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Cyberspace 2.0

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Book Review

Cyberspace 2.0[†]

CODE AND OTHER LAWS OF CYBERSPACE. By Lawrence Lessig[‡]. New York, N.Y.: Basic Books, 1999. Pp. xii, 297. \$30.00.^{††}

THE CONTROL REVOLUTION: HOW THE INTERNET IS PUTTING PEOPLE IN CHARGE AND CHANGING THE WORLD WE KNOW. By Andrew L. Shapiro^{‡‡}. New York, N.Y.: Public Affairs, 1999. Pp. xii, 286. \$25.00.^{†††}

Reviewed by Neil Weinstock Netanel*

I. Introduction

In the eyes of its visionary pioneers, the Internet constituted a new kind of global community. The early Internet seemed to operate by a loose, informal consensus. It arose from universally accepted technical protocols for carrying on electronic conversation from remote locations and times, and it gave birth to common language, culture, and norms. Above all, its founders believed, the “Net” stood for the proposition that “information wants to be free.”¹ The Internet's libertarian culture and

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1. See John Perry Barlow, *The Economy of Ideas: A Framework for Patents and Copyrights in the Digital Age*, WIREd, Mar. 1994, at 83, 89 (crediting the “information wants to be free” slogan to Stewart Brand).

diffuse, packet-switching architecture would guarantee that Internet conversation would remain forever unencumbered by government regulation, proprietary control, and commercial artifice.

The first generation of cyberspace scholarship shared the utopianism of the digital vanguard.² By its very rudderless, decentralized, transnational structure, scholars argued, the Internet must ultimately elude any attempt at government regulation.³ They insisted, indeed, that even if government could regulate cyberspace, it ought not do so. Cyberspace, they posited, creates unprecedented possibilities for “bottom-up private ordering.”⁴ Its cornucopia of discursive fora and virtual communities epitomize a “Jeffersonian mode of law-making,” a radically decentralized political order based on individual choice.⁵ The Net is at once a distinct, self-contained realm and a gauntlet to the inefficient, undemocratic, top-down administration of the territorial state.

Today, after electronic commerce has conquered the Internet and America Online has acquired Time-Warner, that empyrean vision seems quaintly naïve. But the dreams of the early Net persist. Indeed, the notion

2. David Johnson and David Post led the way in claiming that the Internet should be presumptively self-governing. See, e.g., David R. Johnson & David G. Post, *Law and Borders—The Rise of Law in Cyberspace*, 48 STAN. L. REV. 1367 (1996) (arguing that traditional rule systems are ill-equipped to appropriately govern the Internet because of its unconstrained geographical and territorial borders) [hereinafter Johnson & Post, *Law and Borders*]; David G. Post, *Anarchy, State, and the Internet: An Essay on Law-Making in Cyberspace*, 1995 J. ONLINE L. art. 3, at <http://www.wm.edu/law/publications/jol/post.html> (noting how the diversity of the Internet's control agents, such as universities, corporations, and legislation, produce a “free market” of Internet rule sets) [hereinafter Post, *Anarchy*]; David R. Johnson & David G. Post, *The New ‘Civic Virtue’ of the Internet*, in THE EMERGING INTERNET 23 (Institute for Information Studies 1998), at <http://www.cli.org/paper4.htm> (arguing against top-down, legislative regulation of the Internet) [hereinafter Johnson & Post, *Civic Virtue*]. Commentators who have made similar arguments include Llewellyn J. Gibbons, *No Regulation, Government Regulation, or Self-Regulation: Social Enforcement or Social Contracting for Governance in Cyberspace*, 6 CORNELL J.L. & PUB. POL'Y 475 (1997) (asserting that the contract law model of private lawmaking should govern the Internet in lieu of general legislation); I. Trotter Hardy, *The Proper Legal Regime for “Cyberspace,”* 55 U. PITT. L. REV. 993, 1025-41 (1994) (contending that in the absence of some compelling social reason to the contrary, rules of conduct in cyberspace should be governed by self-help, custom, and contract of cyberspace participants); Henry H. Perritt, Jr., *Cyberspace Self-Government: Town Hall Democracy or Rediscovered Royalism?*, 12 BERKELEY TECH. L.J. 413, 419-20 (1997) (contending that as a general rule “self-governance is desirable for electronic communities”); Edward J. Valauskas, *Lex Networkia: Understanding the Internet Community*, 1 FIRST MONDAY 5, (Oct. 7, 1996), at <http://www.firstmonday.dk/issues/issue4/valauskas/index.html> (calling for formalization of Internet self-governance).

3. See Gibbons, *supra* note 2, at 502; Johnson & Post, *Law and Borders*, *supra* note 2, at 1373-74; cf. A. Michael Froomkin, *The Internet as a Source of Regulatory Arbitrage*, in BORDERS IN CYBERSPACE 129 (Brian Kahin & Charles Nesson eds., 1997) (detailing the Internet's “resistance to control”).

4. See, e.g., Johnson & Post, *Civic Virtue*, *supra* note 2, at 25-26 (arguing that “bottom-up” governance in cyberspace markets may be superior to “top-down” rule by traditional democratic debate and legislative action).

5. David G. Post, *Governing Cyberspace*, 43 WAYNE L. REV. 155, 170-71 (1996).

that the Internet's unique qualities warrant both a large measure of cyberspace self-governance and a rethinking of our existing political order continues to reverberate well beyond the writings of the exuberant digerati. Commentators maintain that the abundance of "cheap speech" on the Internet renders unnecessary and constitutionally infirm government efforts to provide for public access to the media and promote expressive diversity.⁶ Others call for Internet plebiscites⁷ and a constitutional order for cyberspace.⁸ Even federal officials cite the Internet's "decentralized nature and . . . tradition of bottom-up governance" as cause for a hands-off approach to network communication and transaction.⁹

Code and Other Laws of Cyberspace and *The Control Revolution: How the Internet is Putting Individuals in Charge and Changing the World We Know* firmly and conclusively dispel such flummery. These complementary studies present a refreshingly nuanced account of the Internet and its rapidly expanding role in our political, cultural, and economic life. As both books make clear, the Internet is not an inherent vehicle for a quasi-libertarian order. Indeed, the Internet is not inherently anything. Rather, its architecture reflects a complex interplay among policy choice, market force, and technological development. Ultimately, collective decision, within the confines of market dictate and attainable technology, determines the extent and nature of individual liberty, speech, privacy, and community on the Internet.

6. During the early days of the Internet, Eugene Volokh predicted that the Internet would usher in an era of "cheap speech." Eugene Volokh, *Cheap Speech and What It Will Do*, 104 YALE L.J. 1805, 1846-47 (1995). Since then, the Internet has seen the beginnings of technological control over content, the advent of broadband distribution, and an ongoing tsunami wave of telecommunications-Internet service provider-media-information technology company mergers. Nevertheless, some commentators still adhere to notions of Internet "cheap speech." See, e.g., Kirk J. Kaludis & Martin H. Redish, *The Right of Expressive Access in First Amendment Theory: Redistributive Values and the Democratic Dilemma*, 93 NW. U. L. REV. 1083, 1129-31 (1999) (arguing that the affordability and democracy of the Internet as an information-gathering and -disseminating tool removes any need for a right of expressive access by private individuals and entities to privately owned information).

7. See, e.g., Ken Dolbeare & Janette Hubbell, *Saving the American System: A Four-Part Program Including New Forms of Direct Democracy* 1 CITIZEN POWER 1, ¶ 27-28 (1997), at <http://www.auburn.edu/tann/cp/features/sos.htm> (proposing a system of regular plebiscites, including e-mail voting, on "all major issues").

8. As David Post has colorfully described, many see the debate over the governance structure for the newly established Internet Corporation for Assigned Names and Numbers (ICANN) as cyberspace's "constitutional moment." David G. Post, *Cyberspace's Constitutional Moment*, AM. LAW., Nov. 1998, at 117. For a brief description of ICANN and some of the issues underlying that debate, see Neil Weinstock Netanel, *Cyberspace Self-Governance: A Skeptical View from Liberal Democratic Theory*, 88 CALIF. L. REV. 395, 484-87 (2000).

9. *Presidential Directive on Electronic Commerce* (July 1997), at <http://www.ecommerce.gov/presiden.htm>. The Clinton Administration has been highly erratic in following its Internet self-regulation rhetoric. See Netanel, *supra* note 8, at 398 n.4; Pamela Samuelson, *Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to be Revised*, 14 BERKELEY TECH. L.J. 519, 527 (1999).

Moreover, as a result of that collective decision—or indecision as the case may be—the Internet is now poised to veer sharply from its libertarian roots. Our future, it seems, is America Online-Time Warner, encrypted content, and privately-controlled broadband infrastructure, not a halcyon realm of free information. We are rapidly entering a domain of media conglomerates' proprietary control of content, distribution, and access, a realm in which our every Internet movement is tracked, recorded, and analyzed.¹⁰ It will be a space that may well radically constrict individual choice and autonomy, not only in the face of early Internet hopes but also in orders of magnitude far greater than parallel pre-digital, offline constraints. Shapiro and Lessig rightfully insist, that future is not inevitable. But contrary to the libertarian impulse of first generation cyberspace scholarship, preserving a foundation for individual liberty, both online and off, requires resolute, albeit carefully tailored, government intervention. Internet architecture and software code—the technologies that enable content encryption, online profiling, and closed infrastructure—effectively regulate individual activity and choice no less than does law, and market actors have powerful incentives to deploy regulatory technologies to gain competitive advantage and channel consumer choice.¹¹

As a result, it falls to government to delimit private control, no less than to enable it. Determining and achieving the balance we want between encryption and access, online profiling and data privacy, closed and open infrastructure, requires not an absence of law, but its active intervention to define and preserve what we want of the public domain, individual privacy, and communications commons. It entails collective, political choice, and that choice may be to allow market actors to deploy regulatory technology in some cases, but not in others.

Part II of this Essay probes Shapiro's and Lessig's development of these themes. The two present similar analyses and policy recommendations on many issues. (Indeed, each cites and provides a book jacket blurb for the other.) Nevertheless, the books reveal some fundamental differences in world view. Part II will elucidate these differences as well as describe common concerns and prescriptions.

10. See A. Michael Froomkin, *The Death of Privacy?*, 52 STAN. L. REV. 1461, 1486-94 (2000) (describing methods for tracking online activity and computer use); Neil Weinstock Netanel, *Market Hierarchy and Copyright in Our System of Free Expression*, 53 VAND. L. REV. 1879, 1902-03 (2000) (discussing the possibility of content providers' hermetic control over each and every use of original expression).

11. For an illuminating, critical assessment of various means by which firms might seek to use regulatory technology and other strategies to surpass competitors, obtain valuable marketing information, and lock-in consumers in the digital marketplace, see CARL SHAPIRO & HAL R. VARIAN, *INFORMATION RULES: A STRATEGIC GUIDE TO THE NETWORK ECONOMY* (1999).

Parts III through V take up Shapiro's and Lessig's challenge to develop a second generation of cyberspace scholarship, one less enchanted with early Internet ideals and more attuned to the likely workings of the information economy and its socio-political ramifications.¹² Part III follows Shapiro's and Lessig's concern that the new Internet will have a deleterious impact on public discourse. Digital technology enables users to customize the information mix they encounter, effectively filtering out any expression and opinion they determine in advance that they do not wish to see. If left unchecked, such customization could well erode the common language and mutual recognition required for a democratic polity. Part III examines the interrelationship between individual customization and content provider centralization. It also evaluates, from a policy and First Amendment perspective, Shapiro's proposal for a state-sponsored PublicNet as a means of combating the threat of excessive individual insularity.

Part IV considers the deployment of electronic "smart agents." Smart agents are computer programs that can search the Internet, exchange and process information, and negotiate transactions with other agents, all in accordance with preprogrammed user instructions and without any continuing user input or supervision.¹³ For example, smart agents called "shopping bots" can find the web site selling a user-specified CD, book, or other good at the lowest price, and can then purchase the item on the user's behalf. Likewise, a smart agent platform known as P3P can enable users to program their browsers to release user information only under certain conditions, or not at all.

Some commentators, including Lessig, see in P3P a possible answer to Internet users' growing concerns regarding data privacy.¹⁴ More

12. These Parts follow on my own recent critique of the theoretical underpinnings of first-generation cyberspace scholarship. See Netanel, *supra* note 8. -Additional beginnings of a second generation of cyberspace scholarship include (among others): Philip E. Agre, *Life After Cyberspace*, 18 EASST REV. (Sept. 1999), at <http://www.chem.uva.nl/easst/easst993.html>; William W. Fisher III, *Property and Contract on the Internet*, 73 CHI.-KENT L. REV. 1203 (1998); Mark A. Lemley, *The Law and Economics of Internet Norms*, 73 CHI.-KENT L. REV. 1257 (1998); Margaret Jane Radin & R. Polk Wagner, *The Myth of Private Ordering: Rediscovering Legal Realism in Cyberspace*, 73 CHI.-KENT L. REV. 1295 (1998); Edward L. Rubin, *Computer Languages as Networks and Power Structures: Governing the Development of XML*, 53 S.M.U. L. REV. (forthcoming 2000); Timothy Wu, *Application-Centered Internet Analysis*, 85 VA. L. REV. 1163 (1999).

13. See generally SOFTWARE AGENTS (Jeffrey M. Bradshaw ed., 1997) (illustrating the diversity of problems being addressed today by software agent technology). See also Chip Bayers, *The Bot.Com Future*, WIRED, Mar. 2000, at 210. Smart agents can also contain artificial intelligence programming that enables them to "learn" user preferences from general instructions and prior transactions. See Nicholas Negroponte, *Agents: From Direct Manipulation to Delegation*, in SOFTWARE AGENTS, *supra*, at 57, 62-63.

14. Lessig favors government inducement for P3P deployment by according individuals a property right in the information that can be gleaned from their Internet activity. See LESSIG pp. 160-61. Shapiro, on the other hand, expresses concern about the "failure points and blind spots" in such a market approach and argues that government should at least set a baseline of inalienable privacy protection. SHAPIRO p. 220.

broadly, others view individuals' use of smart agents as a means to realign the balance of power in the digital marketplace.¹⁵ Smart agents, they suggest, might support a new realm of consumer sovereignty, a realm of near-perfect competition in which producer efforts to rationalize and control the market fall to naught. It might be argued, indeed, that smart agents could thus help to re-create in the digital marketplace the conditions of individual choice and local control that gave rise to the cyberlibertarian paradise of the early pre-commercial Internet. Part III critically assesses that argument.

Part V examines the issue of the Internet and community. Shapiro and Lessig both emphasize the Internet's potential for building community. But each presents sharply differing views of the nature of that community and of its role in the larger sphere of democratic politics and civil society.

II. From the Iron Curtain to the Digital Divide

The Shapiro and Lessig books both begin in Eastern Europe. Shapiro's prologue is about the role that the Internet and other new media played in undermining Communist dictatorship.¹⁶ His moral is that it can happen here, too: decentralized network communication can subvert seemingly immutable power structures in the democratic West no less than the totalitarian East. For that reason, Shapiro gives short shrift to the first-generation notion that cyberspace is a distinct and separate place, deserving of considerable independence from real world regulation. Our actions online, he admonishes, have a significant impact on offline lives, resources, and institutions. And correlative to his story about Eastern Europe, Shapiro's overriding concern is the Internet's potential effect on the foundations of the democratic state. Above all, he entreats, we must insure "that the Net and other new media are not just technologies of freedom, but tools of democracy."¹⁷

Lessig's introductory parable is set shortly after Shapiro's, in post-Communist Eastern Europe. Lessig describes the antigovernment passion of the first moments after the Communist state had collapsed.¹⁸ That passion was soon translated into policy in line with American advisors' exhortations that an unregulated, "free" market would yield liberty and prosperity. But then, as Lessig depicts, came chaotic fall: the rampant fraud and kleptocracy that brought a distinctly unfree sort of formal freedom.¹⁹

15. See, e.g., Indrajit Sinha, *Cost Transparency: The Net's Threat to Prices and Brands*, HARV. BUS. REV., Mar. 2000, at 43.

16. See SHAPIRO pp. 3-9.

17. *Id.* at 219.

18. See LESSIG pp. 3-5.

19. *Id.* at 4.

Lessig shares Shapiro's concern for the fate of our democratic polity. But his opening story and a good part of his book are principally addressed not to "We the People," but to the digital coterie who, like Lessig himself, longingly remember the freedom and community of the early Internet. Lessig's is a cautionary tale for cyberlibertarians who believe that the Internet cannot be regulated and that an Internet without government would be a pinnacle of freedom. Lessig insists that the liberty envisioned by Internet pioneers requires a constitutional order, a rule of law, and an Internet architecture that would check both state and private abuse of power: "As our framers learned, and as the Russians saw, we 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."²⁰

A. *Shapiro: The Control Revolution*

Shapiro's approach is the simpler and more straightforward of the two. While he is fully conversant in Internet technology and culture, he aims his critique unabashedly from the outside (even proclaiming the "Disappearance of Cyberspace"²¹), and his intended audience comprises those concerned with the democratic polity as a whole. To that end, following his story about the media's role in the fall of Communist dictatorship, Shapiro describes the radical shift in power relations that may be at hand in liberal democracies as well. Digital technology, he argues, enables individuals to exert unprecedented control over important aspects of their lives, seizing power from large institutions like government, corporations, and the media.²²

The Internet, in other words, empowers us to bypass intermediaries.²³ Indeed, as Shapiro describes, in sector after sector—from commerce to culture to politics—we can now make decisions that in-termediaries have traditionally made for us. As consumers, we are now armed with browsers and a wealth of information at our fingertips. We can search the web to find bargains and buy goods and services directly from suppliers, bypassing retail outlets and distribution channels. As audiences, we can now personalize the mix of expression and information we receive. We can program our browsers to find and deliver to us just what we want to see and hear, and nothing else. We need no longer buy and sift through CDs, daily newspapers, cable television channels, and other collections of expression selected, bundled, and distributed by the media. As citizens, we seemingly can realize the twin dream of direct

20. *Id.* at 5-6.

21. SHAPIRO p. 29.

22. *Id.* at 25-52.

23. *Id.* at 53-59.

democracy and individual liberty. We have the technology to vote in Internet plebiscites on matters ranging from proposed legislation to rulings on parole applications. We can also evade government regulation by accessing and establishing offshore web sites. We can, in short, increasingly do without elected officials, governmental agencies, and political institutions.

Shapiro interjects two cautionary notes into his depiction of the control revolution. The first is that it might not happen. The second is that it ought not happen. I would add a third: the radical disintermediation Shapiro describes may well bring about a net loss of individual control, not its unprecedented gain.

By Shapiro's account, the control revolution might not happen because powerful institutions have already begun to counter it. Governments can often effectively regulate Internet technology, even when they might find it difficult to impose direct controls on Internet activity. In a number of cases, they have required Internet service and content providers to implement technical protocols that identify users by location or adult status and automatically deny access to those to whom the provision of available content is forbidden by law.²⁴

24. Shapiro discusses Bavaria's prosecution of the German head of CompuServe for allowing a German CompuServe subscriber to gain access to child pornography. See *id.* at 68-69. Pursuant to Germany's Information and Communication Services Act, which took effect in 1997, Internet service providers may be held criminally liable for illegal third-party content available through their service if they have knowledge of such content and if blocking its use is reasonable and technically possible. Informations-und Kommunikationsdienste-Gesetz [Information and Communication Services Act], art. 1, § 5 (1997), available at <http://www.iid.de/rahmen/iukdge.html> (unofficial English translation). More recently, a French court has ordered Yahoo! Inc. to prevent all French web surfers from being able to access a Yahoo auction service where Nazi memorabilia is available for sale. See *UEJF et Licra v. Yahoo! Inc. et Yahoo France*, Tribunal De Grande Instance De Paris, May 22, 2000, available at <http://www.juricom.net/txt/jurisfr/cti/yauctions20000522.htm> (unofficial English translation). The court appointed a team of experts, which concluded that Yahoo has the technological ability to identify the geographical origins of a considerable majority of Internet surfers and to block access to users from particular locations. Tribunal De Grande Instance De Paris, *Document de travail sur le rapport d'expertise*, Nov. 6, 2000, *UEJF et Licra v. Yahoo! Inc. et Yahoo France*, available at <http://www.juricom.net/txt/jurisfr/cti/tgiparis20001106-rp.htm>; John Tagliabue, *French Uphold Ruling Against Yahoo on Nazi Sites*, N.Y. TIMES, Nov. 21, 2000, at C8, available at LEXIS, News Library, N.Y. Times file; see also Gustavo Capdevila, *Human Rights: Racist Speech Finds Course Clear on Internet*, INTER PRESS SERVICE, Feb. 18, 2000, available at 2000 WL 4089901 (reporting proposal presented at a United Nations seminar on racist speech to deploy encryption to block global access to racist messages on U.S. web sites). Congress has twice enacted legislation that would require operators of web sites containing "indecent" material to identify and deny access to minors. Such regulation has thus far been frustrated by successful First Amendment challenges. See Communications Decency Act of 1996, Pub. L. No. 104-104, § 502(d), 110 Stat. 133 (1996), invalidated by *Reno v. ACLU*, 521 U.S. 844 (1997); Child Online Protection Act, § 1403, 47 U.S.C.A. § 231 (Supp. 2000), held unconstitutional in *ACLU v. Reno*, 31 F. Supp. 2d 473 (E.D. Pa. 1999). Most recently, the proposed Children's Internet Protection Act, H.R. 4600, 106th Cong. (2000), would require that all public schools and libraries receiving federal funds in support of Internet access install filtering software to block access to content deemed "inappropriate" for minors.

Concurrently, Shapiro maintains, commercial firms also counter individual control by creating the illusion of choice while actually constraining our personal freedom.²⁵ Users think they can use Yahoo and other search engines to find the web sites they wish. But firms buy prominent placement in search engines' search results, just as Microsoft places icons of its corporate partners on Windows desktops.²⁶ Similarly, versions of Microsoft's Internet Explorer take users only to Microsoft-approved search engines, and America Online commonly prohibits its partners from linking to competitors' web sites.²⁷ More ominously, perhaps, web sites collect user information, whether in the process of registration or by depositing "cookies" on the user's hard drive that can track how much time the user spends at each part of the site. User information can then be assembled with that collected from other sites, creating user profiles, which can in turn be sold and used to personalize content and advertising without the user's knowledge.²⁸

Finally, governments and firms work together to enhance the effectiveness of regulatory technology. At the instance of the entertainment industry, Congress has drastically expanded copyright's effective scope by prohibiting the manufacture and distribution of devices needed to circumvent encryption systems that control access to and uses of digital content.²⁹ Legislative bodies throughout the world are expected to follow suit.³⁰

Shapiro also argues that an untempered control revolution ought not happen. As Shapiro puts it, the American obsession with personal control, coupled with unprecedented opportunities to realize that control in the digital environment, may lead to "oversteer," the tendency to go "farther than intended, with potentially dangerous consequences."³¹ Shapiro is

25. See SHAPIRO pp. 84-101.

26. See Louis D. Introna & Helen Nissenbaum, *Shaping the Web: Why the Politics of Search Engines Matters*, 16 THE INFO. SOC. 169 (2000) (discussing search engine bias towards firms with the resources to gain prominent placement in search results).

27. See SHAPIRO pp. 95-96 (discussing Microsoft); Alec Klein, *AOL Restrictions Alleged*, WASH. POST, Oct. 10, 2000, at E01 (reporting a statement of an America Online executive that it is common business practice for AOL to prohibit AOL partners from linking to sites that compete with AOL or to sites that compete with other AOL partners).

28. See Jerry Kang, *Information Privacy in Cyberspace Transactions*, 50 STAN. L. REV. 1193, 1223-31, 1238-40 (1998); Helen Nissenbaum, *Protecting Privacy in an Information Age: The Problem of Privacy in Public*, 17 LAW & PHIL. 559, 575-78 (1998).

29. See Digital Millennium Copyright Act § 103, 17 U.S.C. § 1201 (Supp. IV 1998). For an insightful analysis of the Act, its legislative history, and possible ramifications, see generally David Nimmer, *A Riff on Fair Use in the Digital Millennium Copyright Act*, 148 U. PA. L. REV. 673 (2000).

30. The anti-circumvention provisions of the Digital Millennium Copyright Act were designed to implement and serve as a model of how to implement technology protection requirements of the WIPO Copyright Treaty, adopted in December 1996.

31. SHAPIRO p. 104.

concerned that as we embrace the individual control that the Internet seems to make possible, we may overdo our personalization of information and social environments. The result may be excessive insulation from people, ideas, and serendipitous encounters outside our narrow, predefined fields of interest. Aside from its detrimental effect on personal development, such tunnel vision can erode the common language and mutual recognition required for a liberal democratic polity. It can also engender an electorate lacking in even the most basic knowledge required to inform political judgments.³²

As Shapiro emphasizes, the control revolution may also push disintermediation too far. Middlemen in news, commerce, and politics have considerable value.³³ They often serve as sources of trustworthiness, stability, and accountability, or at least some combination of those traits.

Whatever their faults, for example, traditional news media have the resources and professional commitment to check facts and verify sources, and we hold them accountable if they do not. In contrast, Matt Drudge and other individual online publishers often have neither the financial wherewithal nor the institutional aspiration to meet professional journalistic standards.³⁴ That is not to say that such gadflies can make no constitutive contribution to public discourse or that the media should hold a monopoly over speech. But Shapiro's point, which I think a good one, is that full disintermediation of the kind envisioned by cyberlibertarians would not only Balkanize public discourse, but would also leave us without any real possibility for assessing the reliability and import of the vast bulk of expression and opinion swirling around the Internet. Indeed, to the extent we cannot have reasonably trustworthy news media producing and deliver-ing content, we would want to rely on reasonably trustworthy critics to help us evaluate each Drudge Report's accuracy and worth.³⁵ We would still need mediate institutions capable of checking facts and committed to standards of quality, candor, and accuracy.

Likewise with politics. Shapiro rightly derides what he labels as "push-button politics," the notion that citizen-voting on a continuous stream

32. Shapiro dramatizes this point with a fantastical anecdote in which those who customize the digital equivalent of their daily newspaper to foreground, or exclusively include, developments within their specific industry might even be unaware of an armed invasion of the United States. SHAPIRO pp. 105-06.

33. See *id.* at 187-97; see also Netanel, *supra* note 10, at 1919-26 (discussing the value of commercial media).

34. See SHAPIRO pp. 133-36.

35. Of course, to the extent that the media are less than completely trustworthy, which even under the best of circumstances, and with the best of intentions, will always be the case, we ought to rely on trusted media watchdogs as well. Shapiro describes several such watchdogs in current operation. See *id.* at 190.

of Internet initiatives ought to supplant parole boards, administrative agencies, and legislatures.³⁶ Popular referenda and initiatives have been the subject of extensive scholarly criticism.³⁷ Uneven voter turnout, ambiguous or misleading drafting of ballot issues, the influence of moneyed special interests, voter ignorance of the issues, and other factors regularly obscure popular input.³⁸ There is no reason to expect any better of cyber-plebiscites. Already, commentators have labeled much-touted electronic town meetings as “electronic town manipulation,” given the distorted nature of information presented and partial framing of ballot issues.³⁹

Moreover, even aside from the problems of vote manipulation and irregularity, one suspects that Internet voters would generally engage in less, not more, careful deliberation than their offline counterparts. Internet voters facing a daily stream of virtual initiatives would have little time to consider each issue.⁴⁰ And the very ease of Internet voting is likely to further militate against deliberation. Supporters of real-world plebiscites argue that voters who must invest the time physically to go to the polls are more inclined as a result to consider carefully the issues on which they plan

36. SHAPIRO pp. 150-54. I present a detailed critique of the theoretical underpinnings of such cyberpopulism in Netanel, *supra* note 8, at 412-27. As a practical matter, Internet voting still faces significant technical hurdles. In March 2000, the Arizona Democratic Party allowed Internet-voting in the state's primary election, the first such Internet voting to take place. Unforeseen technical glitches, user error, outdated browsers, and Macintosh-unfriendly server software resulted in widespread frustration and inability to cast an Internet ballot. See Jon Kamman, *Democrats Hail Success of Online Primary, But Troubles Left Many Disappointed With System*, ARIZ. REP., Mar. 12, 2000, at A22.

37. See, e.g., Derrick A. Bell, Jr., *The Referendum: Democracy's Barrier to Racial Equality*, 54 WASH. L. REV. 1 (1978) (arguing that the increasing use of initiatives and referenda threatens individual rights and jeopardizes the rights of racial minorities); Sherman J. Clark, *A Populist Critique of Direct Democracy*, 112 HARV. L. REV. 434, 436-37 (1998) (arguing that initiatives and referenda do not provide a clear and complete reflection of public opinion); Julian N. Eule, *Judicial Review of Direct Democracy*, 99 YALE L.J. 1503, 1513-22 (1990) (contending that direct democracy measures are subject to manipulation and often inaccurately reflect the public will); Hans A. Linde, *Who is Responsible for Republican Government?*, 65 U. COLO. L. REV. 709, 721-22 (1994) (discussing how initiatives could potentially violate the Guarantee Clause of the Constitution); Daniel H. Lowenstein, *Campaign Spending and Ballot Propositions: Recent Experience, Public Choice Theory and the First Amendment*, 29 U.C.L.A. L. REV. 505, 508 (1982) (exploring whether interest group spending during initiative and referendum campaigns nullifies the original purpose of such measures to “neutraliz[e] the power of well-financed groups”).

38. See Eule, *supra* note 37; Linde, *supra* note 37; see also Elizabeth Garrett, *Money, Agenda Setting, and Direct Democracy*, 77 TEXAS L. REV. 1845 (1999) (arguing that wealthy individuals and groups have a disproportionate ability to place initiatives on the ballot and suggesting reforms to even the playing field).

39. Evan I. Schwartz, *Direct Democracy: Are You Ready for the Democracy Channel?*, WIRED, Jan. 1994, at 74.

40. Cf. Sam Howe Verhovek, *A Ballot Full of Voter Initiatives Becomes an Issue Itself in Oregon*, N.Y. TIMES, Oct. 25, 2000, at A1, available at LEXIS, News Library, New York Times file (reporting that voters in states that liberally use plebiscites often lack the time and ability to understand the numerous and complex initiatives that appear on the ballot).

to vote.⁴¹ Internet users voting from home or at work with a click of the mouse would lack that incentive.⁴²

Shapiro sensibly suggests that digital technology be employed, rather, to enhance the effectiveness of representative democracy.⁴³ The Internet is already used extensively to promote communication between government agencies and citizens and to make more information available to agencies and their staffs.⁴⁴ Especially at the federal level, legislatures, courts, and administrative agencies also post vast amounts of data, regarding both the workings of government and information collected by government, that is freely accessible for citizen use and edification.⁴⁵ Government could and should expand its use of the Internet to further civic education and public knowledge. The Internet might also be used to provide fora for what Jim Fishkin has termed “deliberative polling,” a technique by which a cross-section of citizens can learn and exchange ideas about discrete issues before making policy recommendations to government officials.⁴⁶

In sum, Shapiro argues, and I concur, that if the Internet in fact does lead to radical disintermediation, the result might well be highly deleterious for democratic institutions. But I question even whether what Shapiro terms the “control revolution” would actually yield the realm of individual autonomy to which cyberlibertarians aspire. For one, and this Shapiro does discuss, individuals rely on trusted intermediaries not just as members of a democratic polity but also to make personal decisions. Consumers require relatively accurate information and accountability no less than do citizens. Beyond that, moreover, individuals are not merely citizens,

41. See Clayton P. Gillette, *Plebiscites, Participation, and Collective Action in Local Government Law*, 86 MICH. L. REV. 930, 968-69 (1988). On the other hand, as Lynn Baker points out, “issues for plebiscitary decision typically appear on a ballot that includes candidates for elective office,” and those who have already gone to the polls to vote for a candidate need invest very little in addition to vote in the plebiscite as well. See Lynn A. Baker, *Direct Democracy and Discrimination: A Public Choice Perspective*, 67 CHI.-KENT L. REV. 707, 724 (1991).

42. At least for the near future, Internet voting also raises the issue of disparity between economic and ethnic groups in their ability to vote. Government studies show significant disparities in Internet access across wealth, ethnic, and geographic lines in the United States. See NAT'L TELECOMMS. AND INFO. ADMIN., U.S. DEPT. OF COM., FALLING THROUGH THE NET: DEFINING THE DIGITAL DIVIDE xv-xvi (July 1999, revised Nov. 1999), at <http://www.ntia.doc.gov/ntiahome/digitaldivide> [hereinafter DIGITAL DIVIDE]. Internet voting in the Arizona Democratic primary in March 2000 was challenged in court on the grounds that, because of this digital divide, such voting results in racial discrimination in violation of the Voting Rights Act of 1965. See Gary Chapman, *Casting a Vote of Caution on Online Voting*, L.A. TIMES, Mar. 20, 2000, at C3.

43. See SHAPIRO pp. 192-96.

44. See Michael Remez, *Policy, Persuasion Take Shape on Internet*, HARTFORD COURANT, Feb. 26, 1998, at A12 (describing an American University study on congressional use of the Internet).

45. See Paul Starr, *The Electronic Commons: The Promise of the New Public Domain*, AM. PROSPECT, Mar. 27 - April 10, 2000, at 30, 32 (advocating greater government disclosure of data online).

46. See James S. Fishkin, *Deliberative Polling as a Model for ICANN Membership*, at <http://cyber.harvard.edu/rcs/fish.html> (last modified Feb. 22, 1999).

consumers, speakers, and audiences. They are also wage earners and investors. Here, it seems to me, Shapiro largely misses a significant potential impact of radical disintermediation. Many of us earn our livelihoods working for intermediaries. We have also come to depend on intermediaries such as the Federal Reserve Board to ensure a modicum of national and international economic stability.⁴⁷ Thus, the very same forces that some Internet aficionados welcome as bringing individuals greater control over their consumption decisions might well cause millions severe dislocation and financial insecurity.⁴⁸ At the very least, these forces would exacerbate the “digital divide” between the largely white, educated, and affluent, who have access to the most advanced digital networks and the skills necessary to use those networks, and those without such access and skills.⁴⁹

B. Lessig: Code and Other Laws

Lessig's book is more troubled and troubling than Shapiro's. Shapiro peppers his analysis with policy prescriptions and exhortations for achieving democratic renewal in the digital age. Lessig also endorses various policies, and on most of the issues Lessig addresses, he and Shapiro come out pretty close to one another. But Lessig focuses more on broad process than specific policy recommendations. He wants to sound the alarm against the dark forces that threaten to push us into an abyss of regimentation and constraint. And yet, he fears that we lack the breadth of vision and the political capacity to answer his call.

Lessig seeks first to convince us—particularly the cyberlibertarians among us—that cyberspace can just as readily serve as a tool of domination as it can a torch of individual liberty. It all depends on software code, the architecture upon which the Internet operates. The early Internet was a realm of text-based anonymity and free information (“free” in the double sense of unconstrained and provided without charge). Users could say what they wanted where they wanted and could even assume what identities

47. See Roger Alcaly, *He's Got the Whole World in His Hands*, N.Y. REV. OF BOOKS, Oct. 7, 1999 (discussing the role of the Federal Reserve Board in enhancing economic stability over the past couple of decades); but see ROBERT J. SHILLER, *IRRATIONAL EXUBERANCE* 223-27 (2000) (noting past instances in which Federal Reserve Board and other government agency policies have failed to prevent, or even have contributed to, stock market crashes and severe recessions).

48. Shapiro does refer cryptically to this problem in his amusing, brief account of the guilt he feels towards his Uncle Max, the stockbroker, whenever he engages in online securities trading. SHAPIRO p. 53.

49. See DIGITAL DIVIDE, *supra* note 42, at viii (finding significant disparities in Internet access across wealth, ethnic, and geographic lines in the United States). See also Clive Walker & Yaman Akdeniz, *Virtual Democracy*, PUB. L., Autumn 1998, at 489, 501 (noting that much of the world's population has no connection to the telephone infrastructure, let alone the Internet).

they wanted.⁵⁰ They were also at liberty to partake of, add to, and reformulate whatever Internet text and graphics came their way.

But that era of freedom, Lessig emphasizes, is about to change. As the Internet becomes an electronic marketplace, vendors require architecture that identifies users and controls access to expression and information. Vendors deposit "cookies" to obtain user profiles, employ digital watermarks to trace unauthorized uses of content, and require identification to secure commercial transactions. As Lessig convincingly maintains, we stand on the threshold of a system in which we will need to "show" digital identification in order to enter web sites and other channels of digitized information.⁵¹ Similarly, much of the content we may wish to see, hear, or download will be subject to encryption, imposing a swath of control far broader than copyright's limited set of exclusive rights.⁵²

Even more ominously, Lessig emphasizes, while law's constraints are public and transparent (at least that is the ideal in a democratic state), regulatory technology regularly operates unseen.⁵³ Law, the published product of political process, can be identified and challenged or, at the very least, resented. But regulatory technology is often wired deep within our browsers, computers, and networks, making some activities possible and others not without us even knowing which alternatives have been precluded. Likewise, while law can sometimes be disobeyed or evaded, code imposes the near hermetic constraint of the physical world. If my browser or network is pre-programmed to filter out certain forbidden content, I cannot view the content anyway and take the risk of getting caught. If VCRs are rendered incapable of copying encrypted video signals, I cannot copy the signals and claim the privilege of fair use.⁵⁴

50. The often cited *New Yorker* cartoon depicting two dogs facing a computer screen encapsulated it perfectly: "On the Internet, no one knows you're a dog." Peter Steiner, cartoon, *NEW YORKER*, July 5, 1993, at 61.

51. LESSIG pp. 33-42.

52. See *id.* at 135-36; see also David Nimmer, *supra* note 29, at 741 (contending that, under the right market conditions, the Digital Millennium Copyright Act's prohibitions against circumventing encrypted control of content will lead to "universal pay-per-use and de facto perpetual protection").

53. LESSIG pp. 95-99.

54. In *Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S. 417 (1984), the Supreme Court held that home videotaping of television programs for purposes of "time-shifting," or watching a program after it has been broadcast, is a noninfringing fair use. But the Digital Millennium Copyright Act of 1998, Pub. L. 105-304, § 1, 112 Stat. 2860 (1998), now prohibits the manufacture of or trafficking in analog video cassette recorders that do not contain approved copy control technology. 17 U.S.C. § 1201(k) (Supp. IV 1998). It also prohibits the manufacture of or trafficking in technologies, products, or services primarily designed to circumvent technological measures that control access to copyrighted works or protect the rights of copyright owners. 17 U.S.C. §§ 1201(a)(2) (Supp. IV 1998) (access controls), 1201(b)(1) (Supp. IV 1998) (rights protection). Those provisions would proscribe the sale of devices designed to defeat measures controlling access to or copying of digital television programming.

While regulatory technology threatens liberty, Lessig maintains, a different kind of software code and network architecture can help to secure it. Lessig does not advocate an across-the-board return to the open architecture of the early Internet. His far more subtle point is that code is and should be a reflection of public policy. If we as citizens do nothing to stop them, governments and commercial firms will employ code as a vehicle for regulatory control. Indeed, governments and firms may regulate through code in order to hide their agendas from public scrutiny.⁵⁵ It is thus incumbent upon us—and upon the legislatures that are supposed to represent us, and the courts that are supposed to guarantee our liberties—to deliberate about the kind of code that would best serve our collective, democratic values.⁵⁶ We must introduce an element of open, due process into choosing which types of code to design and deploy, and we must actually choose code that will further transparency and individual liberty. Lessig recommends, for example, that the fundamental components of network architecture be made open and non-proprietary. That way governments and firms will be less able to regulate through hidden code.⁵⁷ He further supports legislation that would use cyberspace architectures to preserve an intellectual commons (by proscribing content provider use of encryption in certain cases) and to accord individuals greater control over the collection and use of personal data (by promoting deployment of P3P).⁵⁸

Yet, although Lessig's broad policy conclusions ultimately comport with Shapiro's insistence that We the People (and our elected government) must shape the Internet to serve the demos as a whole, Lessig comes to that position with profound ambivalence and doubt. For one, unlike Shapiro and despite Lessig's frustration with what he sees as cyber-libertarians' tragic, reflexive opposition to government involvement in cyberspace, Lessig evinces considerable empathy for the cyberlibertarian dream.⁵⁹ On a number of occasions he catches himself "romanticiz[ing] the old days when the Net was a place for conversation and exchange," and it is with a wistful regret that he reminds Internet pioneers that consumer-oriented "newbies" have come to make up "the silent majority of today's

55. See LESSIG p. 98.

56. For a critical assessment of the federal government policy regarding its role in standard setting for telecommunications and the Internet, see generally Mark A. Lemley, *Standardizing Government Standard-Setting Policy for Electronic Commerce*, 14 BERKELEY TECH. L.J. 745 (1999).

57. See LESSIG pp. 107-08.

58. See *id.* at 128, 160.

59. In an article published shortly before this Essay went to print, Lessig reflects as follows on the process of writing his book and on the debates that have ensued: "I don't think the issues I've raised map directly into the pro- or anti-libertarianism camp. Indeed, I was surprised, as I worked through it, how much of what I thought was, in its core, libertarian." Lawrence Lessig, *Forward*, 52 STAN. L. REV. 987, 999 (2000).

Net.”⁶⁰ Indeed, at points, Lessig seems to want to view cyberspace at least as a semi-autonomous, semi-distinct social domain, one in which a certain kind of discursive community should be allowed to flourish. As Lessig portrays them, inveterate participants in virtual communities mirror his own bestraddled stance between the online and offline worlds: they “are actually living in two places at once.”⁶¹

More broadly, though, Lessig questions, far more than does Shapiro, the role and efficacy of the state. Liberal democracy presents a dichotomy between individual rights and democratic process. That dichotomy is far less pronounced than is sometimes suggested, since rights and democracy are mutually dependent and reinforcing.⁶² But the tension between those who are primarily individual-rights-oriented liberals and those who are primarily polity-oriented democrats is real nevertheless. Shapiro exults in some of the possibilities for greater individual autonomy in the information age, but his principal, immediate concern is for “cooperation, mutual obligation, . . . collective action,” and democratic institutions.⁶³ Lessig underscores the need for democratic institutions and the importance of collective values as well, but his primary orientation, and what he seems to define as our fundamental collective value, is that of preserving individual liberty. Our lodestar, he posits, must be that of John Stuart Mill: “What is the threat to liberty, and how can we resist it?”⁶⁴

To be certain, Lessig's defense of individual liberty is far more profound than that of the reflexive libertarian. He argues cogently that liberty can be undermined no less by private than by public power.⁶⁵ He insists, indeed, that it is an “overemphasis on the private”—an inability to see that individual liberty depends upon government support—that has left us fatally and fatalistically passive in the face of encroaching digital regimentation.⁶⁶ Nevertheless, Lessig also exhibits far more skepticism of government intention and capability than does Shapiro. Shapiro turns with little pause to government to promote the greater good. Lessig pessimistically concludes that, like our political culture and partly as a reflection of that culture, our current governmental institutions lack the

60. LESSIG p. 64.

61. *Id.* at 193.

62. For a cogent refutation of the notion that rights-based liberalism is inherently hostile to democracy, see STEPHEN HOLMES, *PASSIONS AND CONSTRAINT: ON THE THEORY OF LIBERAL DEMOCRACY* 29-36 (1995). In addition, as Ed Rubin insightfully argues, the often overblown rhetoric of “rights” and “democracy” fails to capture the essence of most government decision making in a modern “liberal democratic” administrative state. See Edward L. Rubin, *Getting Past Democracy*, 149 U. PA. L. REV. (forthcoming 2001).

63. SHAPIRO p. 230.

64. See LESSIG p. 85.

65. See *id.* at 85-86.

66. See *id.* at 232-34.

capacity to articulate and promote our deepest constitutional values in the face of the challenges posed by cyberspace and regulatory technology.⁶⁷

In assessing the capacity of our governmental institutions, Lessig painstakingly navigates between the cyberlibertarian disavowal of government involvement and Shapiro's arguably credulous acceptance of state intervention. Yet, on the other hand, despite his overriding emphasis on individual liberty, and largely, I suspect, because his argument arises from and seeks to respond to the *Weltanschauung* of the early Internet, Lessig offers a fairly thin account of liberty and its constraints. Although cyberlibertarians might deny that the absence of government involvement will actually lead to the regimented dystopia Lessig describes, they would readily concede that the widespread commercial deployment of digital systems for requiring user identification, tracing individuals' Internet use, and preventing unauthorized access to and copying of content represent a constraint on liberty.⁶⁸ For others, however, it may be less clear. We all operate within numerous constraints and impediments posed by our physical and social world. Yet we would not define many of them as obstacles to freedom. I cannot fly across the sea by flapping my arms, and thus must obtain a seat on a transoceanic airline flight if I want to achieve my goal. That fact limits my range of possible activity, but would not generally be deemed a constraint on my liberty. Nor would the fact that I need to purchase a ticket in order to get a seat on the flight. Why doesn't the same apply to the Internet and its architecture? How, for example, does an Internet Service Provider's requirement that I reveal my offline identity or a web site operator's collection of information about my Internet use impair my liberty and autonomy? Am I not still free to visit whatever web sites I choose? And the same regarding encrypted control of content. Does my need to obtain another's permission and to pay for access to content impinge on my liberty? Or does it simply represent another contingent aspect of context, the limited realm of possibility in which I must exercise my autonomous choice?⁶⁹

Although Lessig touches only lightly on these questions, his argument does contain a basis for response.⁷⁰ For one, Lessig aptly emphasizes that

67. See *id.* at 120, 220.

68. See, e.g., David G. Post, *What Larry Doesn't Get: Code, Law, and Liberty in Cyberspace*, 52 STAN. L. REV. 1439, 1456 (2000) (noting that he has "no quarrel with the notion that the code/architectures of cyberspace embed fundamental values," but disagreeing with Lessig's argument that code is, therefore, the proper subject of political decision).

69. See Lloyd L. Weinreb, *The Right to Privacy*, 17 SOC. PHIL. & POL'Y 25, 41 (contending that an absence of information privacy does not diminish "autonomy," but only colors the context in which persons may exercise their autonomy).

70. I do not fault Lessig for refraining from delving too deeply into the meaning of liberty in this context. His book is largely a call-to-action, and to probe the theoretical underpinnings of liberty and autonomy might well have detracted from his effort to garner support for his policy argument. See

Internet architecture reflects human choice among available technology and telecommunications configurations. The constraints he discusses are thus properly seen as humanly imposed, not an immutable fact of the physical world. But although human agency is a necessary condition for an impediment to constitute a constraint on liberty, as generally understood, it is not a sufficient condition. Not all impediments and costs we impose on others' freedom of action are understood to impair their liberty. Rather only those obstacles that are viewed as somehow unjust, overreaching, or improper render individuals less than fully free.⁷¹ If a merchant lowers his prices for a line of goods and thereby induces a competitor to cease selling those goods or even to go out of business, we would not normally say that the merchant's conduct is liberty-diminishing, unless perhaps the merchant acted out of pure spite, racial animus, or monopoly power.

At times Lessig seems to suggest that any humanly imposed hindrance to individual choice and activity diminishes liberty, or, even more broadly, that any hindrance to individual choice and activity that could be alleviated by human design constitutes an impairment of liberty. Concomitantly, his ideal system would maximize the quantum of unhindered individual choice and activity. And, Lessig argues in that regard that the next generation, encryption-laden Internet will produce an untoward, contrary result. It will greatly restrict individual choice and activity.

But the overall, quantum impact of the evolving next generation Internet on unhindered individual choice and activity is largely an empirical question, the answer to which is uncertain. For one, the new, commercial Internet does not necessarily subvert or stifle first-generation online conversation, role-playing, and sharing. Rather, it essentially adds an immense commercial overlay, perhaps seeming to overwhelm the first generation, cyberlibertarian kernel by sheer force of numbers, but probably leaving much of that kernel intact.⁷² Even in the new encrypted, pay-per-use, broadband world, an Internet user who wishes to engage in anonymous, free exchange of ideas will find ample online space to do so. What the commercial Internet does supplant is an increasing portion of our offline information-gathering and transactional activity. But here as well digital networks create many opportunities for communication and exchange that did not previously exist in the offline world. Moreover, it may

generally Cass R. Sunstein, *Incompletely Theorized Agreements*, 108 HARV. L. REV. 1733 (1995) (contending that, in many situations, consensus for legislative and judicial decision can be achieved only by finding common ground on desirable policy outcomes in concrete cases rather than seeking to find agreement on abstract theoretical principles).

71. See Chandran Kukathas, *Liberty*, in *A COMPANION TO CONTEMPORARY POLITICAL PHILOSOPHY* 534, 540-42 (Robert E. Goodin & Philip Pettit eds. 1993) (emphasizing that our judgments about liberty cannot be completely insulated from other values and issues of social theory).

72. See Wu, *supra* note 12, at 1196-1200 (emphasizing heterogeneity of Internet use, architectures, and networks).

be that commercial entities will not create such opportunities unless they can impose a measure of regulation on use. So even accepting that encryption, Internet activity tracing, and the like impair liberty to some extent in each instance in which they are applied, it is unclear that the next generation Internet will diminish the total sum of individual choice and activity.

In addition, part of the new-generation Internet's hindrance of individual choice lies in the fact that users will now have to purchase various goods that were previously available for free. In a pay-per-use world, for example, I may have to pay to read an online book or listen to a song each time I wish to do so. But it is unclear whether having to pay to engage in an activity of one's choice constitutes a diminution of liberty *per se*. Lessig is ambiguous on this point. He treats the imposition of a price to obtain access to expression as a constraint on liberty,⁷³ but seems satisfied that enabling Internet users to trade their information privacy for other goods would adequately protect their liberty.⁷⁴

In short, it is less than certain, from what I have said thus far, that much or any of the next-generation Internet's regulatory regime diminishes our freedom in any meaningful sense. But Lessig discusses a further aspect of that regime that, to my mind, does more convincingly demonstrate the regime's liberty diminishing character. Lessig emphasizes that commercial actors (and governments) can use regulatory technology to control and manipulate Internet users.⁷⁵ The problem, here, is not merely that regulatory technology hinders certain possibilities for online activity and communication, but also that it empowers others to treat us strategically and, from our perspective, arbitrarily. Part of this claim is straightforward. Much regulatory technology operates unseen. Commercial actors may track and collate our Internet use patterns without our knowledge and may use the resulting profile for purposes ranging from assessing our suitability for employment to configuring what we see the next time we visit a web site, again without our knowledge or consent. Or, as mentioned above, our search engines and browsers may be preset, without our knowledge, to favor certain content over other. With regulatory technology, in short, others can covertly shape our agendas and rig the consequences of our actions. That capacity to interfere with our choices on an arbitrary basis diminishes our liberty.⁷⁶

73. See LESSIG pp. 139-40 (depicting advent of trusted systems and the consequent proprietization of expression as a restriction on liberty).

74. See LESSIG p. 160 (advocating adoption of a machine-to-machine protocol for negotiating privacy protections).

75. See, e.g., LESSIG p. 99 (referring to private enterprise and government use of code to control and manipulate individual behavior).

76. See PHILIP PETTIT, *REPUBLICANISM: A THEORY OF FREEDOM AND GOVERNMENT* 52-53 (1997) (defining the manipulation of a person's beliefs and choices as an arbitrary interference with the

Pushing still further, part of Lessig's claim regarding control and manipulation seems to reside in the bare fact that our Internet activity—and thus an increasing portion of our search for and consumption of information—has become fully commodified. Our online and offline conversation and gathering of information has moved from a regime of sharing and gift, or at least part sharing and part market, to a regime of pure market. We now have to bargain with commercial actors to use expression in ways that used to be fair use or to visit web sites without others identifying us and tracking our movements. Consequently, we are vulnerable to the will of actors who do not act as our agents, but view us instrumentally, as a means for serving their interests.

Now that sort of interference with our chosen activity at the hands of market actors is not generally viewed as a constraint on our liberty.⁷⁷ The fact that I have to pay to acquire a pen or ticket on an overseas flight is simply part of the context in which I exercise autonomy. I can choose whether to buy the pen or the ticket for the price offered, and if the pen or seats are sold out, I remain free to act within the limits of the resources that are available to me. But it may be that acquiring and imparting information is so central to the exercise of autonomy, both because it is necessary to make informed choices and in the sense that it feels to us as part and parcel of who we are, that its complete commodification is properly seen to diminish freedom.⁷⁸ In the regulatory regime that Lessig depicts, I am dependent upon the will of market actors in my every act of gathering and using information—or at least the exponentially increasing portion of information available online. Where content is encrypted, I have to pay for access or, possibly, do without a good that is vital to my ability to make informed choices. Where I am subject to online tracking and data profiling, my information-gathering and -using activity itself becomes a commodity. It is exposed and mined by others for their instrumental gain without any mutual obligation and vulnerability, thus again subjecting my exercise of autonomy to the prospect of arbitrary interference by another. As that happens, moreover, I am significantly more likely to eschew controversial website content, thus moving towards the bleak conformism that Mill saw as the greatest threat to “personal liberty” (in the sense of enjoying the capacity to give free rein to one's idiosyncratic dispositions)

target individual's choice and thus as a deprivation of liberty); Frank H. Knight, *Some Notes on Political Freedom and on a Famous Essay*, in *NOMOS IV: LIBERTY* 110, 112 (Carl J. Friedrich ed. 1962) (contending that liberty-restricting “coercion” consists in “one person arbitrarily, ‘forcibly,’ manipulating the alternatives open to another”).

77. But see HOLMES, *supra* note 62, at 187 (noting that John Stuart Mill viewed a seller's concealment of competitors' prices as inimical to “free” market transactions and called upon the government to publish price information in order to remedy that asymmetry).

78. Cf. C. Edwin Baker, *International Trade in Media Products*, in *THE COMMODIFICATION OF INFORMATION* (Neil Netanel, et al. eds., forthcoming 2001) (contending that the value of communication often lies in its non-commodified aspects).

in a modern democracy.⁷⁹ It is for that reason, and in that sense, as well that Lessig is ultimately correct in viewing the commercial deployment of regulatory digital technology as a threat to liberty.

III. Cyberspace and Public Discourse

Lessig's pessimistic conclusion about our ability to harness digital technology in line with our collective values is meant, I surmise, less as jeremiad than anguished spur to further inquiry and action. In that spirit, in any event, I now proceed briefly to consider how our collective values might apply to three fault lines that Shapiro's and Lessig's second-generation cyberspace analysis lays bare. In this Part, I address the threat to public discourse posed by excessive individual insularity. In Part IV, I assess whether individuals' use of electronic agents might counter the regimenting force of regulatory technology. In Part V, I examine claims regarding the Internet's potential role in reviving community and civil society.

Shapiro and Lessig both express grave concern that individuals' ability to customize the information mix to which they are exposed will impoverish public discourse and ultimately erode the social fabric upon which a democratic polity depends.⁸⁰ As Shapiro and Lessig note, digital filtering, search engines, and electronic agents will enable us to define in advance what sorts of information we will receive and what sorts we wish to eschew.⁸¹ As a result, they fear, individuals will limit their input of news, literature, and art to what MIT professor Nicholas Negroponte has colorfully labeled *The Daily Me*, a highly personalized collection of material aimed at each person's narrow tastes.⁸² Unlike today's news-paper reader, radio listener, or television watcher, the imbiber of digital content will never serendipitously happen upon expression that might pique her interest or challenge her preconceived ideas.⁸³

79. JOHN STUART MILL, ON LIBERTY; WITH THE SUBJECTION OF WOMEN; AND CHAPTERS ON SOCIALISM 69-73 (Stefan Collini ed. 1989).

80. The liberal democratic state, many commentators assert, depends upon both a sense of mutual recognition and robust debate among contrary views. See, e.g., HOLMES, *supra* note 62, at 179-81 (discussing John Stuart Mills' thesis that a liberal state requires a robust exchange of view); JOHN RAWLS, POLITICAL LIBERALISM 38 (1993) (arguing that rampart separatism would undermine the degree of social cohesion required to sustain an "enduring and secure democratic regime"); CASS R. SUNSTEIN, FREE MARKETS AND SOCIAL JUSTICE 186-87 (1997) (asserting that it is only through interaction and deliberation with those of opposing ideas and perspectives that citizens can test their preferences and produce better collective decisions).

81. See LESSIG pp. 177-80; SHAPIRO pp. 105-09.

82. NICHOLAS NEGROPONTE, BEING DIGITAL 153 (1995), cited in SHAPIRO p. 45.

83. Shapiro and Lessig might overestimate the extent to which such serendipitous contact actually leads individuals to reconsider their prior views. Studies in bounded rationality show that people have powerful and systematic tendencies to hold on to existing beliefs even in the face of evidence to the contrary, and indeed to misread such contrary evidence as additional support for their initial

To my mind, Shapiro and Lessig at once overstate and understate their concern. They overstate it in that it is questionable whether digital technology will actually lead to the widespread excessive insularity they portray. They understate the concern in that to the extent customization does in fact promote insularity, the effect may be considerably more pernicious than they suggest.

First, the overstatement. Contrary to Shapiro's and Lessig's prognosis, most individuals may well choose to receive the digital equivalent of today's mainstream media for much of the time. Indeed, preliminary studies of Internet usage show a considerable concentration of user visits among a relatively small number of popular sites.⁸⁴

I can envision several reasons for this. For one, informational and cultural works share characteristics of solidarity and associative goods.⁸⁵ I do not read *The New York Times* simply because it provides me with the mix of information that suits my taste and interest. I read it because many other people read it and, no less importantly, because many other people of a certain educational and professional status read it. It would not do for me merely to have an electronic agent bring me much the same information as I might find in the *Times*. Rather I want to know what is in the *Times* in part because it is *in the Times*. I want to know what *The New York Times* as an opinion leader and what the network of *Times* readers think is important, current, and of interest. Likewise, I want to be able to share a common basis for conversation with colleagues, and to show others that I, too, am "in the know," that I am part of the coterie of readers of *The*

hypotheses. See, e.g., Jon D. Hanson & Douglas A. Kysar, *Taking Behavioralism Seriously: The Problem of Market Manipulation*, 74 N.Y.U. L. REV. 630, 646-50 (1999) (surveying studies showing "belief perseverance" and "confirmatory bias").

84. See Lada A. Adamic & Bernardo A. Huberman, *The Nature of Markets in the World Wide Web*, May 6, 1999, at 4 tbl. 1 available at <http://parc.xerox.com/istl/groups/iea/www/webmarkets.html>; James G. Webster & Shu-Fang Lin, Internet Audiences: Some Features of Mass Behavior 6, 15 (July 25, 2000) (unpublished paper) (finding, on the basis of a study of Internet usage, both that the top 200 web sites out of the 1,766 sites studied accounted for roughly half of all user visits and that people "opt for a more varied diet than the worst fears [of customized tunnel vision] would suggest"). In fact, existing data suggest that, despite some fragmentation, mass appeal network television is likely to continue to dominate media consumption in the United States for the foreseeable future. See JAMES G. WEBSTER & PATRICIA F. PHALEN, *THE MASS AUDIENCE: REDISCOVERING THE DOMINANT MODEL* 114 (1997).

85. Cass Sunstein and Edna Ullman-Margalit label as "solidarity goods" those "goods whose value increases as the number of people enjoying them increases." CASS R. SUNSTEIN & EDNA ULLMAN-MARGALIT, *Solidarity in Consumption* (John M. Olin Law & Economics Working Paper No. 98, 2d Series, April 28, 2000), available at http://papers2.ssrn.com/paper.taf?abstract_id=224618. Associative goods are those, like country clubs and institutions of higher education, for which the consumer is interested not just in the good's quality and price, but also in the personal characteristics of the good's other customers. See Henry Hansmann, *Higher Education As An Associative Good*, (Yale Law and Economics Working Paper No. 23, Nov. 21, 1999), available at http://papers.ssrn.com/paper.taf?ABSTRACT_ID=192576.

New York Times. I suspect that something of the same is true with most people with respect to many newspapers, movies, songs, and television shows. If I am correct, then, even given the opportunity to customize their information mix, most people will want to read, see, and hear at least in part what they think others of their social group are reading, seeing, and hearing.

Significantly, moreover, the next generation Internet will be highly conducive to mass media mainstreaming. Economies of scale, network effects, intense competition for user attention, and emerging Internet technology for the dissemination of high-quality, star-studded, expensive video content will radically transform cyberspace's expressive matrix.⁸⁶ Far from its pluralist "cheap speech" origins, cyberspace will reverberate to the tune of America Online-Time Warner, CBS-Viacom, and ABC-Disney. Lone authors and musicians might still post their work on listservs and web sites, and those who know and care to look will still be able to read and hear that work. But the dissemination of most information and expression will more closely resemble today's mass media marketplace than today's infant Internet. Both authors and audiences will return to depend heavily on intermediaries—the cyberspace equivalents of book publishers, film studios, newspapers, television networks, and record producers—to act as gatekeepers selecting which expression to market, to market that expression, and to invest in the production of expensive content.⁸⁷ Those intermediaries will determine what content gets communicated to most people. In turn, cyberspace intermediaries, like their offline counterparts, will tailor much of that content to mainstream tastes and to the tastes of audience segments most likely to buy advertiser products and services.⁸⁸

At the same time, Shapiro and Lessig are correct that, at least on the margins—and no one knows just how wide those margins will be—people will take advantage of the narrowcasting and individual customization opportunities that digital technology presents.⁸⁹ In addition, the Internet does and will continue to engender countless discussion groups and virtual

86. I discuss this in more detail in Netanel, *supra* note 8, at 440-43, and Netanel, *supra* note 8, at 1887-93.

87. See generally Joseph P. Bailey & Yannis Bakos, *An Exploratory Study of the Emerging Role of Electronic Intermediaries*, 1 INT'L J. ELEC. COM., Spring 1997, at 7; Nicholas G. Carr, *Hypermediation: Commerce as Clickstream*, HARV. BUS. REV., Jan.-Feb. 2000, at 46.

88. See BRUCE M. OWEN & STEVEN S. WILDMAN, VIDEO ECONOMICS 101-50 (1992) (noting that content providers' congenital bias against minority tastes and in favor of large audiences' tastes is exacerbated in media characterized by firm concentration and in media supported by advertising); WEBSTER & PHALEN, *supra* note 84, at 103 (noting that with unlimited channels, it may be profitable to "produce minority interest content for relatively small segments of the audience, particularly if those segments have characteristics appealing to advertisers" or if those audience segments "are willing and able to pay for it").

89. See Michael Lewis, *Boom Box*, N.Y. TIMES MAG., Aug. 13, 2000, at 36 (describing expected transformation of television into an Internet-like medium of vast user-directed choice).

communities in which people of like-minded views and interests converse.⁹⁰ To the extent the digital world does actually bring about a material increase in individual—and group—insularity, Shapiro and Lessig may well understate its dangers. Insularity does not merely vitiate public discourse. It also breeds extremism.

Cass Sunstein has recently surveyed studies in individual and group psychology documenting the phenomenon of “group polarization.”⁹¹ Longstanding democratic theory holds that group deliberation, the exchange of competing views, produces better outcomes. But as Sunstein summarizes, when a group consists of individuals with predeliberation judgments that, on the whole, lean even moderately in a given direction, deliberation tends to move the group, and the individuals who compose it, toward a more extreme position. Thus, with striking empirical regularity, “people who are opposed to the minimum wage are likely, after talking to each other, to be still more opposed; people who tend to support gun control are likely, after discussion, to support gun control with considerable enthusiasm; people who believe that global warming is a serious problem are likely, after discussion, to insist on severe measures to prevent global warming; jurors who support a high punitive damages award are likely, after talking, to support an award higher than the median of their predeliberation judgments.”⁹²

While studies have just begun to address the phenomenon of group polarization in online groups, preliminary results suggest that group deliberation on the Internet, especially under conditions of anonymity, magnifies that tendency.⁹³ One can hypothesize, moreover, that mass media mainstreaming may produce a kind of reverse polarization. People who continually hear the same mainstream views and voices will be inclined to cast an increasingly jaundiced eye towards minority viewpoints. In sum, insularity and intellectual ossification can spawn not only from *The Daily Me*, but also from a mainstream media that gives insufficient play to a wide spectrum of view. As a result, the next generation Internet may well conduce both interest group extremism and a deepening inability to comprehend minority opinion and culture.

90. According to one commentator, participation in online, topic-defined discussion groups is the second most frequent interactive Internet use, behind e-mail. William A. Galston, *Does the Internet Strengthen Community?*, 19 REP. FROM THE INST. FOR PHIL. & PUB. POL'Y 1, 4 (1999), available at http://www.puaf.umd.edu/ippp/fall1999/internet_community.htm.

91. Cass R. Sunstein, *Deliberative Trouble? Why Groups Go to Extremes*, 110 YALE L.J. 71 (2000).

92. Cass R. Sunstein, *The Law of Group Polarization* 1 (U. Chi. Law School, John M. Olin Law & Economics Working Paper No. 91, 1999) available at http://papers.ssrn.com/paper.taf?abstract_id=199668.

93. Sunstein, *supra* note 91, at 101.

Certainly the state cannot and should not seek to address this potential problem by micromanaging individual speech and speech consumption. At the very least, however, government should encourage individuals to partake of diverse expression and different viewpoints. Where necessary, the government should also subsidize the production and dissemination of a multiplicity of views concerning political, social, and cultural issues. In particular, in an age in which market dictate and rampant consumerism so thoroughly dominate offline and, increasingly, online media content,⁹⁴ it is incumbent upon government to fund and secure ample space for non-market driven and nonmarket driving expression.

Along these lines, Shapiro advocates the creation of a "PublicNet," an aggregation of web sites and virtual fora "where otherwise-invisible community groups, activists, and artists might occasionally have a limited but real opportunity to be seen or heard."⁹⁵ Shapiro envisions the PublicNet as the Internet equivalent of a street corner or public access cable, a place where "we might be exposed now and again to an unplanned encounter that we would find interesting and valuable."⁹⁶ To ensure that the PublicNet does not disappear in the maelstrom of commercial media competition for Internet-user eyeballs, Shapiro would require Microsoft and other large Internet gatekeepers to display on customers' desktops a PublicNet icon through which users could access the PublicNet with a click of the mouse.⁹⁷

To my mind, Shapiro's PublicNet would have about as much chance of attracting an audience as, well, street corner leafleters and public access cable. Indeed, given the overabundance of expression and information on the Internet and what will be a plethora of high-quality broadband content, audiences will have even less time and patience for such speech than they do today. Rather, given the drastic scarcity of user attention, the only hope for attracting anything more than a trivial audience for PublicNet content would be for governments to provide substantial subsidies for the production—and marketing—of high-quality educational and public interest content. One might imagine, indeed, a PublicNet consisting of a conglomeration of sites sponsored by the BBC, PBS, NPR, and other noncommercial public broadcasters from the United States and abroad.⁹⁸

94. See generally C. EDWIN BAKER, *ADVERTISING AND A DEMOCRATIC PRESS* (1994) (detailing advertiser influence on media content); JULIET B. SCHOR, *THE OVERSPENT AMERICAN* 80-83 (1998) (describing studies showing a positive correlation between television viewing and consumer spending).

95. SHAPIRO p. 205.

96. SHAPIRO p. 206.

97. See *id.*

98. For a survey and analysis of the Internet presence of public broadcasters from various countries, see Amit M. Schejter, *Public Service Internet? Public Service Broadcasting and the Internet: An International and Comparative Study* (Sept. 24, 2000) (unpublished paper presented at the 28th

It might also include sites of public museums, cultural centers, and educational institutions. Finally, the PublicNet might serve as a kind of "Global Public Library," both a trustworthy source for the creation of accurate digital copies of public domain literary, musical, and artistic works, and a vast repository of such copies.⁹⁹ That sort of PublicNet might lack much of the unmediated discourse of Shapiro's public access cable idea. But in keeping with Shapiro's own emphasis on the value of mediating institutions, it would likely produce far more content of interest and significance.

The question remains whether significant state subsidies for such speech—or, even further, a government requirement that commercial gatekeepers display the PublicNet icon—comport with free speech values and First Amendment doctrine. While I cannot fully address that question here, I will suggest that the answer is "yes." As the Supreme Court has recently reaffirmed, government enjoys a well-established, though not unqualified, prerogative to use public funds to advance civic goals, as it defines them, as well as to advocate and defend its own policies.¹⁰⁰ Central to that prerogative is government's venerable practice, extending back to the founding of the Republic, of furthering the dissemination of "political intelligence and information" by underwriting the press.¹⁰¹ The first Congress heavily subsidized newspaper deliveries by imposing preferential postal rates, levying postal charges on subscribers rather than printers, intermittently collecting subscribers' postal charges, providing free newspaper delivery among printers, and maintaining postal roads for both post office and printers' private use.¹⁰² More recently, Congress has established and funded the Corporation for Public Broadcasting to "encourage the growth and development of public radio and television broadcasting . . . for instructional, educational, and cultural purposes" and provide "programming that involves creative risks and that addresses the

Annual TPRC Research Conference on Communication, Information, and Internet Policy, on file with Texas Law Review).

99. See Starr, *supra* note 45, at 32-33 (proposing the idea of Global Public Library, to include both public domain and other freely accessible works). The Internet proliferation of unverifiable sources for digitized texts poses the problem of how to determine the accuracy of copies. See *id.* Interestingly, that very same problem plagued the early modern print world. See ADRIAN JOHNS, *THE NATURE OF THE BOOK: PRINT AND KNOWLEDGE IN THE MAKING* 30-31 (1998) (discussing the widespread uncertainty regarding authenticity and accuracy of copies of books resulting from pervasive piracy, plagiarism, and printer error during the first centuries of printing).

100. See Board of Regents of the Univ. of Wis. Sys. v. Southworth, 120 S. Ct. 1346, 1356-57 (2000).

101. C. Edwin Baker, *Turner Broadcasting: Content-Based Regulation of Persons and Presses*, 1994 SUP. CT. REV. 57, 99 (quoting George Washington's pronouncement in favor of lower postal rates for newspapers).

102. Richard B. Kielbowicz, *The Press, Post Office, and Flow of News in the Early Republic*, 3 J. EARLY REPUBLIC 255, 257-59 (1983).

needs of unserved and underserved audiences, particularly children and minorities.”¹⁰³ To much the same informational ends, the federal government has also heavily subsidized the Internet, both directly from the public fisc and by telecommunications regulations maintaining cross-subsidies from telephone and other non-Internet services.¹⁰⁴

The question is whether the government need and ought to fund the digital equivalent of public broadcasting when we have the Internet. Would a PublicNet, consisting of public broadcaster, cultural, and educational institution programming be necessary and warranted to further the fundamental federal objectives of providing public service and educational programming and promoting the “[w]idest possible dissemination of information from diverse and antagonistic sources?”¹⁰⁵ I would argue that it very much would.¹⁰⁶ While even the next generation Internet may contain an abundance of such information, few will see or hear it without government funding for high-quality programming and delivery and for effective marketing. Just as a profusion of street corner speech has never obviated the need for government funding for informational and diversity-enhancing mass communication, neither would a plenitude of virtual fora take the place of a well-funded PublicNet. At the same time, given the wealth of commercial expression on the Internet and the expressive power of the media-telecommunications conglomerates, substantial government funding would pose no reasonable danger of government monopolization of the expressive sector, which is widely seen to constitute a fundamental limitation on the governmental prerogative to subsidize speech.¹⁰⁷

Shapiro's suggestion of requiring Internet gatekeepers to display the PublicNet icon raises more difficult questions. As a general rule, government efforts to compel expression violate the First Amendment no less than does government censorship.¹⁰⁸ However, courts have carved out a partial exception to this rule when the speaker serves as a gatekeeper to a significant sector of mass communication. On one permutation or

103. Corporation for Public Broadcasting, 47 U.S.C. § 396(a)(1),(6) (1994).

104. See Steve Bickerstaff, *Shackles on the Giant: How the Federal Government Created Microsoft, Personal Computers, and the Internet*, 78 TEXAS L. REV. 1, 45-55, 82-83 (1999); Jonathan Weinberg, *The Internet and “Telecommunications Services” Universal Service Mechanisms, Access Charges, and Other Flotsam of the Regulatory System*, 16 YALE J. ON REG. 211 (1999).

105. *Associated Press v. United States*, 326 U.S. 1, 20 (1944).

106. For a cogent argument that broadcasters' public trustee obligations should be replaced with cross-subsidies and other funding for public telecommunications, see Henry Geller, *Public Interest Regulation in the Digital TV Era*, 16 CARDOZO ARTS & ENT. L.J. 341, 362-66 (1998).

107. See MARK G. YUDOF, *WHEN GOVERNMENT SPEAKS: POLITICS, LAW, AND GOVERNMENT EXPRESSION IN AMERICA* 170 (1983) (“The greater the state's monopoly, the more apparent the dangers of government communications.”).

108. See *Wooley v. Maynard*, 430 U.S. 705 (1977) (finding that a mandatory license plate motto violates the First Amendment); *W. Va. St. Bd. of Educ. v. Barnette*, 319 U.S. 624 (1943) (holding that the mandatory recitation of the Pledge of Allegiance violates the First Amendment).

another of that rationale, the Supreme Court has held constitutionally permissible federal treatment of broadcasters as public trustees and of cable television systems as quasi-common carriers.¹⁰⁹ In that vein, moreover, Congress has provided, and courts have upheld, that cable systems and direct broadcast satellite providers must allocate channels for non-commercial public, educational, and governmental programming.¹¹⁰

The application of this precedent to the PublicNet icon would depend largely on an understanding of, first, when a speaker can be said to be a gatekeeper such that the speaker can constitutionally be required to serve as a partial conduit for publicly funded programming and, second, what, if anything, constitutes such “gatekeeping” on the Internet. On one reading, gatekeeper status depends entirely on the physical, not the economic, characteristics of the relevant communications sector. Government may require speakers to convey others’ views only when the speaker occupies the sole means of entry into the relevant medium, whether as a result of spectrum scarcity or cable bottleneck. On a broader reading, albeit one specifically rejected in Supreme Court dicta, significant market concentration and dysfunction might in and of themselves give rise to constitutionally permissible gatekeeper treatment.¹¹¹

It is as yet unclear whether the evolving digital communications network, both wired and wireless, will contain physical bottlenecks and, if so, which entities, if any, will be gatekeepers.¹¹² There are signs,

109. See *Red Lion Broad. Co. v. FCC*, 395 U.S. 367, 390 (1969) (holding that “[b]ecause of the scarcity of [electromagnetic] frequencies, the Government is permitted to put restraints on licensees in favor of others whose views should be expressed on this unique medium”); *Turner Broad. Sys., Inc. v. FCC*, 512 U.S. 622, 662 (1994); *Turner Broad. Sys., Inc. v. FCC*, 520 U.S. 180, 218 (1997) (upholding legislation requiring that cable systems carry over-the-air broadcasts of local television broadcasters without charge).

110. See, e.g., *Time Warner Entertainment Co. v. FCC*, 93 F.3d 957, 963, 973 (D.C. Cir. 1996) *reh’g denied*, 105 F.3d 723 (D.C. Cir. 1997) (upholding against First Amendment challenge § 611 of the Cable Communications Policy Act of 1984, requiring “cable operators to set aside channels for public, educational, and governmental programming” and § 25 of the Cable Television Consumer Protection and Competition Act of 1992, requiring direct broadcast satellite providers to set aside up to 7% of their channel capacity for “noncommercial programming of an educational or informational nature”).

111. The market dysfunction argument was rejected in *Turner Broadcasting System, Inc. v. FCC*, 512 U.S. 622, 640 (1994) (stating that “the mere assertion of dysfunction or failure in a speech market, without more, is not sufficient to shield speech regulation from the First Amendment standards applicable to nonbroadcast media”). But see Baker, *supra* note 10 at 80-82, 93-114 (criticizing the *Turner* decision and contending that government may generally impose content-based regulation on nonbroadcast as well as broadcast media in order to enhance expressive diversity).

112. The question of physical, as well as market, bottlenecks lies at the center of the dispute over whether broadband networks should follow the “open access,” end-to-end design of the Internet or the proprietary model of cable television. See Harold Feld, *Whose Line Is It Anyway? The First Amendment and Cable Open Access*, 8 COMM.LAW CONSP. 23 (2000); Lawrence Lessig, *Innovation, Regulation, and the Internet*, AM. PROSPECT, Mar. 27 - April 10, 2000, at 26. For an intriguing argument that spread spectrum technology enables multiple uses of the same slice of

however, that as various sectors for the production and distribution of expression—television, radio, books, newspapers, films, sound recordings, and others—converge into a common network and as media and telecommunications mergers proceed apace, our system of political and cultural expression will reach unprecedented levels of market concentration at all but the virtual street corner. As I have discussed elsewhere, that consolidation of media ownership will both skew the mix of effective speech and diminish expressive diversity.¹¹³ To the extent it comes to pass, such market dysfunction, I would argue, ought to render constitutionally permissible a government requirement that market gatekeepers act as partial conduits, reserving a portion of their network capacity—and perhaps visual icon capacity—for noncommercial telecommunications such as the PublicNet.¹¹⁴

Identifying market gatekeepers in an assuredly content- and speaker-neutral fashion might be more difficult than for physical gatekeepers. But the coming broadband market appears likely to reflect not only concentration in media ownership, but also a concomitant tipping of the broadband audience towards a small percentage of portals and web sites (and their broadband equivalents), similarly to the consolidation of user attention that increasingly characterizes the Internet.¹¹⁵ In that event, it should be entirely possible, even in the absence of physical gatekeeping, to implement objective, verifiable, market-structure-based criteria for determining which broadband outlets must carry the PublicNet icon or allocate capacity to noncommercial telecommunication.

IV. Electronic Smart Agents

Among Lessig's major themes is that network architecture and software code define the scope of personal liberty in cyberspace. Congruent with that theme, he suggests that the widespread deployment of P3P, a software protocol that enables users to instruct their browsers which personal information, if any, may be imparted to web sites, might be the

spectrum, and thus, if deployed, might render unconstitutional any government licensing or defined property rights in spectrum frequency, see Yochai Benkler & Lawrence Lessig, *Net Gains*, *THE NEW REPUBLIC*, Dec. 14, 1998, at 13.

113. See Netanel, *supra* note 10, at 1887-98.

114. See also Baker, *supra* note 101, (arguing that concentration and market power do and should suffice to justify selective media regulation in the interest of promoting expressive diversity).

115. Preliminary studies indicate a considerable concentration of Internet user attention among a small number of web sites. See *supra* note 84. Not surprisingly, the most highly-visited sites are operated by large commercial players. According to Nielson//Netratings, aside from portal sites such as AOL and Yahoo (which were, respectively, the first and second most visited web sites during August 2000), the top five visited sites during September 2000 were those operated by Microsoft, Walt Disney, Time Warner, Amazon.com, and NBC Internet. Nielson//Netratings: *Top 25 Web Sites by Property, Combined Home and Work* (Sept. 2000), at http://63.140.238.20/press_releases/pr_001016.htm.

key to protecting information privacy online.¹¹⁶ Others similarly argue that electronic agents like P3P will enable users generally to reclaim sovereignty in online transactions.¹¹⁷ Electronic smart agents, this claim suggests, might be a technological counter to some of the evils that Lessig and Shapiro associate with commercial dominance of the Internet. Armed with such agents, and the enhanced power that they will give to consumers, individuals need not agree to pay for digital content embedded with onerous restrictions on use or to relinquishing anonymity as a condition to visiting online spaces.

To understand the possible basis for such a claim, let's begin with supermarkets—not online virtual supermarkets—real supermarkets, where we walk around and hear Musak. Supermarket proprietors have four significant advantages over consumers in appropriating the gains from trade from consumers' supermarket purchases. The first advantage consists of information costs. Supermarkets frequently change the prices at which many items are offered, with varying select items on sale at reduced prices for limited times. As a result, in order to obtain a given basket of produce at the lowest cost, a consumer would generally have to buy some items from one supermarket and other items from other supermarkets, with the configuration changing every time one supermarket or another changes its price for an item in the basket. Aside from scanning advertisements for temporary price reductions for select items, consumers can effectively compare prices only by travelling from one supermarket to another. It is rarely worth the time and expense required for consumers to obtain that information.¹¹⁸ Supermarket proprietors reap the difference between the price the consumer actually pays for his basket of produce and the price he would pay if he had perfect information.

The proprietors' second advantage arises from their knowledge and manipulation of consumers' systematic cognitive biases. Supermarket techniques for inducing greater consumer purchases, particularly impulse buying, are time-tested and varied. They include item placements, such as shelving milk at the back of the store and arranging soups out of alpha-

116. LESSIG p. 160. Lessig argues that giving users a property right in their personal information is necessary to spur merchant acceptance of the P3P platform. *Id.* But once P3P was in general use, user-merchant transactions, effected through the technology itself with minimal friction and transaction costs, would presumably make any legal default rule irrelevant. On P3P and its uses, see Jessica Litman, *Information Privacy/Information Property*, 52 STAN. L. REV. 1283, 1298-99 (2000); Netanel, *supra* note 8, at 478-80; Joseph Reagle & Lorrie Faith Cranor, *The Platform for Privacy Preferences* (Nov. 6, 1998), at <http://www.w3.org/TR/NOTE-P3P-CACM>.

117. See, e.g., Lorin Brennan, *The Public Policy of Information Licensing*, 36 Hous. L. REV. 61, 111-15 (1999) (arguing that electronic smart agents help consumers negotiate favorable transactions); Singh, *supra* note 15, at 46.

118. See ROBERT KUTTNER, *EVERYTHING FOR SALE: THE VIRTUES AND LIMITS OF MARKETS* 13-14 (2d ed. 1999).

betical order, that force customers to come across many products that are not on the customers' shopping lists.¹¹⁹ They also include putting impulse items like candy at the cash register (as well as judiciously interspersing sugarless gum and trail mix in order to avoid alienating health conscious parents).¹²⁰ They extend even to designing aisle width and piping in music that market research has shown to increase customer purchasing.¹²¹

Third, proprietors can increasingly gather information about consumer buying habits. This enables them to target advertising. It also helps them to price discriminate.¹²² Armed with knowledge of consumer valuations, supermarket proprietors can offer reduced prices or charge premiums on certain items to certain persons at certain locations, but not to others.¹²³

Finally, proprietors enjoy repeat player advantages over consumers. Proprietors sell each item many times per day. A typical consumer buys most supermarket items only once or twice per week. As a result, proprietors can spread the cost of determining product prices across many consumers. It is generally worth it for proprietors and their suppliers to invest time and money in market research and experimentation to determine the prices and other factors best designed to enable the proprietor to reap as much gains from trade as possible for each item in stock.¹²⁴ It is generally not worth it for an individual consumer to invest in research that might save him only a few cents per item. In theory, supermarket consumers could band together to purchase supermarket items or to invest in up-to-date research on the daily price fluctuations of typical items at competing supermarkets. But as anyone who has participated in a grocery cooperative knows all too well, consumers face significant collective action cost barriers to doing so.

Significantly, moreover, moving beyond the supermarket example, such proprietor advantages are magnified when transactions involve not only price, but multiple contingencies like payment terms, financing,

119. See Hanson & Kysar, *supra* note 83, at 748.

120. See Jon D. Hanson & Douglas A. Kysar, *Taking Behavioralism Seriously: Some Evidence of Market Manipulation*, 112 HARV. L. REV. 1420, 1437 (1999).

121. *Id.* at 1447-48.

122. The determination of when price differentiation constitutes price discrimination can be quite complex. See Wendy J. Gordon, *Intellectual Property as Price Discrimination: Implications for Contract*, 73 CHI.-KENT L. REV. 1367, 1376-78 (1998) (underscoring complexity with respect to copyright). Very basically, price discrimination occurs in two instances: first, where the seller sells the same good to two or more buyers at different net prices, and second, where the seller sells two varieties of a good to two or more buyers at different net prices, the net price being the price paid by the buyer corrected for the cost associated with the product differentiation. See LOUIS PHILIPS, *THE ECONOMICS OF PRICE DISCRIMINATION* 5-7 (1983).

123. See SHAPIRO & VARIAN, *supra* note 9, at 41.

124. See Hanson & Kysar, *supra* note 83, at 1429-39 (describing manufacturers' and merchants' vast and costly research regarding consumer behavior).

product warranties, conditions of use, proprietor service requirements, proprietor's use of consumer's personal information, and the like. It is widely recognized, for example, that customers rarely understand or even read the terms of standard contracts.¹²⁵ And even if they do, consumers face considerable difficulty in weighing contingencies and risks. Firms, on the other hand, have considerable incentives to contain even remote contingencies.¹²⁶ They are also able to spread the cost of developing standard terms among many potential transactions.

Thus far, the Internet has done surprisingly little to undercut proprietor advantages for most types of goods. Say I want to buy a book on the web. In order to find the site offering the book at the lowest price, I need to locate and visit the website for each and every online book merchant. I can probably do so at a fraction of the travel time and expense I would have to expend at comparison shopping among conventional bookstores, but despite the wealth of information available on the Internet, my information costs will still be substantial. Indeed, apparently as a result of these persistent information costs, online book retailers regularly sell best-selling books at higher prices than do offline outlets,¹²⁷ and online markets show substantial price dispersion, reflecting a marked dominance of heavily branded retailers characteristic of winner-take-all markets.¹²⁸ Likewise, online retailers study and manipulate users' cognitive biases no less than in the offline world. Akin to supermarkets' product placement and piped-in music, online retailers design web sites and online stores to capitalize on such factors as user perceptions of advertisement size, user

125. See Todd D. Rakoff, *Contracts of Adhesion: An Essay in Reconstruction*, 96 HARV. L. REV. 1173, 1179 (1983); see also RESTATEMENT (SECOND) OF CONTRACTS § 211 cmt. b (1981) ("Customers do not in fact ordinarily understand or even read the standard terms.").

126. See Rakoff, *supra* note 125, at 1221-27 (contrasting incentives on adhesion contract drafters to contain even remote contingencies given consumers' difficulty in assessing such risks).

127. Indeed, given recent price increases by leading online booksellers, when shipping charges are taken into account, "only hardcover books with cover prices above \$22.50 are now as cheap online as they are at full price" (not including sales tax) in a retail store. See David D. Kirkpatrick, *Quietly, Booksellers are Putting an End to the Discount Era*, N.Y. TIMES, Oct. 9, 2000, at A1. Of course, higher prices for buying books online may also reflect the added value of quick and convenient online searches and of saving the trip to the bookstore.

128. Erik Brynjolfsson & Michael D. Smith, *Frictionless Commerce?: A Comparison of Internet and Conventional Retailers*, 46 MGMT. SCI. 563 (2000), available at <http://ecommerce.mit.edu/papers/friction>; Adamic & Huberman, *supra* note 84.

Preliminary evidence suggests that online shopping for expensive, infrequently purchased items, like cars and air tickets, may warrant consumers' time and information costs, although it is unclear whether this is entirely due to the possibility of obtaining price discounts or whether, at the least in the case of cars, online purchases also enable the consumer to avoid the time and aggravation of haggling with the dealer. See Tim Race, *Name-Your-Own-Price Misnomers*, N.Y. TIMES ON THE WEB, Oct. 23, 2000, at <http://www.nytimes.com/2000/10/23/technology/23NECO.html> (comparing online car purchases with Priceline's reverse auctions for air tickets, hotel rooms, and car rentals and with the recent failure, reportedly due to lack of consumer interest, of WebHouse's online reverse auction for grocery items).

tendencies to click on the first icons or links that appear on their screen, and user desires for community and affiliation.¹²⁹ In addition, the Internet has dramatically increased proprietors' capacity to gather, exchange, and collate data regarding customer buying habits. Indeed, such information has become a principal, if not the sole, profit center for many online businesses.¹³⁰ Finally, as I have discussed elsewhere, Internet users have no better opportunity to assess or contest Web site access terms and other standard online contracts than they do offline.¹³¹ On the Internet, like in the offline world, rule shopping and drafting is considerably more costly for individual consumers, both in absolute terms and relative to potential benefits, than for proprietors.

But enter the electronic "smart agent," a technology already beginning to be deployed in electronic commerce.¹³² As noted above, smart agents (or "bots") are computer programs that can comparison shop, set terms for use of data regarding users' web activity, and negotiate transactions on users' behalf. So, if I want to buy a book online, I can direct my shopping bot to find the site that offers the book at the lowest price and that will deliver the book to me within three days. Per my previous instructions, my bot might even purchase the book on my behalf. I can also direct my bot to allow the online bookseller to keep a record of my book-buying interests, but not to share that information with other sites, or to only share that information in return for giving me a discount on my purchases. Likewise, as more sophisticated electronic agents are developed, I might be able to give my bot instructions involving and weighing multiple additional contingencies.¹³³ In the case of book buying, these might range from delivery time to my right to copy portions of the book.

129. Janis L. Gogan, *The Web's Impact on Selling Techniques: Historical Perspective and Early Observations*, 1 INT'L J. ELEC. COM., Winter 1996-97 at 89, 96 (discussing marketing techniques that seek to capitalize on Web users' desire for affiliation); Abeer Y. Hoque & Gerald L. Lohse, *An Information Search Cost Perspective for Designing Interfaces for Electronic Commerce*, 36 J. MKTG. RSCH. 387, 389 (1999); Sirka L. Jarvenpaa & Peter A. Todd, *Consumer Reactions to Electronic Shopping on the World Wide Web*, 1 INT'L J. ELEC. COM., Winter 1996-97, at 59, 63.

130. SHAPIRO & VARIAN, *supra* note 11, at 34, 43.

131. See Netanel, *supra* note 8, at 436-38.

132. The use of electronic agents to enter into binding contracts is validated under the Uniform Computer Information Transactions Act (UCITA), already enacted or under consideration in a number of states. See UCITA §§ 107, 112, 206, available at <http://www.ucitaonline.com/ucita.html>. For an illuminating discussion of how the use of electronic agents and other digital devices for making and enforcing binding agreements may impact our understandings of contract, see Margaret Jane Radin, *Humans, Computers, and Binding Commitment*, 75 IND. L. J. 1125 (2000).

133. See Brennan, *supra* note 117, at 114 (discussing expected multi-attribute decision capabilities of more sophisticated electronic agents); Joan Morris & Pattie Maes, *Negotiating Beyond the Bid Price*, in CHI 2000 WORKSHOP PROCEEDINGS: DESIGNING INTERACTIVE SYSTEMS FOR 1-TO-1 E-COMMERCE (April 2000), at <http://agents.www.media.mit.edu/groups/agents/publications> (describing prototype application for online bidding involving multiple products and product attributes).

At first glance, it seems that my smart agent has overcome each of the four proprietor advantages I have discussed. My information costs have now fallen almost to zero because my smart agent does all of the searching and comparing for me. (Indeed, once my agent learns my book preferences, it might even initiate searches for me, without my having to enter instructions.) In addition, my agent is presumably immune to the cognitive biases that plague me. No product or icon placement need interfere with the agent's perfect rationality in finding, assessing, and comparing product information.¹³⁴ Finally, my agent empowers me to exert far greater control over matters other than price, including the release and use of data concerning my consuming preferences and Internet surfing habits. It enables me to set preferences in advance of particular transactions and, more strongly, to precommit to those terms which will or will not be acceptable. In short, smart agents may be the vehicle for finally tipping the balance of power from producers to consumers, the tool for finally achieving a market that nears a state of perfect competition.¹³⁵

Likewise, and more to the point of this Essay, in bringing about true consumer sovereignty, smart agents might undergird a cyberlibertarian realm of individual control and autonomy. Armed with smart agents, individuals can counter much of the market and technological advantage that enables commercial firms to regulate through code. They can effectively determine much Internet policy through the power of their aggregated informed, rational consumer choices. In the ensuing realm of perfect competition, perhaps we have less need for government intervention than Shapiro, Lessig, and I suggest.¹³⁶

I raise that proposition only to cast significant doubt upon it. For one, as I have discussed elsewhere, the aggregate outcome of individuals' market decisions might shortchange fundamental collective values of liberal democracy, including free speech, protections against discrimination based on personal status, universal access to the basic incidents of citizenship, and the like.¹³⁷ Here, however, I will focus on a narrower, more empirical front. I argue that smart agents would likely be far less effective in countering producer advantages than is sometimes supposed.¹³⁸

134. See Karen Solomon, *To Bot or Not To Bot*, THE STANDARD, Nov. 15, 1999, available at <http://www.thestandard.com/article/display/1,1151,7628,00.html> (noting that with shopping bots very little e-commerce is impulse buying).

135. See Gogan, *supra* note 129, at 103 (reporting web sellers' concern that customers' nearly perfect market information, brought about by use of software agents, will destroy sellers' pricing strategy).

136. Cf. Post, *supra* note 68, at 1457-58 (arguing that "uncoerced individual decisions," rather than collective decision through the political process, is the best vehicle to further the values Lessig would like the Internet to reflect).

137. See Netanel, *supra* note 8, at 443-46, 452-82.

138. At least for the foreseeable future, the use of smart agents to draft and agree to contracts will also likely result in allocative inefficiencies. Economics of contracts literature suggests that "complex"

First, those who see shopping bots as the deliverer of consumer sovereignty forget that producers will also deploy smart agents. A likely scenario, indeed, is that the Internet will evolve into an information economy in which billions of electronic agents exchange information goods and services amongst themselves.¹³⁹ Significantly, each producer's agent will be able continually to gather and process information regarding competitors' prices as well as consumer demand, and then instantaneously change the producer's price and product offerings to reflect that information. The result, researchers have shown, would likely be an unending, highly unstable, and ultimately disastrous cycle of "wars" in price and product offerings.¹⁴⁰ Alternatively, producers' agents could be programmed to avoid price wars by accounting for competitors' likely retaliatory moves to a producer's price reductions.¹⁴¹ In that event, as simulations have shown, the disastrous price wars never happen. But then the agents engage in a kind of tacit collusion, similar to that of four gas stations at the same intersection that maintain prices close to the monopolist level.¹⁴²

Nor would smart agents overcome the problem of a consumer's bounded rationality. For one, like all computer programs, agents are, of course, created and designed by humans. Accordingly, they are certain to incorporate much the same sort of bugs, myopias, and biases that are

contracts, which provide for variable responses to a broad range of possible contingencies, are often more efficient than simple contracts. See Karen Eggleston, et al., *Simplicity and Complexity in Contracts* 4-32 (John M. Olin Law & Economics Working Paper No. 93, 2d Series, 2000), available at <http://www.law.uchicago.edu/Publications/Working/index.html> (surveying the literature, and setting forth possible reasons why contracts are often simpler than economic theory would predict they should be). However, given present technology, smart agents are incapable of negotiating more than a small number of pre-programmed issues. See *supra* note 133. Thus, even if consumers wish to negotiate customized, complex agreements, electronic contracts will be both simple and tailored towards machine-friendly terms. See Radin, *supra* note 132, at 1151. For that reason, the most promising use of smart agents for the near future is in business-to-business transactions in which the same limited set of issues arises in each transaction and in which lacunae can be readily completed by standard forms, industry custom, legal default rules, and ongoing supplier-customer relationships. See *id.* at 1131 (discussing business-to-business applications).

139. See generally Amy R. Greenwald & Jeffrey O. Kephart, *Shoptbots and Pricebots*, in PROCEEDINGS OF IJCAI '99 (INTERNATIONAL JOINT CONFERENCES ON ARTIFICIAL INTELLIGENCE), July 31- August 6, 1999, at <http://www.research.ibm.com/infoecon/paps/html/ijcai99/shopbot.html>.

140. Jeffrey O. Kephart, et al., *Price-War Dynamics in a Free-Market Economy of Software Agents*, (June 29, 1998), at <http://www.research.ibm.com/infoecon/paps/html/alife6/node1.html>.

141. *Id.*

142. Bayers, *supra* note 13, at 215-16 (reporting IBM researcher Jeffrey Kephart's simulation); see also Hal R. Varian, *Market Structure in the Network Age* (August 30, 1999), at <http://www.sims.berkeley.edu/~hal/Papers/doc/doc.pdf> (discussing the phenomenon of price matching among dominant firms and noting that bots will make it easier for firms to deploy a price-matching strategy by enabling them to monitor each other's price movements). The Federal Trade Commission has recently expressed concern about the possibility of firms' use of information readily available in real time on the Internet to engage in more systematic collusion on pricing and other terms. ENTERING THE 21ST CENTURY: COMPETITION POLICY IN THE WORLD OF B2B ELECTRONIC MARKETPLACES: A REPORT BY FEDERAL TRADE COMMISSION STAFF (October 2000), at <http://www.ftc.gov/os/2000/10/intro.pdf>.

generic to all computer programs.¹⁴³ In addition, smart agents must receive instructions from consumers on how to behave. If current experience with shopping bots is a reliable indication, many consumers will simply lack the patience, time, and ability to determine how to program smart agents in line with their preferences.¹⁴⁴

Less obviously, even computer-literate consumers will likely face systematic bounded rationality distortions in their deployment of smart agents. In essence, consumers who use smart agents have made and are called upon to make what Cass Sunstein and Edna Ullman-Margalit call "second-order decisions."¹⁴⁵ Second-order decisions are decisions about the appropriate strategy for reducing anticipated obstacles to future on-the-spot decisions. Second-order decisions can include such strategies as adopting a firm rule or standard in advance of the on-the-spot decision or delegating to another the authority to make the on-the-spot decision. The deployment of smart agents combines these two strategies. Users both delegate authority to their agents to negotiate and make on-the-spot decisions and provide agents with firm rules or standards for making those decisions. In that way, users hope to avoid their susceptibility to impulse buying and other irrationalities that would plague their own on-the-spot decisions.

As Sunstein and Ullman-Margalit note, however, bounded rationality can permeate second-order decisions no less than on-the-spot decisions.¹⁴⁶ In fact, in many circumstances it would seem that decisions that attempt to weigh multiple contingencies in the abstract might well prove more

143. On biases in computer systems, see generally Batya Friedman & Helen Nissenbaum, *Bias in Computer Systems*, 14 ACM TRANS. INFO. SYS. 330 (July 1996); Brian Cantwell Smith, *Limits of Correctness in Computers*, in COMPUTERS, ETHICS & SOCIAL VALUES 456 (Deborah G. Johnson & Helen Nissenbaum eds. 1995). On the difficulties of designing software agents to minimize such biases, see Ben Shneiderman, *Direct Manipulation Versus Agents: Paths to Predictable, Controllable, and Comprehensible Interfaces*, in SOFTWARE AGENTS, *supra* note 13, at 96; Joseph M. Reagle, Jr., *Eskimo Snow and Scottish Rain: Legal Considerations of Schema Design*, W3C Note, at <http://www.w3.org/TR/md-policy-design> (Dec. 10, 1999); see also Anne Eisenberg, *In Online Auctions of the Future, It'll Be Bot vs. Bot vs. Bot*, N.Y. TIMES, Aug. 17, 2000, at G8, available at <http://www.nytimes.com/library/tech/00/08/circuits/articles/17next.html> (reporting on tendency of some bots to exhibit human-like qualities of "irrational exuberance," raising the price at which they offer to buy a good based on what their competitor bots are doing rather than on the value of what is being sold).

144. Scott Rosenberg, *Keep the Customer Dissatisfied: What Does the Failure of E-Commerce Experiments Tell Us About the Potential for Making Money on the Net?*, SALON, Oct. 20, 2000, at <http://salon.com/tech/col/rose/2000/10/20/customer/print.html> (noting the failure of many e-commerce ventures as a result of consumer resistance to learning how new consumer-oriented schemes, such as group-buying, price-comparison shopping bots, and reverse auctions, might work).

145. Cass R. Sunstein & Edna Ullman-Margalit, *Second-Order Decisions* (Chicago Public Law and Legal Theory Working Paper No. 01, 1999), available at http://papers.ssrn.com/paper.taf?abstract_id=193848.

146. *Id.* at 33.

susceptible to certain aspects of bounded rationality, and would face greater information costs, than decisions about actual, discrete transactions. Significantly for our purposes, systematic cognitive biases would likely affect user decisions about which rules and standards to program into a smart agent. For example, a user might instruct her agent to focus solely on low price without accounting for quality enhancements and add-ons that the user, acting rationally with perfect information, might have decided to buy.¹⁴⁷ Or users might fall prey to producers' manipulation of the psychological phenomenon known as "extremeness aversion" (offering a high-priced version of a product, like a jumbo-size soft drink at the movie theater refreshment stand, in order to induce consumers to buy the medium-priced, rather than lowest-priced version) configuring preset purchase instructions for their agents, no less than when making the on-the-spot decision themselves.¹⁴⁸ To the extent that electronic agents act in accordance with these and other such sub-rational second-order decisions of their human principals, producers may still find means to capitalize on human systematic cognitive biases.

Finally, even assuming that smart agents would enhance consumer sovereignty and individual autonomy, in many sectors government involvement may be necessary to overcome producer resistance to consumer smart agents, insure agent trustworthiness, and enforce bargains that smart agents make. Some producers have already denied shopping bot access to their web sites.¹⁴⁹ And in a sign of who currently has the greater market power, search engines that employ shopping bots on behalf of consumers have modified their own web sites and service in order to cater to merchants. Shopping bot sites increasingly offer merchants opportunities for partnership, affiliation, advertising, and, most insidiously, top ranking in search results in return for a fee.¹⁵⁰

Individual users will likely face similar merchant resistance. As a result, unless a user can be assured that a critical mass of other users will both use smart agents and be willing to bypass vendors that do not accept them, she will not use the agent (or at least will not program the agent to

147. Cf. George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 Q.J. ECON. 488 (1970) (showing that producers may find it prohibitively costly to inform consumers of higher-quality products and thus may tend to settle on lower-quality, lower-price products).

148. For a brief discussion of marketing techniques that capitalize on extremeness aversion, see SHAPIRO & VARIAN, *supra* note 9, at 71-72.

149. See Bailey & Bakos, *supra* note 87, at 17 (noting that more than half the Web stores selling music CDs that the authors studied blocked the BargainFinder shopping bot from searching their database); see also Rosenberg, *supra* note 144 (noting merchants' refusal to participate in e-commerce business models that would enhance consumer choice at the expense of merchant profit margins).

150. See Karen Solomon, *Revenge of the Bots*, THE STANDARD, Nov. 15, 1999, available at <http://www.thestandard.com/article/display/1,1151,7624,00.html>.

insist on her preferences) herself.¹⁵¹ As Paul Schwartz notes with regard to the P3P platform for privacy-protecting agents, under such circumstances users face a "Hobson's choice" between "sacrificing either their privacy or their access to the Internet."¹⁵²

In sum, Lessig correctly emphasizes code's importance in defining the character of human interaction on the Internet and correctly identifies the nature of code and network architecture as matters for political decision. At least with regard to P3P, however, he seems to rely too heavily on the deployment of the right kind of code as a means to guarantee individual liberty. Smart agents might accord individuals with means to counter certain liberty-diminishing aspects of an increasingly commercial digital network space. But liberty and other collective values will still depend on protective regulation, legal default rules, and rights allocation.¹⁵³ They also demand an ongoing political determination of which sorts of values and goods may even be subject to individual market transaction.¹⁵⁴

V. Internet Community and Civil Society

Like other commentators,¹⁵⁵ Shapiro and Lessig stress the Internet's potential and importance for building community.¹⁵⁶ In so doing, they mirror a widespread concern for the perceived erosion of civil society, a realm between the individual and the state that includes civic associations, workplace and neighborhood organizations, churches, and, on some accounts, families.¹⁵⁷ Scholars and public officials have variously called for a revival of civil society in order to inculcate civic values, counter consumer culture, ameliorate loneliness, invigorate local control, and address problems that government alone cannot solve.¹⁵⁸ Likewise,

151. I discuss this problem with respect to P3P in Netanel, *supra* note 8, at 479-80.

152. Paul M. Schwartz, *Privacy and Democracy in Cyberspace*, 52 VAND. L. REV. 1609, 1696 (1999).

153. As noted above, in conjunction with his support of P3P, Lessig does call for a legal default rule allocating to individuals a property right in their personal information. See *supra* note 14. But as Lessig describes it, that property right is needed to induce acceptance of P3P among web site operators and users, not as an ongoing supplement to P3P-based bargaining. See LESSIG pp. 160-61.

154. See generally MARGARET JANE RADIN, *CONTESTED COMMODITIES* (1996) (analyzing the conceptual, moral, and practical problems with allowing trade in various goods and human attributes). See also Litman, *supra* note 116, at 1299-1301 (contending that personal data should not be subject to market alienability).

155. See generally CYBERSOCIETY: COMPUTER-MEDIATED COMMUNICATION AND COMMUNITY (Steven G. Jones ed., 1995) [hereinafter CYBERSOCIETY]; HOWARD RHEINGOLD, *THE VIRTUAL COMMUNITY: HOMESTEADING ON THE ELECTRONIC FRONTIER* (1993).

156. See SHAPIRO pp. 208-16; LESSIG pp. 63-84.

157. As I have noted elsewhere, the precise definition and contours of civil society have long been a matter of some uncertainty and dispute. See Neil Weinstock Netanel, *Copyright and a Democratic Civil Society*, 106 YALE L. J. 283, 342 n.280 (1996) (citing various sources).

158. See Linda C. McClain & James E. Fleming, *Some Questions for Civil Society-Revivalists*, 75 CHI.-KENT L. REV. 301, 302-06 (2000) (depicting different strands of civil-society revivalism).

Internet theorists tout the benefits of “virtual communities,” networks of individuals who regularly interact in online discussion groups, chat rooms, multi-user games, and other virtual spaces.¹⁵⁹ Those sites of online association, they contend, carry the potential to restore a “stable sense of community, of place . . . in a nation that's increasingly anxious about the fragmentation of public life and the polarization of interest groups and the alienation of urban existence.”¹⁶⁰

While Shapiro and Lessig share a common interest in the Internet and community, they present highly divergent portraits of the Internet's role in building community and of the place of Internet community in the broader realm of civil society and the democratic polity. That divergence parallels their differing approaches to the Internet in general, with Shapiro conceiving of the Internet as primarily a tool for real-world democracy, and Lessig understanding it more as a space for individual liberty. It also tracks one of the principal fault lines within the commentary regarding civil-society revival.

Shapiro is dismissive of the possibilities for a strictly virtual community.¹⁶¹ He would have us use the Internet, rather, to strengthen geographic communities. He proposes the establishment of local Internet gateways, populated with “stimulating content about local issues and, even more, an opportunity for users to talk with one another.”¹⁶² Such gateways, Shapiro posits, will “facilitate dialogue among community members,” and “eventually empathy, interdependence, and cooperative action will follow.”¹⁶³

Shapiro, then, views Internet-assisted community as a fount of social capital and civic virtue. His proposal hearkens back to the vibrant civil society that deTocqueville witnessed in antebellum America and described as central to making democracy work.¹⁶⁴ For Shapiro, like many civil-society revivalists, the associational institutions of civil society serve fundamentally to develop a citizenry with the social responsibility, discursive skill, self-direction, political awareness, and mutual recognition

159. See, e.g., ESTHER DYSON, *RELEASE 2.0: A DESIGN FOR LIVING IN THE DIGITAL AGE* 32 (1997).

160. LESSIG p. 63 (quoting MIKE GODWIN, *CYBERRIGHTS: DEFENDING FREE SPEECH IN THE DIGITAL AGE* 15 (1998)).

161. Shapiro contends that members of most successful “virtual” communities have periodic opportunities for face-to-face contact in addition to online interaction. SHAPIRO p. 212.

162. SHAPIRO p. 213.

163. *Id.*

164. See McClain & Fleming, *supra* note 158, at 307-08 (discussing de Tocqueville in the context of present-day civil-society revivalism); see also 2 ALEXIS DE TOCQUEVILLE, *DEMOCRACY IN AMERICA* 115-16 (Phillips Bradley, ed., Henry Reeve, trans., 1945) (1840) (asserting that individuals' participation in voluntary associations assists them in acquiring organizational skill and in seeing the possibility of accomplishing through common undertaking what they could not on their own, thus encouraging their participation in political association).

upon which a democratic polity depends.¹⁶⁵ They are at once a center for participatory culture and a bulwark against both state tyranny and market hegemony.

Lessig, in contrast, describes virtual community almost entirely in terms of a haven for personal expression and self-fulfillment. Lessig emphasizes that, for many people, online spaces are foci for genuine personal interchange and the development of complex networks of social relations.¹⁶⁶ They are also tools for some to escape the constraints of their real world identities, to gain power through anonymity or fashioning online identities of their own choosing.¹⁶⁷ When network architecture is constructed in a manner that obstructs these functions (such as when AOL limits the scope of subscriber interaction and when broadband video-conferencing supersedes text-based anonymity), a fundamental constitutive value of cyberspace is lost.¹⁶⁸

Lessig's approach parallels what might be termed a "personal uses of pluralism" critique of the civil-society revival.¹⁶⁹ Nancy Rosenblum, a leading exponent of this critique, argues that the account of civil society as a school for citizenship fails to capture a vital aspect of individual participation in voluntary associations.¹⁷⁰ Associational life, she maintains, has inherent value for personal development and individual autonomy.¹⁷¹ The ability to participate in and, no less importantly, move freely among diverse associational networks provides opportunities for variable self-definition and individual empowerment.¹⁷² Similarly, as Jane Mansbridge argues, civil society provides a space for "deliberative enclaves of resistance" or "counterpublics."¹⁷³ Its primary value thus

165. See NATIONAL COMM'N ON CIVIC RENEWAL, A NATION OF SPECTATORS: HOW CIVIC DISENGAGEMENT WEAKENS AMERICA AND WHAT WE CAN DO ABOUT IT 8-11, 40-42 (1998), available at http://www.puaf.umd.edu/civicrenewal/finalreport/table_of_contentsfinal_report.htm (asserting that participation in voluntary association fosters citizenship skills). Cf. JOHN RAWLS, A THEORY OF JUSTICE 468-70, 494-96 (1971) (describing a "morality of association" in which participation in voluntary associations fosters a sense of mutual obligation and attachment to public institutions that in turn amplifies individuals' capacity for commitment to liberal principles of justice).

166. See LESSIG pp. 63-64.

167. *Id.* at 64-66, 74-78.

168. *Id.* at 66-71.

169. I rely heavily here on the discussion in McClain & Fleming, *supra* note 158, at 316-18. The term, "personal uses of pluralism," comes from NANCY L. ROSENBLUM, MEMBERSHIP AND MORALS: THE PERSONAL USES OF PLURALISM IN AMERICA (1998).

170. ROSENBLUM, *supra* note 169, at 47-50.

171. *Id.*

172. Rosenblum also sees voluntary associations as valuable for the democratic polity as whole. But that value, she contends, lies not in associations' capacity to serve as schools for civic virtue, but in their role as relatively benign outlets for illiberal vices and a means for individuals to gain a personal appreciation for pluralism. *Id.* at 349-63.

173. Jane Mansbridge, *Using Power/Fighting Power: The Polity*, in DEMOCRACY AND DIFFERENCE: CONTESTING THE BOUNDARIES OF THE POLITICAL 46, 57-58 (Seyla Benhabib ed., 1996).

may lie not in fostering a common civic culture, but in enabling individuals to escape from what they experience as the oppressiveness or injustice of that culture. In that view, as in Lessig's depiction of virtual community, civil society is less a bridge for an activist citizenry to engage its government and more a sanctuary for individual self-expression.

I want briefly to examine both the Shapiro and Lessig approaches, although my point in this short Essay is more to raise issues than carry on exhaustive analysis. I will begin with the question of whether the Internet might be harnessed to foster civic renewal. Shapiro, not Lessig, raises that argument. But Shapiro might say that an Internet-assisted civic renewal would serve as an antidote for an ill that troubles Lessig as well, our widespread lack of faith in government and democratic process.

There is, I think, no definitive, across-the-board answer to the question of whether the Internet might help to revitalize a democracy-enhancing, deTocquevillian civil society. It is difficult to dispute Shapiro's more modest claim, that digital network communication can serve as a useful tool in strengthening local geographic community association. Similarly, the Internet certainly gives a significant boost to traditional mass, grass-roots organization. Organizations ranging from the Sierra Club to the Christian Coalition can now employ web sites, online discussion groups, and email for both intra- and extra-association communication. Using these tools, they can inform and galvanize their members, reach out to new potential members across the country (and, indeed, the world), and organize campaigns for members to petition government officials far more effectively and at a fraction of the cost than in the pre-digital age. In that regard, it might even be that the Internet serves a leveling function. At least until Internet "cheap speech" is overtaken by broadband video, associations with relatively little funding can compete for user attention online with those able to afford expensive mass mailings and media advertising.¹⁷⁴

Far more questionable is the assertion that voluntary association, whether online or off, necessarily enhances the empathy, mutual recognition, and participatory culture broadly seen as vital for a liberal, democratic society. Some voluntary association, for some people, might well serve as such a school of civic virtue. But there is little empirical evidence that mutual cooperation and recognition within associations generally conduces members to exhibit such qualities in dealings with

174. Cf. James Fallows, *Internet Illusions*, N.Y. REVIEW OF BOOKS, Nov. 16, 2000, at 28, 29-30, available at <http://www.nybooks.com/nyrev/WWWarchdisplay.cgi?20001116028R#top> (predicting that the Internet will level the playing field for elections for public office by drastically reducing the amount of money required for a candidate to become a serious contender, but noting that that promise has yet to be borne out in recent elections).

nonmembers.¹⁷⁵ As Nancy Rosenblum emphasizes, in considering the moral and political valence of voluntary association, “[w]e would do well to absorb sociology’s reminder that deviance is as much a part of social life as the reproduction of norms, and to consider whether and how associations temper illiberal vices and circumscribe mistrust.”¹⁷⁶ Depending on their nature and composition, even internally democratic and deliberative associations can foster hatred, irrationality, and extremism.

In that regard, as I have discussed above, online fora are likely to provide particularly fruitful grounds for group polarization.¹⁷⁷ That online Balkanization, in turn, would tend to undermine opportunities for broader compromise and cooperation. In Madisonian terms, virtual community and association might simply spur the substitution of insular ideological and interest-based factions for local, geographically-based ones. The extended republic Madison envisioned would ameliorate social strife because it requires local factions to develop relations of reciprocity and trust across diverse citizen coalitions.¹⁷⁸ To the extent that computer-mediated communication promotes an insular avoidance of distracting intellectual and political entanglements, it will engender a sort of digital tribalism, not liberal citizenship.

On the other hand, the Internet might be conducive to a market-pluralist conception of civil society. In the market-pluralist view, associations compete with each other and with the state for individuals’ allegiances.¹⁷⁹ In turn, individuals’ loyalties are often divided among a variety of memberships and affiliations. Here, it is the fluidity of individual involvement and the fragmentation of individual loyalty, more than coalition politics, that cabins extremism and social discord. Indeed, individuals’ moderated commitments and multiple associative ties help to stave off state tyranny as well as group insularity.

The Internet may well enhance possibilities for realizing such market group-pluralism. Virtual communities are generally characterized by far greater ease of exit and entrance than their “real world” counterparts. Individuals who are unhappy with any given online discussion group can simply search the Internet for another one; real world dissidents face far greater mobility and information costs. As a result, Internet users enjoy considerable freedom to choose multiple and alternative associational affiliations online. The extent to which this freedom of choice and exit will

175. See ROSENBLUM, *supra* note 169, at 48-50.

176. *Id.* at 48.

177. See *supra* notes 91-93 and accompanying text.

178. See Stephen Macedo, *Constituting Civil Society: School Vouchers, Religious Nonprofit Organizations, and Liberal Public Values*, 75 CHL.-KENT L. REV. 417, 421-22 (2000) (summarizing Madison’s hypothesis that an extended republic would ameliorate factionalism).

179. See *id.* at 429-30 (presenting what I have termed the “market-pluralist” view of civil society).

lead primarily to the market-pluralist scenario or to the proliferation of narrow, insular, and extremist groups, or even whether the Internet will have any significant effect on the nature and mix of individuals' associative commitments, remains to be seen.¹⁸⁰

Regardless of its ramifications for the overall character of civil society, the Internet's frictionless mobility may undermine the individual commitment required for building viable community. As a result of the ease of exit, online discussion fora that are not ruled by moderator fiat are notorious for the unraveling of social norms of mutual cooperation, obligation, and civility.¹⁸¹ It often takes only one rude or overly verbose, off-topic discussant for others to counter with aggressive attack or simply withdraw from participation.¹⁸² It may be that the ability to deliberate and compromise comes to the fore only when exit is not a ready option, when group members have or perceive themselves to have little choice but to engage each other in rational argument and accommodation.

In addition, commentators question whether individuals engaged in anonymous communication or role-playing can develop the meaningful affective ties required for the constitutive aspects of association and community.¹⁸³ Those who simulate identities in chat rooms and multi-user dimension games might well feel genuine affection or other emotion when interacting with other participants' adopted persona.¹⁸⁴ But such interaction seems to stop far short of the sort of personal commitment and mutual recognition needed to replace or serve as a useful adjunct to traditional geographical civic association and community. In sum, even assuming that voluntary, geographically-based associations foster citizen qualities, it is by no means certain that online associations do the same.

Lessig's personal-uses understanding of online association elides some of the concerns and uncertainties that plague the more ambitious civic-virtue vision—but not all of them. As Lessig emphasizes, some forms of online association are more propitious for individual liberty and self-fulfillment than others. Just as significantly, certain network

180. William Galston surmises that the ease of exit tends to produce internally homogenous groups whose members lack incentives to develop shared understandings across their differences. See Galston, *supra* note 90, at 5-6.

181. See Richard C. MacKinnon, *Searching for the Leviathan in Usenet*, in CYBERSOCIETY, *supra* note 155, at 112, 129-32.

182. I discuss this phenomenon in more detail in Netanel, *supra* note 8, at 429-32. Lessig gives an example: the dissolution of his own "The Law of Cyberspace" class newsgroup following a series of vicious verbal attacks by an anonymous participant. LESSIG pp. 78-82.

183. See Galston, *supra* note 90, at 7.

184. Lessig describes an instance that has become standard cyberspace lore, the upset and turmoil resulting from the virtual rape of one fictional character by another in a Multi-User Domain called LamdaMOO. LESSIG pp. 74-76.

architectures, Internet Service Provider policies, and government regulations enable and facilitate liberty-enhancing forms of online association and others do not. Accordingly, as Lessig also well recognizes, even if our vision and goal are simply to engender multiple sites for liberty-enhancing online association and community, we must look to collective decision, and ultimately to government and law, to secure those possibilities.

In that broad sense, then, just like offline civic associations, virtual community is constituted by the state.¹⁸⁵ It is the state that has created and subsidized the Internet, the state that licenses various network architectures and not others, the state that defines property rights in telecommunications facilities and determines whether owners are to be treated as common carriers, and the state that defines and delimits property rights in information and expression. That does not mean that government ought to micromanage virtual community and online interaction. But it very much supports Lessig's point that even those with a libertarian conception of Internet interaction and community must, paradoxically, look offline, to the political process of the territorial state, to realize the underlying architecture for the online world or worlds they desire.

In addition, as I have discussed elsewhere, the state ought to have a role in tempering illiberal externalities imposed by online association.¹⁸⁶ Cyberlibertarian visionaries assert that "cyberspace needs architectures where deliberation and reason and freedom can flourish because . . . people want to live in communities where deliberation and reason and freedom can flourish."¹⁸⁷ But, unfortunately, many people either do not share that salutary aspiration or would realize it for themselves by excluding others. Nor, I would venture to say, does the experience of the past century suggest that human beings can generally be depended upon to treat each other with mutual recognition and respect unconstrained by the rule of law of a strong, democratic state.¹⁸⁸ Indeed, no less than deliberation and reason, the Internet has spawned a profusion of racial animus, violent pornography, political and religious intolerance, vicious rumor, and blind prejudice.¹⁸⁹ Again, that does not and cannot mean that the state

185. See Mark Tushnet, *The Constitution of Civil Society*, 75 CHL.-KENT L. REV. 379, 380-83 (2000) (discussing the tension between the desire of some to revitalize institutions of civil society as a check on government and the fact that those institutions are themselves constituted by government).

186. Netanel, *supra* note 8, at 452-83.

187. Post, *supra* note 68, at 1459 (reviewing Lessig).

188. See generally JONATHAN GLOVER, *HUMANITY: A MORAL HISTORY OF THE TWENTIETH CENTURY* (2000) (surveying repeated patterns of human cruelty when moral resources of sympathy and self-respect are eroded).

189. See, e.g., Tony Perry & Kim Murphy, *White Supremacist, 3 Followers Charged With Harassing 4 Officials*, L.A. TIMES, Nov. 11, 2000, at A20, available at 2000 WL 25916865 (reporting the indictment, for violation of federal civil rights and hate crime laws, of a white supremacist and

must micromanage online communication. But the question of whether and how the state ought to counter and cabin the most egregious effects of illiberal association, both online and off, must be a matter of collective decision within the framework of democratic, governmental institutions and law.

V. Conclusion

Whether seen as an integral part of our communications infrastructure or a distinct social space with pervasive effects on the rest of society, cyberspace stands at the cusp of yet another round of profound change. Aided by laws extending intellectual property over expressive content and e-commerce business methods, technology that amplifies content provider control over access, and the advent of broadband networks and their accompanying reversion from open to privately controlled telecommunications infrastructure, media conglomerates seemed poised to make much of the Internet their own.

Andrew Shapiro and Lawrence Lessig have argued convincingly that these developments pose significant cause for concern. The authors also present insightful and welcome correctives to those who would blithely stand behind first-generation Internet ideals in the face of the Internet's radically changed conditions. No less importantly, Shapiro and Lessig leave furrowed ground for further critical thought regarding the ever-transforming Internet and what it means for democratic governance and individual liberty. It is good that they have taken up the cudgels. Maybe lawmakers—and code makers—will listen.

three followers who met through the leader's "extensive Web sites dedicated to preaching racial superiority and violence").