Civic Renewal and the Commons of Cyberspace

Peter Levine

This article brings together two current discussions. One—which is already familiar to readers of the *National Civic Review*—concerns the somewhat shaky condition of American civil society. The other investigates the Internet as a particular kind of public resource, a "commons." By bringing these discussions together, I hope to stimulate thinking about how the Internet might help to revitalize civil society. I also want to draw attention to developments that are threatening to spoil the Internet's civic potential.

People who are concerned about America's civil society believe that our habits and skills of association have weakened over time. Robert Putnam and others argue that joining associations and participating in loose cooperative networks (especially those that unite diverse people) makes the economy more efficient, introduces citizens to politics, increases the level of knowledge about public issues, helps to solve social problems without high financial cost or government coercion, and even promotes psychological and physical health.[1] Some people doubt Putnam's narrative portraying a decline in the health of civil society, arguing that he has romanticized the civil society of the 1950s and overlooked some contemporary strengths.[2] In my own view, the biggest problem is the deterioration of certain institutions that once helped ordinary people wield power while generating broad discussion of public issues, especially unions, political parties, civil rights organizations, and metropolitan daily newspapers.[3] I am not convinced that we have found substitutes for these institutions. But even if our civil society is reasonably strong compared to past decades, this is no reason for complacency. In each generation, it takes conscious effort to sustain old networks and associations and to bring new ones to life.

The second discussion, regarding the Internet as a commons, may be less familiar to readers of this journal. Some legal scholars and public-interest advocates (and computer hackers) view the Internet as a resource that is neither divided among separate property holders nor managed directly by the state. In a commons, volunteers donate labor to sustain a shared property, deliberate about its governance, and allow the whole community to reap its benefits.

As examples, consider forests and streams near a medieval manor, or a grassy area in the middle of an old New England town.[4] (I hope that we can note some attractive features of these historical examples without imagining that the Sheriff of Nottingham's England or Cotton Mather's Massachusetts was an ideal place to live.) Officially, the commons belonged to the crown or the state, but in practice the government was distant. Networks of local citizens actually managed the commons as if it were their shared property. Because they cut firewood, grazed cattle, and held fairs on the public land, they benefited as individuals working in a nascent market economy. But the land itself was not a commodity that anyone could buy or sell.

People must exhibit mutual trust, habits and skills of collaboration, and public spirit in order to sustain such a common resource against the tendency of individuals to abuse it. If their work succeeds, they may gain knowledge and inspiration that they can then transfer to other joint endeavors. In short, a successful commons relies on social capital—and generates more of it. A commons does not require or imply a *democracy* (think again of medieval Europe and puritan New England). But if its users are equal citizens with full civil rights living under a representative government, then their commons can be a powerful democratic resource. Indeed, Alexis de Tocqueville attributed the vitality of America's democracy to citizens' work in building free, local, public assets: "The Americans make associations to give entertainments, to found seminaries, to diffuse books, to build inns, to construct churches, to send missionaries to the antipodes; in this manner they found hospitals, prisons, and schools."[5]

The Commons of Cyberspace

Just a few years ago, the Internet seemed to be a rare modern example of a functioning commons. It is true that most of the software and equipment was manufactured by private companies and purchased by individuals or corporations. (The main exceptions were some popular free programs for sending e-mail and sharing files.) However, the overall system was structured by rules that had been devised collaboratively, that were open for public inspection, and that belonged to no one. These rules ensured that most types of privately manufactured hardware, software, and files were treated exactly alike. No company had intellectual property rights to crucial parts of the network. Anyone could turn text, sound, or images into strings of numbers and send them to any other Internet user, across all kinds of privately owned wires and machines, without worrying that the message would be appropriated, manipulated, or held up on its way. In the terminology used by Lawrence Lessig and others, the Internet had an "open architecture."[6]

Moreover, the mechanisms that routed Internet communications to their correct destinations were simple. What made the Internet a rich and exciting space were the programs—and the text, data, and images—that resided in peo-

ple's desktop computers. Power was not centralized, as in a telephone network, but distributed among millions of diverse and largely autonomous users. As a result, groups of cooperating individuals could invent utterly unanticipated devices (such as the World Wide Web) to exploit the deliberately "stupid" underlying network.[7]

In those days, all Web pages and e-mail messages and many important programs were still "open source," meaning anyone could see how they had been constructed and imitate them. Users could enhance the models they found in cyberspace, so that the standard design of Web pages and discussion forums constantly improved.

People used the Internet not only to view others' material but also to build sites and disseminate free text and pictures, creating a gigantic commonwealth of public information. Usually, there is a reason not to contribute goods to a common pool: others may use them up without donating anything of equal value. But this problem is reduced if goods take a digital form, because they can be used many times over without harm. Of course, not all of these goods were unqualifiedly beneficial. The free material that was available online included not just genuine public *goods* but pirated pornography, false rumors, and racist screeds as well. But at least people had a rare opportunity to generate free and nondegradable common resources at low cost. Open architecture, free content, and norms of sharing together made a true commons in cyberspace.

Anecdotal evidence suggests that active participants in this commons sometimes formed intense social and civic bonds that transferred to the offline world. For instance, Howard Rheingold describes the profound friendships and networks of mutual support that developed because of the WELL, a San Francisco-based computer network that functioned as a commons.[8] We do not have enough statistical evidence to tell whether these anecdotes are typical. For one thing, surveys have not asked people whether they make their own Web pages, moderate online discussions, or write software, so we cannot assess the relationship between this kind of public work and civil society more generally. Even if it were the case that the people who helped build the cybercommons were heavily engaged in social and civic life, this would not prove that the Internet was responsible for their good citizenship. (Maybe they used the Internet because they were active citizens.) Thus there is insufficient evidence to prove that more widespread use of the cybercommons will revive American civil society. I think it will, because working together on shared, public projects is an excellent way to develop habits and skills of association.

Threats to the Cybercommons

Unfortunately, the electronic commons is under intense pressure today. In fact, some people detect a modern "enclosure movement" comparable to the takeover of English medieval commons by the seigneurial class.[9] Here I have

space to mention just a few skirmishes in a larger conflict that has important civic implications.

First, the most valuable "real estate" on the Internet is scarce, and much of it is privately held. McDonald's wants its Web page to appear when you search for the word *hamburger*—but so do Burger King, People for the Ethical Treatment of Animals, and the City of Hamburg. Only ten or twenty Websites actually appear on the first page of results when you search for an important word or phrase. Since the owners of search engines are private companies, they may steer us to sites that belong to their own business partners. In any case, they use secret and proprietary methods to index only select portions of the World Wide Web. (Even the best ones cover no more than 16 percent of the whole.[10]) Meanwhile, just one entity can control any given domain name, and some names are more prominent than others. The owners of www.politics.com and www.freedom.org have claimed precious pieces of the commons.

Second, the valuable resources of the Internet are not like trees that grow on public land without human attention. It takes work and inspiration to build an exciting Web page that can draw an audience, but it also takes capital and marketable skills. Most people, and even most small organizations, cannot produce content that is worth looking at. Already, according to the Center for Digital Democracy, the top four "digital media properties (AOL Time Warner, Microsoft, Yahoo, and Lycos) . . . attract more visitors than the next 14 combined. And the top 10 companies (which include NBC, Disney, and Amazon) attract more visitors than the rest of the top 50 combined. The traffic patterns of today's web, in other words, are much closer to those of network television in the 1960s than to those of the Internet in the early 1990s."[11] This is a problem of civic significance, because it means the Internet is turning into a relatively passive medium rather than a commons sustained by the whole community of users.

Third, much of the Internet consists of completely proprietary space whose architecture is controlled by the owner. One such space is AOL's portal, through which millions of people go online. AOL makes the law within its own domain, structuring the whole experience of "the Internet" for its customers. For instance, the company has made sure that it can communicate en masse with all its customers, but its discussion groups are limited to twenty-six people. Therefore, customers cannot organize themselves against AOL.[12] An official from Microsoft complains that AOL "has erected a walled garden of captive users, and their strategy is to feed them Time Warner content." But AOL makes the same charge in return, predicting "consumers will use Microsoft software to view Microsoft content on Microsoft networks."[13] The emergence of two or three huge walled gardens does not mean the utter extinction of amateur Websites, independent discussion groups, and open networks. It does mean, though, that most of the audience, energy, and investment is taken out of the commons.

Fourth, most valuable software and even many corporate Web pages and e-mails are no longer open source. Technically, it is extremely difficult to see

how sites and programs are constructed, and their design is covered by patents or copyrights that make imitation illegal. Even the "business methods" used by companies such as Amazon.com have been patented (in violation of longstanding legal principles).[14] Most of us no longer look at other people's files using free and open-source software such as FTP; instead, we browse the Web using patented corporate products, such as Microsoft Explorer, that have deliberate biases built into their design. People who want their Websites to be seen must make them compatible with such products.

Fifth, companies are starting to use cable television lines and the broadcast spectrum to transmit huge amounts of data per second, thereby allowing the World Wide Web to evolve from a library of text and images into an arena full of moving pictures and sound. Although the broadcast spectrum is public property, it has been allocated to a few large companies that also make products to which they want to steer mass audiences.[15] Even if the government blocks broadcasters and cable operators from discriminating in favor of their own content (a fairly unlikely prospect), the transformation to moving pictures still gives an enormous competitive advantage to Hollywood over the local kid with a Web page.

The broadcast spectrum can also connect small, mobile devices such as cellular telephones to the Internet. Such devices are much less powerful than computers, so the software they use must often be stored on a mainframe computer. Since the same companies that produce the mobile devices also own these computers, they are able to steer their customers to certain services and Web pages.[16]

Protecting Cyberspace as a Commons

These threats to the cybercommons should worry anyone who is concerned about civil society, social capital, and civic health. Most Americans will soon be connected to the thing called the Internet, but it may not be a commons built by millions of citizens. It may instead be a venue for news, information, and entertainment provided by professional employees of just a few companies. The majority of people will enter the Internet through some kind of portal (perhaps on their television screens or mobile phones) that nudges them toward corporate material. Although some of this material may be excellent, its purpose is to maximize profits, not to support civil society. Some citizens and small organizations will continue to create material of their own, but it will be increasingly difficult to find, because the owners of portals and proprietary networks have no incentive to highlight it.

If this happens, then there is no reason to predict an increase in social capital as a result of Internet use. On the contrary, we might expect most Americans to react like those Pittsburgh citizens who were given free Internet access (but little training) on the condition that they regularly logged onto the 'Net. They began to communicate less with other members of their own households,

their social networks narrowed, and they reported a higher level of depression.[17] Likewise, the Stanford Institute for the Quantitative Study of Society gave thirty-five thousand people access to Microsoft's WebTV, a simple Internet connection. The new Internet users began spending less time with family and friends, attended fewer social events, and they devoted less time to the newspaper.[18] Both experiments essentially turned people into passive users of a rapidly commercializing Internet, and the civic results were discouraging.

We must strive to protect cyberspace as a commons; this means taking deliberate action on several levels. First, it is important to keep the architecture of the Internet open. The traditional medieval commons had to be physically accessible, lying near the village and not surrounded by impassible forests or private lands. Similarly, people must be able to find, receive, publish, and transmit just the data they want—even if they browse with Microsoft Explorer or connect to the Internet by way of a cell phone. Unless the federal government intervenes, companies that provide Internet access will surely discriminate in favor of their own content.

Second, the medieval commons was only worthwhile if stocked with fodder, tinder, spring water, and fish. Likewise, the cybercommons must feature valuable and exciting goods that are accessible to all. Producing such content in digital form may require subsidies by the government, or at least by large foundations. The *Digital Promise* report by Lawrence Grossman and Newton Minow recommends auctioning the broadcast spectrum and using the resulting revenues to fund nonprofit institutions that generate free online material.[19] I have some concerns about the governance structure that *Digital Promise* recommends, because it may unduly favor established institutions. But some kind of public support is probably essential.

Finally, the medieval commons required a network of individuals who knew how to work together and who valued their common property. Today, a broad group of stakeholders is developing the idea of a Public Telecommunications Service (PTS), whose main task will be to build such citizen networks in the digital age. Our assumption is that people will only value open architecture, public subsidies, and other features of a cybercommons if they personally use the Internet for public work. If they assume that the purpose of the Internet is to deliver entertainment quickly and cheaply, then they will not resist the privatization of public spaces.

Some local civic projects are quite inspiring. For example, since 1994 the Seattle Community Network (www.scn.org) has offered a single community portal leading to diverse Web pages. It provides free services such as an "education program which teaches computer and e-mail usage to those new to computers; a helpdesk and voicemail service for our user base; [and] hosting for small regional nonprofit organizations, including Web page mentoring." SCN enacts policies regarding civility, privacy, and other important civic issues only after public deliberation, thereby enhancing democratic participation and civic values. More recently, Hmong and Latino young people on the west

side of St. Paul, Minnesota, have begun building the St. Paul Information Commons, a Website that maps the assets of their community and reflects their cultures.

However, most of the nonprofit, participatory, community-based Websites that sprang up in the 1990s have since closed. They were often poorly funded; they were difficult to find because search engines and private portals would not list them prominently; and they lost market share to commercial Websites in the same cities. Now that our eyes are open to the difficulty of operating in a commercial landscape, we must find ways to construct new community projects, to sustain them over time, and to connect them into larger networks. The future of the Internet as a commons depends on it—and American civil society itself may be at stake.

Notes

1. Putnam, R. D. *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon & Schuster, 2000.
2. See for example Wills, G. "Putnam's America." *American Prospect,* July 12, 2000, pp. 34–37.
3. Levine, P. *The New Progressive Era: Toward a Fair and Deliberative Democracy*. Lanham, Md.: Rowman and Littlefield, 2000.
4. The classic theoretical treatment is Ostrom, E. *Governing the Commons: The Evolution of Institutions for Collective Action.* New York: Cambridge University Press, 1990. Ostrom describes "common pool resource" systems that are still extant in Switzerland, Spain, Japan, and the Philippines. Examples from medieval England or colonial America would be more difficult to analyze, but Ostrom suggests that these cases probably shared key features with their modern counterparts. See also Taylor, M. *The Possibility of Cooperation.* New York: Cambridge University Press, 1987.
5. De Tocqueville, A. *Democracy in America, Vol. II.* (H. Reeve and others, trans.) New York: Vintage, 1954, book two, chapter five, p. 114.
6. See for instance Lessig, L. "Innovation, Regulation, and the Internet." *American Prospect,* Mar. 27, 2000.
7. Reed, D. P., Saltzer, J. H., and Clark, D. D. "Comment on Active Networking and End-to-End Arguments." *IEEE Network,* 1998, *12* (3), 69–71.
8. Rheingold, H. *The Virtual Community: Homesteading on the Electronic Frontier*. (Rev. ed.) Cambridge, Mass.: MIT Press, 2000.
9. See for example Benkler, Y. "From Consumers to Users: Shifting the Deeper Structures of Regulation Toward Sustainable Commons and User Access." *Federal Communications Law Journal,* 2000, 52 (3), pp. 561–579.
10. Introna, L. D., and Nissenbaum, H. "Shaping the Web: Why the Politics of Search Engines Matters." *Information Society,* 2000, *16* (3), 1–17. For a public search engine and other proposals, see Chin, A. "Making the World Wide Web Safe for Democracy: A Medium-Specific First Amendment Analysis." *Hastings Communications and Entertainment Law Journal,* 1997, *19,* pp. 311–338.
11. E-mail from Jeffrey Chester of the Center for Digital Democracy, May 16, 2001.
12. Lessig, L. *Code and Other Laws of Cyberspace.* New York: Basic Books, 1999.
13. Klein, A. "For AOL and Microsoft, It's High-Tech Noon." *Washington Post,* June 8, 2001, p. A1.
14. Bollier, D. *Public Assets, Private Profits: Reclaiming the American Commons in an Age of Market Enclosure*. Washington, D.C.: New America Foundation, 2001.
15. Bollier (2001).

16. Hatfield, D. "A Look at the Promise and Policy Implications of New Wireless Technologies." Address at the Ford Foundation Digital Media Forum, Alexandria, Va., May 30, 2001.
17. Kraut, R., and others. "A Social Technology That Reduces Social Involvement and Psychological Well-Being?" *American Psychologist,* 1998, *53,* 1017–1031.
18. Stanford Institute for the Quantitative Study of Society. "Internet Study." 2000. (www.stanford.edu/group/siqss/Press_Release/internetStudy.html)
19. See www.digitalpromise.org.

Peter Levine is a research scholar at the University of Maryland's Institute for Philosophy and Public Policy.