill Gates wants to control cyberspace.⁷⁴ Lessig wants no one to control cyberspace.⁷⁵

70. See p. 8 ("Guarantee the structural (a space in cyberspace for open code), and (much of) the substance will take care of itself."). Lessig argues that we should strive for a "commons" in the core code of the Internet. P. 141.

71. See p. 7 ("If the code of cyberspace is owned (in a sense that I describe in the book), it can be controlled; if it is not owned, control is much more difficult. The lack of ownership, the absence of property, the inability to direct how ideas will be used — in a word, the presence of a commons — is key to limiting, or checking, certain forms of government control.").

72. P. 8. See, e.g., Lawrence Lessig, *Amicus Brief on Technological Tying* (2/1/00).

73. See p. 105 ("Microsoft may have imagined in 1995 that by 2000 there would be no other server operating system available except Windows NT, but when 2000 came around, there was GNU/Linux.").

74. See Laura Evenson, *Gates to the Future: Microsoft Founder Outlines the World and How He'll Run It*, S.F. CHRON., Nov. 23, 1995, at C1.

75. Richard Epstein has argued that open and proprietary codes can easily coexist. Epstein draws a parallel with the manner in which public highways easily coexist with gated communities. This is a very important issue. If a multicode world is the future, then Microsoft presents less of a threat than if a monocode world is likely instead. Epstein, *supra* note 10, Jan. 19 posting, ¶¶ 2-4.

Lessig argues that, in order to systematically and democratically deal with issues such as open code, we need to enter a period of constitution building. Lessig recommends that we create a constitution for cyberspace.⁷⁶ Recall that for Lessig, the word "constitution" is to be understood in the British not the American sense. On this definition, constitution building involves both governmental and nongovernmental action.

On the broad account of constitution, then, what Lessig is really saying is that we would do well to implement a justified social order for cyberspace. Considered first at this general level, this claim is highly plausible. Disagreement will come when we begin to fill in the detail as to what in particular the constitutional order should look like. Lessig does not provide details as to what the overarching features of this order should be. Doing so would be an entire project in itself. Lessig's main point is preliminary to this discussion. Before creating a constitution, there must first be the recognition that one is needed. This is the story of *Code*.

The reader comes away unclear on whether Lessig is proposing that the constitutional order grow out of the U.S. legal system or instead that it evolve as a form of world government. Throughout the book, Lessig uses the term "we." It appears that "we" means we Americans. Does this mean that we Americans are supposed to create the constitution for cyberspace? This is problematic, of course, as the Internet is global.

Lessig suggests that we should choose to develop a new constitution for this space, just as the American Founders and Russians had to (pp. 4-8). But there are already constitutions in place that pertain to cyberspace. China just announced rules to govern its space.⁷⁷ Despite the fact that the official U.S. policy is to support industry self-regulation, the United States has been regulating the Internet.⁷⁸ While early attempts at regulating the Internet may have been unsuccessful, it is unlikely that this will cause the United States to cease trying. This may make the issue of founding a new social order to govern the Internet beside the point. In the United States alone, regulation of the

76. Lessig thinks it is natural and proper that the state should play an integral role in the process of constitution building in cyberspace. This will probably strike the typical reader of this Review as uncontroversial, but the crowd that Lessig most wants to convince on this particular point is not constituted of the readers of this Review but rather the influential libertarian contingent of the Internet policy community. These are libertarians staunchly opposed to all state involvement. See *supra* note 34.

77. See *supra* note 33.

78. See, e.g., Anticybersquatting Act, *supra* note 33; NET Act, *supra* note 33; § 230 of the CDA, *supra* note 33; DMCA, *supra* note 32. These statutes are operative only because they pass muster under the U.S. Constitution.

Internet has arguably moved past the point where a founding of a new order could be possible.

Nor does the broad need for a justified social order for cyberspace entail the desirability of new constitutional amendments or federal statutes. Indeed, a *grundnorm* of the Internet has been self-regulation. Lessig is right that there is no necessary reason to prefer informal social solutions. Nevertheless, informal solutions have a significant role to play. Lessig is also right that anarcho-libertarianism is overly antigovernment in allowing no role for the government. The government plays a fundamental role in providing legal order. Legal order, however, is only one aspect of social order.

Lessig argues that the Constitution is thin; it does not adequately stretch to cyberspace (p. 22). Two brief responses are worth mentioning, although the topic merits greater discussion than can be pursued here. The first is that the bare fact that there are examples in which the U.S. Constitution does not apply snugly to Internet facts is certainly not enough reason to conclude that the larger U.S. legal system is not capable of dealing with the Internet. In particular, common law processes have done reasonably well so far in adapting to the Internet.⁷⁹ So has the FTC, which has recently fostered industry self-regulation regarding website provision of privacy policies.⁸⁰ Second, there has not been enough time to tell. For example, the FTC had made clear that it thinks more time is needed with respect to self-regulatory efforts regarding informational privacy online.⁸¹

Lessig does not point out that open source code is currently being driven by commercial entities.⁸² While open code may be highly desirable, it may still be the case, then, that the best provider of it is the market and norms, not the state.

CONCLUSION

Climbing the walls of your electronic cage is what you will be doing if the near dystopia which Lessig foretells in his important new book,

79. See, e.g., *Compuserve v. Cyberpromotions*, 962 F. Supp. 1015 (1997) (applying trespass theory in context of unsolicited electronic mail).

80. In its 1999 Report to Congress, the FTC notes that there has been significant improvement in website provision of privacy policies. MARTHA LANDESBURG & LAURA MAZZARELLA, FEDERAL TRADE COMM'N, SELF-REGULATION AND PRIVACY ONLINE: A REPORT TO CONGRESS (1999) (visited July 5, 2000) <<http://www.ftc.gov/os/1999/9907/privacy99.pdf>>. In its most recent Report to Congress, the FTC recommends fairly minimal regulations, along with its continued support of industry self-regulation.

81. See *id.*

82. See, e.g., "Red Hat Reinforces Commitment to Open Source, Releases Source Code for Popular Source-Navigator 10E" (press release) available at <http://www.redhat.com/about/2000/press_sourcemav.html>.

Code, comes to pass. In this world, the Internet is a central and pervasive fact of people's lives, and it is no longer free. Liberty has been coded away. Your options, choices, and movement are heavily restricted, due to unprecedented levels of social regulation, made possible by the awesome efficiencies of the Internet. In the encoded dystopia that Lessig predicts, you will be wired, but feeling wired in.

The issues Lessig raises are new and important. Thus, while one can take issue with Lessig on various points, the book on the whole nevertheless provides a compelling account that is intentionally scary. Lessig seeks to scare because he is on a mission to deflect the trajectory of modern techno-society from its current path. His book demands attention and demands attention now because the changes Lessig describes are radical and are happening in Internet time.