

SOME PEER-TO-PEER, DEMOCRATICALLY, AND VOLUNTARILY-PRODUCED THOUGHTS

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THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION
TRANSFORMS MARKETS AND FREEDOM. By Yochai Benkler. Yale
University Press. 2006. \$26.40.

INTRODUCTION

Yochai Benkler is an exceedingly smart, widely-read and thoughtful person, so it is no surprise that his new book is very interesting and well worth reading. In many respects I ought to end my review right here, or maybe after a sentence (such as this one!) in which I explicitly recommend that you obtain and read it.¹ Benkler offers a lot of fascinating observations and predictions that are very useful to consider, even if you are not necessarily in agreement with his world view.

In an exercise of either hubris or idiocy, or possibly both, I am going to continue this review beyond that initial introductory paragraph with some observations, and even a few criticisms, of the tome. I'm not really sure who the target audience for a book review such as this is: people who are considering reading the book, people who have already read it and are interested in the reactions of others, or people who have no intention of reading the book but want to know enough about its slant and content so that they can pretend that they did. For the purpose of this review, I'm going to assume that anyone who has read this far has at least some familiarity with Benkler's academic scholarship. Even if you

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1. YOCHAI BENKLER, *THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION TRANSFORMS MARKETS AND FREEDOM* (2006). It can be purchased in hardbound form at most mainstream commercial book vendors, both online and in real space. It can also be freely downloaded here in its entirety, which is pretty great: http://www.benkler.org/wealth_of_networks/index.php?title=Download_PDFs_of_the_book.

haven't yet read *The Wealth of Networks*, many of the themes and some of the examples will already be known to anyone who has read his law review articles, including (but not limited to, not even close): "*Sharing Nicely*": *On shareable goods and the emergence of sharing as a modality of economic production*;² *Freedom in the Commons*;³ *Coase's Penguin, or Linux and the Nature of the Firm*;⁴ *An Unhurried View of Private Ordering in Information Transactions*;⁵ and *Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain*.⁶

I. AN OVERVIEW OF THE BOOK AS IT IS WRITTEN

Yochai Benkler has written a book that articulates a lot of the things that people love about the Internet, and offers some thoughtful explanations about how and why it developed so quickly and expansively. The work has already received many gloriously positive reviews,⁷ including a statement by Lawrence Lessig that it is "the most important and powerful book written in the fields that matter most to [him] in the last ten years."⁸

Another reviewer asserted:

The Wealth of Networks . . . is an extended philosophical manifesto on the potential of open source decentralized "peer production" – not just as a way of creating software, but in the broader sense of a fundamentally new means of producing goods, services, and freedom itself.⁹

The book was also the subject of an online seminar at the Crooked Timber blog.¹⁰ I was aware of the seminar before I agreed to write this review, but I did not read Benkler's replies to his critics until afterwards. His response to Siva Vaidhyanathan's commentary gave me particular

2. 114 YALE L.J. 273 (2004).

3. 52 DUKE L.J. 1245 (2003).

4. 112 YALE L.J. (2002).

5. 53 VAND. L. REV. 2063 (2000).

6. 74 N.Y.U. L. REV. 354 (1999).

7. See Debora Halbert, *Book Review*, 16 L. & POL'Y. BOOK REV. 8, 572-75 (2006), available at <http://www.bsos.umd.edu/gvpt/lpbr/subpages/reviews/benkler0806.htm>; Amazon.com, Review of *The Wealth of Networks: How Social Functions Transforms Markets and Freedom*, <http://www.amazon.com/gp/product/product-description/0300110561/> (last visited Sept. 25, 2006).

8. Posting of Lawrence Lessig to Lessig Blog, Benkler's Book is Out, <http://www.lessig.org/blog/archives/003368.shtml> (Apr. 15, 2006, 12:50 PM).

9. Posting of Hassan Masum to WorldChanging Blog, *The Wealth of Networks: Remixed Highlights*, <http://www.worldchanging.com/archives/004691.html> (July 14, 2006, 07:47 PM).

10. See Archive for the Benkler Seminar at Crooked Timber, <http://crookedtimber.org/category/benkler-seminar/> (last visited Sept. 25, 2006).

pause.¹¹ Vaidhyanathan wrote that he felt the story of Internet technology was an underwritten subject, noting:

Throughout the text, there seems to be an almost givenness [sic] about the technology. TCP/IP is just there. Even Cisco's notorious discriminating servers, the source of so much tension over the end of network neutrality, just appear. . . . We get no sense that particular technologies are malleable, adaptable, contingent, and socially shaped. We get no account of developer's wishes or users' adaptations. We only get cursory accounts of the conflicts over the future of these technologies that have unleashed (to choose a loaded term) so much creativity.¹²

In reply, Benkler retorted:

His complaint . . . is that I wrote a book about what interests me, not about what interests him. That is, that I wrote a book about how the dynamics of how technology, society, economy, and law intersect to fundamentally alter how information, knowledge, and culture are produced, rather than a book about the dynamics of how the technology component itself got to be as it is, and how it may or may not change given present pressures.

I plead only partly guilty, and that part excused by the fact that not every book can be about everything.¹³

Ouch. No doubt his reaction to this review will be similar, if he reads it, because my focus is largely on what I think is missing from the work, which I will detail below, after just a few observations about the subjects it does cover, very thoughtfully and in great detail.

Benkler's book offers a meta-account of the Internet's role in cultural production that meshes mostly comfortably with my own observations and experiences. Among other ideas, Benkler argues that the Internet offers something that, though imperfect, allows for all kinds of productive transactions that were difficult and inefficient to arrange and complete in real space. People can, for example, freely exchange information in both senses of the word free – unfettered, and without cost – if

11. Posting of Yochai Benkler to Crooked Timber Blog, *Response*, <http://crookedtimber.org/2006/05/30/response-2/> (May 30, 2006, 9:30AM). I should note at this juncture that Siva Vaidhyanathan is a friend of mine, and also the founder of Sivacracy.net, a group blog in which I participate. Sivacracy.net, <http://www.nyu.edu/classes/siva/> (last visited Sept. 25, 2006).

12. Posting of Siva Vaidhyanathan to Crooked Timber blog, *The Dialectic of Technology*, <http://crookedtimber.org/2006/05/30/the-dialectic-of-technology/> (May 30, 2006, 9:31 AM).

13. Posting of Yochai Benkler to Crooked Timber blog, *supra* note 11.

they choose to. Creative works can be produced and distributed by individuals acting as socially connected beings rather than cogs in the market economy.

Though unhampered by logistical constraints like transportation or postage costs, Benkler observes that there are artificial barriers to many interactions that have been constructed as part of an enclosure movement facilitated by expansive intellectual property precepts, particularly in the area of copyright law. He says that rather than the naïve model of “everyone a pamphleteer,” there are editorial functions, and filtration and accreditation issues that impose limits on personal autonomy.¹⁴ Nevertheless, he believes that the Internet empowers individuals to do things themselves, and reduces their susceptibility to intervention and manipulation. As Jack Balkin articulated it:

[A]t the very moment when the digital revolution holds out the promise of genuine democratic participation, businesses driven by the twin needs to maximize profits and protect themselves from competition have tried to assert control over the knowledge economy through expanding intellectual property rights and securing legal protection for proprietary architectures, undermining the Internet’s democratic promise. This collision of interests is not accidental: Industrial, closed and proprietary models of information production and democratic, open, and commons-based models are made possible by the same technology; the struggle between these two models of information production is the social contradiction of the digital age.

How can these opposing trends be reconciled? Yochai Benkler’s argument in *The Wealth of Networks* is that the contradiction can be resolved by two features of the digital revolution. The first is that not all successful business models in the knowledge economy have rested or will rest on maximizing the exploitation of intellectual property or closed and proprietary architectures. The second is that the digital networked environment makes possible and gives increased salience to commons-based peer production methods for information production. In both cases, but especially in the second, democratic participation in information production is wholly consistent with efficient economic production and the growth of the knowledge economy. Indeed, preserving a space for democratic participation in the means of production is the best way for the knowledge economy to flourish.¹⁵

14. He uses or quotes this phrase to characterize an unattainable, democratically utopian view of mass communications. BENKLER, *supra* note 1, *passim*.

15. Posting of Jack Balkin to Crooked Timber blog, *Mediating the Social Contradiction of the Digital Age*, <http://crookedtimber.org/2006/05/30/mediating-the-social-contradiction-of-the-digital-age/> (May 30, 2006, 9:32AM).

Given that Benkler credited Balkin with “captur[ing] precisely what [he] was trying to say in so many portions of the book,” and with providing a “well reasoned and generous exploration of central themes of the book,”¹⁶ I am more than willing to assume that Balkin got this exactly right.

II. COMMENTS ON THE UNWRITTEN CHAPTERS: WITH AN ANTICIPATORY NOD. . .

By “information production,” one assumes that both Benkler and Balkin basically mean both the ascertainment of technologically useful information and the authorship of creative works, aggregates of knowledge that are potentially patentable or copyrightable which fit under the broad rubric of “intellectual property.”¹⁷ An acquaintance once told me that she thought very pretentious people were drawn to intellectual property law because they adored being able to invoke the word “intellectual” to describe their area of legal practice. For various reasons including but not limited to the Fifth Amendment I prefer not to speculate about how much truth there might be to this observation, but it is certainly true that representations that an invention is patented, or a work is “protected by copyright,” lend a certain superficial gravitas, or patina of respectability to marketable goods and services, including informational products.¹⁸

The so-called “intellectual property clause”¹⁹ of the U.S. Constitution authorizes Congress “to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.”²⁰ Patents and copyright registrations are governmental imprimaturs which imply that the ideas or expressions of ideas embodied in the protected works are useful and progress promoting. This of course is not necessarily true in any meaningful sense. Only a small fraction of patented inventions are ever commercially exploited,²¹ and only a small fraction of copyrighted

16. Posting of Yochai Benkler to Crooked Timber blog, *supra* note 11.

17. Benkler makes what he characterizes as a “tricky” distinction between information and knowledge at page 313 that is admittedly elided here. BENKLER, *supra* note 1, at 313.

18. See, e.g., Ann Bartow, *Separating Marketing Innovation from Actual Invention: A Proposal for a New, Improved, Lighter, and Better-Tasting Form of Patent Protection*, 4 J. SMALL & EMERGING BUS. L. 1 (2000).

19. The term “intellectual property” did not likely exist when the Constitution was drafted. Richard Stallman has argued that it carries a hidden assumption that concepts like copyrights should be analogized with physical objects and ideas about physical property. He has noted that widespread use of the term is a fairly recent development, and he criticizes it on several grounds. See Richard Stallman, *Did You Say “Intellectual Property”? It’s a Seductive Mirage*, www.gnu.org/philosophy/not_ipr.html (last visited Feb. 4, 2007).

20. U.S. CONST. art. I, § 7.

21. See, e.g., Jean O. Lanjouw & Mark Schankerman, *Enforcement of Patent Rights in the United States*, in PATENTS IN THE KNOWLEDGE-BASED ECONOMY 145 (Wesley M. Cohen

works are ever commercially distributed,²² suggesting that most of the “knowledge” that is developed is not seen as valuable by market actors. Whether it is socially useful is a different question, but not one that can be reflexively answered in the affirmative. Blanket generalizations about some categories of information are deeply problematic.

A. Pornography

My University of South Carolina School of Law students are overwhelmingly conservative in their social and political views. For this reason, at the start of each semester of Cyberspace Law, I advise them that if they will be uncomfortable learning about cases involving sexual and scatological topics, this probably isn't a good elective for them to take, and they should drop the course. I need my students to be prepared for the fact that we will need to discuss cases and substantive issues related to pornography, though I do not go so far as require them to view any. As a screening device, I sometimes show them a satirical website called “Furniture Porn.”²³ To provide the reader with a bit of the upholstered flavor of this site, I reprint below an excerpt from the putative Click-Wrap End User License Agreement one must acquiesce to in order to access the substantive portions of the site:

I agree that I will not steal this site outright and put it on my own website and pass it off as my own work. Nor will I use, view, access, share, think about, or show my sniggering co-workers this site in violation of international agreements and/or treaties, or federal, state, county, city or incorporated village laws or their non-U.S. equivalent. Nor will I share any materials on this site with minors or allow minors to view any portion of this site, or mix paper and plastic recyclables or allow minors to mix paper and plastic recyclables.²⁴

The site itself shows pictures of ordinary chairs (folding chairs, law chairs, recliners, etc.) in familiar, banal arrangements reframed through

& Stephen A. Merrill, eds. 2003); John R. Allison & Mark A. Lemley, *Who's Patenting What? An Empirical Exploration of Patent Prosecution*, 53 VAND. L. REV. 2099 (2000); Jonathan A. Barney, *A Study of Patent Mortality Rates: Using Statistical Survival Analysis to Rate and Value Patent Assets*, 30 AIPLA Q.J. 317 (2002); Josh Lerner, *Patenting in the Shadow of Competitors*, 38 J.L. & ECON. 463 (1995); Kimberly A. Moore, *Judges, Juries, and Patent Cases - An Empirical Peek Inside the Black Box*, 99 MICH. L. REV. 365 (2000); Bronwyn H. Hall et al., *The NBER Patent Citations Data File: Lessons, Insights and Methodological Tools*, (Nat'l Bureau of Econ. Research, Working Paper No. 8498), available at <http://www.nber.org/papers/w8498>.

22. See, e.g., JESSICA LITMAN, *DIGITAL COPYRIGHT*, (2001), available at <http://www.msen.com/~litman/digital-copyright/>.

23. Furniture Porn: Enter. . . , <http://www.furnitureporn.com/> (last visited Oct. 2, 2006).

24. Furniture Porn: Warning!, <http://www.furnitureporn.com/warning.html>, ¶ 4 (last visited Oct. 2, 2006).

creative captioning as “hot, triple XXX chair-on-chair action.” This alone is enough to make some law students profess discomfort or revulsion.²⁵ Typically, however, my course enrollment actually spikes upward a little after this exercise, but growing the size of the class roster is not the primary reason I engage in it. In fact, this warning is necessitated by the fact that in many respects the law of the Internet is the law of pornography, and some law students are not intellectually or emotionally equipped to analyze legal issues related to pornography with anything resembling objectivity. The politically liberal students, generally outnumbered in any classroom setting, usually oppose anything resembling censorship quite vehemently. The conservative students are eager to advocate in favor of governmental promulgation of “decency” and morality that does not countenance the distribution of pornography. This polarization makes substantive discussions difficult and prickly.²⁶

Whether expansive access to pornography is good, bad or neutral for society as a general matter raises contentious issues far beyond the scope of this book review.²⁷ What is indisputable though, is that the Internet has provided pornography on an enormous scale.²⁸ Although e-mail is often touted as the “killer application” of the Internet, pornography is a very successful content-based, online business model.²⁹ Estimates of the Internet pornography market vary,³⁰ but it is generally believed to be substantial.³¹ Legal issues concerning privacy, censorship, filtering, jurisdiction, copyrights and trademarks have frequently arisen and been addressed by courts in the context of online pornography cases,

25. I have been accused of exaggerating about this, but in a roomful of South Carolina law students, many quite reasonably anticipate careers in state politics or in the judiciary, and the opportunity to publicly embrace and exhibit prudence, temperance and a rather rigid sort of morality proves irresistible to some of them.

26. Experiences with trying to discuss pornography in law school classrooms have made me more sympathetic than I used to be toward law professors who decline to cover subjects like rape in criminal law courses, though I still disagree with their decisions.

27. The author discusses online pornography in a limited way in Ann Bartow, *Open Access, Law, Knowledge, Copyrights, Dominance and Subordination*, 10 LEWIS & CLARK L. REV. 869 (2007).

28. Answers.com, Internet pornography, <http://www.answers.com/topic/internet-pornography> (last visited Oct. 2, 2006).

29. See Jay Lyman, *Priority for Internet Users: Porn*, TECHNEWSWORLD, Jun. 4, 2004, <http://www.technewsworld.com/story/34233.html>; Raymond Chan et al., *The Porn Business* (Winter Quarter 2001) (unpublished student project, Stanford University), available at <http://cse.stanford.edu/class/cs201/projects-00-01/pornography/business.htm>.

30. See, e.g., Cecil Adams, *How much of all Internet traffic is pornography?*, THE STRAIGHT DOPE, Oct. 7, 2005, <http://www.straightdope.com/columns/051007.html>; SUSANNAH FOX, PEW INTERNET & AM. LIFE, ADULT CONTENT ONLINE (2005), <http://www.pewinternet.org/PPF/p/1102/pipcomments.asp>.

31. National Academy of Sciences, Pornography on the Internet, <http://www4.nationalacademies.org/onpi/webextra.nsf/44bf87db309563a0852566f2006d63bb/13a0fdabb8339dce85256bac005b4a2f?OpenDocument> (last visited Oct. 2, 2006).

demonstrating its salience to the form and content of cyberspace law.³² In addition to commercial porn production, there is also a substantial amount of “amateur” pornography³³ that is uploaded and downloaded in cyberspace, an enormous socially important category of nonmarket social production Benkler leaves uninterrogated.

Generally when “bad knowledge” is communicated, the locus of the harm is related to end uses. Instructions for building bombs, or for manufacturing amphetamines out of cold medicine, or for tapping into strangers’ bank accounts do not cause any real damage until they are followed. With pornography, however, simply “producing” the “information” can inflict emotional or physical damages on living humans, such as HIV transmission.³⁴ Pornography is also deeply linked to sex trafficking and slavery.³⁵ The role of the Internet in enabling and incentivizing

32. See, e.g., Tom W. Bell, Internet Privacy and Self-Regulation Lessons from the Porn Wars, available at <http://www.cato.org/pubs/brief/bp-065es.html>; see also *Reno v. ACLU*, 521 U.S. 844 (1997); *ACLU v. Reno*, 217 F.3d 162 (3d Cir. 1999); *Free Speech Coal. v. Reno*, 198 F.3d 1083 (9th Cir. 1999); *ACLU v. Johnson*, 194 F.3d 1149 (10th Cir. 1999); *United States v. Thomas*, 74 F.3d 701 (3d Cir. 1996); *Computer Professionals for Social Responsibility v. U.S. Secret Service*, 72 F.3d 897 (D.C. Cir. 1996); *Playboy Enters. v. Netscape Comm. Corp.*, 55 F.Supp.2d 1070 (C.D. Cal. 1999); *Mainstream Loudoun v. Bd. of Trustees of the Loudoun County Library*, 24 F.Supp.2d 552, (E.D. Va. 1998); *Playboy Enters. v. Welles*, 7 F.Supp.2d 1098 (S.D. Cal. 1998); *Playboy Enters. v. Calvin Designer Label*, 985 F.Supp. 1220 (N.D. Cal. 1997); *Playboy Enters. v. Russ Hardenburgh, Inc.*, 982 F.Supp. 503 (N.D. Ohio 1997); *ACLU v. Miller*, 977 F.Supp. 1228 (N.D. Georgia 1997); *Am. Library. Ass’n v. Pataki*, 969 F.Supp. 160 (S.D.N.Y. 1997); *Playboy Enters. v. Webworld*, 968 F.Supp. 1171 (N.D. Tex. 1997); *Playboy Enters. v. Chuckleberry Pub., Inc.*, 939 F.Supp. 1032 (S.D.N.Y. 1996); *Playboy Enters. v. Frena*, 839 F.Supp. 1552 (M.D. Fla. 1994); *Playboy Enters. v. AsiaFocus Int’l Inc.*, NO. CIV.A. 97-734-A, 1998 WL 724000 (E.D. Va. Apr. 10, 1998); Child Online Protection Act (COPA), Pub. L. No. 105-277, §1403, 112 Stat. 2681-736 to 2681-739 (1998) (codified at 47 U.S.C. § 231 (2000)); Communications Decency Act of 1996, Pub. L. No. 104-104, tit. V, 110 Stat. 133, *invalidated in part by Reno v. ACLU*, 521 U.S. 844 (1997); Electronic Communications Privacy Act (ECPA) of 1986, Pub. L. No. 99-508, 100 Stat. 1848 (codified as amended at 18 U.S.C. §§ 2510-2521); Todd Kendall, Pornography, Rape and the Internet (Sept. 28, 2006), http://www.law.stanford.edu/display/images/dynamic/events_media/Kendall%20cover%20+%20paper.pdf.

33. Answers.com, Amateur Pornography, <http://www.answers.com/topic/amateur-pornography> (last visited Oct. 2, 2006).

34. See, e.g., Xení Jardin, *Porn Valley’s HIV Crisis*, BOINGBOING, Apr. 18, 2004, http://www.boingboing.net/2004/04/18/porn_valleys_hiv_cri.html; *Let them eat HIV: Who failed Lara Rxxx?*, http://www.slumdance.com/blogs/brian_flemming/archives/000873.html (Apr. 16, 2004, 12:38 AM); *Jessica Dee tests positive for HIV*, http://www.slumdance.com/blogs/brian_flemming/archives/000926.html (Apr. 29, 2004, 4:49 PM). See also Kurt Eichenwald, *With Child Sex Sites on the Run, Nearly Nude Photos Hit the Web*, N.Y. TIMES MAG., Aug. 20, 2006, at 1; *Playboy, call your lawyers*, <http://tushnet.blogspot.com/2006/08/playboy-call-your-lawyers.html> (Aug. 19, 2006, 9:45 PM).

35. See the San Francisco Chronicle’s Series on Sex Trafficking. Meredith May, *San Francisco is a Major Center for International Crime Networks that Smuggle and Enslave*, SAN FRANCISCO CHRON., Oct. 6, 2006, available at <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2006/10/06/MNGR1LGUQ41.DTL>; Meredith May & Deanne Fitzmaurice, *A Youthful Mistake: You Mi Was a Typical College Student, Until her first Credit Card*

the production of pornography is a nontrivial aspect of the information society's big picture that I expected Benkler to analyze in the book, and I hope that he will do so in the future. Many observers believe that the Internet has drastically expanded both the production and the distribution of pornography.³⁶ It is a pervasive aspect of online culture that many people would prefer for various reasons to ignore, but Benkler does not strike me as a person who lacks the fortitude to engage with controversial subjects.

B. Astroturf

Another non-beneficial body of information that Benkler did not address substantively in the book but has explicitly articulated an interest in addressing in upcoming research, is an Internet phenomenon sometimes described as "astroturf." According to one Wikipedia entry,

Astroturfing techniques usually consist of a few people discreetly posing as mass numbers of activists advocating a specific cause. Supporters or employees will manipulate the degree of interest through letters to the editor, e-mails, blog posts, crossposts, trackbacks, etc. They are instructed on what to say, how to say it, where to send it, and how to make it appear that their indignation, appreciation, joy, or hate is entirely spontaneous and independent. This makes their campaign seem "real" rather than the product of an orchestrated campaign. Local newspapers are often victims of astroturfing when they publish letters identical to those received and printed by other newspapers.

It has become easier to structure an astroturfing campaign in the electronic era because the cost and effort to send an e-mail (especially a pre-written, sign-your-name-at-the-bottom e-mail) is so low. Companies may use a boiler room full of telephones and computers where hired activists locate people and groups that create enthusiasm for the

got her into Trouble, SAN FRANCISCO CHRON., Oct. 8, 2006, available at <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2006/10/08/MNGAULL53D1.DTL>; Meredith May, *You Mi is Put into Debt Bondage—Life Becomes an Endless Cycle of Sex with Strangers*, SAN FRANCISCO CHRON., Oct. 9, 2006, available at <http://sfgate.com/cgi-bin/article.cgi?file=/c/a/2006/10/09/MNGM5K215270.DTL>; Meredith May, *Free, but Trapped: In San Francisco, You Mi Begins to Put her Life Back Together—but the Cost is High*, SAN FRANCISCO CHRON., Oct. 10, 2006, available at <http://sfgate.com/cgi-bin/article.cgi?file=/c/a/2006/10/10/MNGN9LFHRO1.DTL>; Meredith May, *The Story: How we Reported the Series*, SAN FRANCISCO CHRON., Oct. 9, 2006, available at <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2006/10/09/MNGN9LFHOP1.DTL>.

36. See, e.g., Anthony D'Amato, *Porn Up, Rape Down*, (Northwestern Pub. Law Res. Paper No. 913013), available at <http://ssrn.com/abstract=913013>; see also Steven E. Landsburg, *How the Web Prevents Rape*, SLATE, <http://www.slate.com/id/2152487/>; Kendall, *supra* note 32.

specified cause. Also, the use of psychographics allows hired supporters to persuade their targeted audience. This correlates with the merge-purge technique that combines information about an individual from multiple databases. Companies can then turn hypothetical supporters into activists for the cause. This leads to misuse of the Internet, for one person is able to play the role of a whole group of like-minded people (see also Internet sockpuppet).³⁷

“Astroturf” is thus commentary that is manufactured to look authentic and natural, but is actually the product of deceptive public relations “opinion shaping” campaigns.³⁸ It is faux political or commercial feedback that springs from artificial grass roots engineered to appear as diverse and geographically distributed, independently acting individuals.³⁹ Astroturf subverts an informal norm of the Internet and of the blogosphere in particular, authenticity. In his review of the book, Henry Farrell observed:

Roughly speaking, I take this norm to say that individual bloggers should represent their own points of view in an honest and straightforward fashion. The comparative advantage of bloggers vis-a-vis other kinds of pundits is that they have (or should have) a strong personal voice based on their internal beliefs. This distinguishes the blogosphere from many other spheres of publication, where individuals are expected to represent the positions of their institution, or their political party rather than their own personal position on the issue at hand. It also distinguishes blogging from genres of writing (op-eds, speeches, political autobiographies) where authorship is blurred and ghost-writing by others than the official author are considered to be perfectly acceptable. Bloggers who are perceived as not representing their own position on the issues, or as having their material written for them by others, are likely to have a hard time getting their writing accepted by other bloggers.⁴⁰

Benkler wrote in reply:

We cannot be sanguine about the sustainability of the practices we today celebrate. There are internal pressures—like what he describes

37. Wikipedia, Astroturfing, <http://en.wikipedia.org/wiki/Astroturfing> (last visited Oct. 2, 2006).

38. See Center for Media and Democracy, Astroturf, <http://www.prwatch.org/taxonomy/term/110> (last visited Oct. 2, 2006); see also NewPR Wiki, AntiAstroturfing.GeneralDiscussion, <http://www.thenewpr.com/wiki/pmwiki.php?pagename=AntiAstroturfing.GeneralDiscussion> (last visited Oct. 2, 2006).

39. Wikipedia, Astroturfing, *supra* note 37.

40. Posting of Henry Farrell to Crooked Timber blog, *Norms and Networks*, <http://crookedtimber.org/2006/05/30/norms-and-networks/> (May 30, 2006, 9:34 AM).

as “invasion” from actors such as paid political astroturf bloggers or spammers—that put pressure on the genuinely free environment, and require technological or norms-based changes from a more open norm. All this is true. The ways in which these are developing, and the responses to them represent a rich and important area of research. Going into the basic science of cooperation to try to get some of the answers is an important project, and my next major focus.⁴¹

Astroturf campaigns have been uncovered or at least suspected in contexts including various political campaigns,⁴² debates about broadband policy,⁴³ tort reform initiatives,⁴⁴ Al Gore’s movie about global warming,⁴⁵ and companies like Monsanto,⁴⁶ American Apparel, Microsoft⁴⁷ and Miller.⁴⁸ It is a corrupting influence on open and honest de-

41. Posting of Yochai Benkler to Crooked Timber, *supra* note 11.

42. See Aaron Glantz, *Kurds just want to thank the US*, ASIATIMES ONLINE, Aug. 2, 2006, http://www.atimes.com/atimes/Front_Page/HH02Aa01.html; “*Their voice. Amplified.*” or *Why I’m banning comments*, newsrack blog, http://pages.prodigy.net/thomasm528/blog/2006_08_20_newsarcv.html#115573804040419389 (Aug. 22, 2006, 7:43 AM); Posting of DBK to Blanton’s and Ashton’s – Article. III. Section. 4. blog, *Strange Days Indeed: Shadowy Propoganda-for-Pay Group Targeting Web Logs*, <http://frogsdong.blogspot.com/2006/06/strange-days-indeed-shadowy-propoganda.html> (June 13, 2006, 10:52 AM); Posting of Tyler Slack to Desultory Thoughts blog, *Has Netvocates Visited Your Blog Recently*, <http://www.utahadventurevideos.com/blog/archives/2006/06/10/has-netvocates-visited-your-blog-recently/> (June 10, 2006, 2:09 AM); Posting of Blogenfreude to Daily Kos, *Get Out Your Tinfoil Hats*, <http://www.dailykos.com/story/2006/6/14/105534/099> (June 14, 2006, 07:55 PDT); Posting of Robin Hamman to Cybersoc.com blog, *behind netvocates (and it’s link to customscoop)*, http://www.cybersoc.com/2006/05/behind_netvocat.html (May 31, 2006); The Rendon Group and Astroturfing, <http://morewhat.com/wordpress/?p=99> (Aug. 31, 2006, 2:12 AM); see also Posting of Peter Rost to Dr. Peter Rost blog, *Am I Crazy Paranoid*, <http://peterrost.blogspot.com/2006/06/am-i-crazy-paranoid.html> (June 2006).

43. See Posting of Cynthia Brumfield to IP Democracy blog, *Do Broadband Providers Employ Blog Comment Shills?*, http://www.ipdemocracy.com/archives/001580do_broadband_providers_employ_blog_comment_shills.php (May 21, 2006, 9:39 AM); Posting of Cog to The Abstract Factory blog, *Anti-Network Neutrality Astroturfing*, <http://abstractfactory.blogspot.com/2006/05/anti-network-neutrality-astroturfing.html> (May 30, 2006, 22:55 PDT).

44. See Posting of Teresa Nielsen Hayden to Making Light blog, *Common Fraud*, <http://nielsenhayden.com/makinglight/archives/005850.html#005850> (Dec. 3, 2004, 11:00 AM).

45. See Comments to Words, Not Fists blog, *Another Inconvenient Truth*, <http://wordsnofists.blogspot.com/2006/06/another-inconvenient-truth-netvocates.html> (June 9, 2006); TheNewPR/Wiki, *Links to resource discussing a YouTube video attacking Al Gore that the Wall Street Journal uncovered as possibly the work of PR firm DCI Group*, <http://www.thenewpr.com/wiki/pmwiki.php?pagename=AntiAstroturfing.OnlineCommunication>.

46. See George Monbiot, *The Fake Persuaders*, THE GUARDIAN, May 14, 2002, <http://ngin.tripod.com/deceit4.html>.

47. Joseph Menn & Edmund Sanders, *Microsoft lobbying campaign backfires; even dead people write in support of firm*, SEATTLE TIMES, Aug. 23, 2001, available at <http://archives.seattletimes.nwsourc.com/cgi-bin/texis.cgi/web/vortex/display?slug=microlob23&date=20010823>; John Lettice, *Dead people rise in support of Microsoft*, THE REGISTER, Aug. 24, 2001,

bate.⁴⁹ One commentator wryly observed that when he was writing “A Declaration of the Independence of Cyberspace,” John Perry Barlow “didn’t realize that moneyed interests would treat open society as damage and route around it.”⁵⁰ Another sardonically noted, “The killing aspect of astroturf is that it poisons the well of discourse. Before this, you could at least have a degree of confidence that the stupid was *authentic* stupid. I’m not sure if I can deal with sorting out the fake stupid.”⁵¹

In theory, the blogosphere offers an alternative to the top down “trust me, I have authority” model of mass media that Benkler discusses in Chapter 7, where he touts the transparency of the networked public sphere. I’m glad he recognizes the practical, opacity-inducing risks posed by astroturfing. It is simple and inexpensive to do and virtually impossible to police. Attempts to resist its corrosive reach necessarily undermine norms of privacy and tolerance toward anonymity and pseudonymity. In consequence, some observers characterize online astroturf as a tremendous threat to the future of the Internet.⁵²

C. The Migration of Resources From Real Space To Cyberspace

Though his contention that the material means of information and cultural production are in the hands of a significant fraction of the world population is fairly important to the book’s central claims, Benkler acknowledges that the Internet will not improve the lives of all people, writing:

How will the emergence of a substantial sector of nonmarket, commons-based production in the information economy affect questions

http://www.theregister.co.uk/2001/08/24/dead_people_rise_in_support/; *Microsoft funded ‘grass roots’ campaign*, USA TODAY, Aug. 23, 2001, available at <http://www.usatoday.com/tech/news/2001-08-23-microsoft-letters.htm>; *Dead People, Fake Letters, Support Microsoft*, NEWSBYTES NEWS NETWORK, Aug. 23, 2001, available at http://www.findarticles.com/p/articles/mi_m0NEW/is_2001_August_23/ai_77447353.

48. See Posting of Amanda Marcotte to Pandagon blog, *One More Reason to be Wary of Feeding Trolls*, <http://pandagon.net/2006/06/13/one-more-reason-to-be-wary-of-feeding-trolls/> (June 13, 2006).

49. See Posting of Trevor Cook and JWM colleagues to Corporate Engagement blog, *PR Bloggers Urged to Fight Against Astroturfing*, http://trevorcook.typepad.com/weblog/2006/07/pr_bloggers_urg.html (July 16, 2006).

50. See Posting of Bill Humphries to More Like This Weblog, *Turf Wars*, <http://www.whump.com/moreLikeThis/2006/08/30/turf-wars/> (Aug. 30, 2006, 10:41 PM); Posting of John Perry Barlow, *A Declaration of the Independence*, <http://homes.eff.org/~barlow/Declaration-Final.html> (Feb. 8, 1996).

51. Comments of John D. to Making Light blog, *Another Update on Astroturf*, <http://nielsenhayden.com/makinglight/archives/007947.html#141279> (Sept. 2, 2006, 9:09 AM).

52. Ann Cavoukian, *7 Laws of Identity: The Case for Privacy-Embedded Laws of Identity in the Digital Age*, available at http://www.identityblog.com/wp-content/resources/7_laws_whitepaper.pdf.

of distribution and human well-being? The pessimistic answer is, very little. Hunger, disease, and deeply rooted racial, ethnic, or class stratification will not be solved by a more decentralized, nonproprietary information production system. Without clean water, basic literacy, moderately well-functioning governments, and universal practical adoption of the commitment to treat all human beings as fundamentally deserving of equal regard, the fancy Internet-based society will have little effect on the billions living in poverty or deprivation, either in the rich world, or, more urgently and deeply, in poor and middle-income economies.⁵³

Chapter nine focuses on ways in which the emergence of Internet-facilitated social production can improve the lives and living conditions of people everywhere, even those lacking connectivity. He notes that information policy is a critical aspect of development policy, and asserts that access to knowledge is hampered by a market system that accords access to innovations based on the willingness and ability to pay privileges to the interests and desires of the wealthy over those of the poor. What I don't think he adequately considers is the fact that investment in "the networked information economy" may actually worsen conditions for poor people by stripping them of resources that were previously available. When the interactions that are necessary for human flourishing move online, those without regular, unfettered Internet access will see the quality of their lives actually deteriorate.

The "Law of Conservation of Matter" states that matter cannot be created or destroyed, it can only be changed in form.⁵⁴ In other words, in a closed system, which is one in which nothing escapes, any process will not change the total "matter content" of the system. I would propose that to the extent that the global economy can be characterized as a closed system, an analogous statement can be made: Wealth isn't created or destroyed either, it is only changed in form, as well as moved around.

When money and resources are electrified and pixilated, those who live primarily offline may see their living conditions worsen dramatically. Consider if you will this ambling personal anecdote as an illustrative analogy. I live in within the city limits of Columbia, South Carolina, about seven miles from the University of South Carolina School of Law where I teach. Because I tend to work more productively in the office than I do at home, I typically drive there at least five days per week. Taking mass transit as an alternative isn't really an option, as the nearest bus stop is over a mile and a half from my home, and after walking there, which could easily take 30 minutes or more, I would have to take two

53. BENKLER, *supra* note 1, at 301.

54. Wikipedia, Law of Conservation of Matter, http://en.wikipedia.org/wiki/Law_of_Conservation_of_Matter (last visited Sept. 26, 2006).

different buses to get within a quarter mile of the law school building. It could take me as long as two hours to get to work by bus even when the buses are running on schedule, so I have never attempted this. I could not live in my current neighborhood if I lacked a car, and would have to choose from a very narrow and unappealing range of housing options.

One weekend day, when the weather was reasonably pleasant, I decided to walk from my house to my office, to see how long it would take me and what the walk would be like, in the event I find myself lacking a car or other source of transportation and needing to get back and forth on my own power. I secured a ride home beforehand, and set off early one morning on what I referred to as my excellent urban pedestrian commuter adventure. Under different circumstances, however, I might have dreaded such a long walk, particularly if the weather was hotter and wetter, as could easily have been the case. Much as I was voluntarily forgoing the use of my car, I sometimes forgo the use of my computer and Internet access for short periods, which is a very different experience than the frustration that accrues when my computer malfunctions or my Internet connection is unavailable, despite my desire to be online.

An ultimately positive aspect of my pedestrian journey is that I was reminded of how nice and kindhearted people in Columbia SC can be, as I was offered a ride on five different occasions by friends, neighbors, and a former student. Not a single ride offer came while I strode the shaded lanes near my home (even though I had to walk in the street because there are no sidewalks there) because recreational walking is commonplace in this part of town (even in spite of the lack of basic pedestrian amenities). Once I began trodding the narrow sidewalk that runs along the eight lane highway that joins my neighborhood with downtown Columbia, however, the ride offers came fast and furious, because apparently it seemed exceedingly unlikely to passersby that I would be walking there voluntarily.

That part of the walk was quite unpleasant from a multi-sensory standpoint. In addition to the noise of the cars whizzing past me were the smells of auto exhaust, and of fast food restaurant fry emissions. And the route itself was unremittingly ugly. Landscaping was sparse, but billboards were plentiful. This section of the hike was rife with litter, and I have to assume this was at least partly correlated to the complete absence of convenient trash receptacles. I wished I had thought to bring work gloves and a trash bag, so that I could have picked up some of the rampant refuse as I walked along. Most of it seemed beverage consumption related, as cups, cans, and bottles were everywhere. There are homologous places on the Internet, such as sites that are choked with advertisements and browser traps, webpages that require complicated registration disclosures, programs that impose onerous and sometimes degrading terms and conditions for use, and "free" e-mail programs that

inject ads, extract personal information and intrusively monitor all of a user's activities and communications. People who can avoid them undoubtedly do.

At one point I crossed a bridge, where several people stood fishing in the stream below, for what I assumed were utilitarian rather than recreational purposes. Copious litter floated in the water too, and it appeared to have a sudsing problem. Unsurprisingly, the catch of the day was catfish, a piscine creature known to flourish in less than environmentally pristine environments. I thought about how lucky I was not to have to fish for my dinner. I think now, as I write this, about how fortunate I am to have the means to own computers and related equipment and to afford top-notch Internet connectivity at my home.

After passing a number of crowded, unsheltered and shadeless bus stops, I arrived at the office grateful that I didn't have to make the trek regularly, thanks to my trusty Honda Civic Hybrid. Owning and operating a car, even one that gets good gas mileage, is a fairly expensive proposition. People of modest financial means are forced to either dedicate a substantial portion of their incomes toward buying, fueling, insuring, and maintaining an automobile, or to make do with the limited mass transportation that is available, along with rides provided by friends or family members, and supplement this with walking, bicycling, and the occasional cab ride. They would benefit greatly from an extensive, dependable and affordable mass transit system, and they suffer from the lack of one. Yet as long as possessing personal automobiles is within the reach of the citizens to whom governments are most responsive, it is unlikely that Columbia, South Carolina (or similarly situated communities elsewhere), will be motivated to invest in additional bus routes, or commuter rail systems. Long ago public resources were redirected from mass transit to highways and parking garages, to the detriment of the carless poor. So too are public resources migrating online, where they are less easily accessible, and sometimes completely unreachable, by the computerless poor.

In the United States the Internet is developing away from a public transit model, and many of its attributes may be fully accessible only to those who can afford expensive computer equipment and monthly broadband cable fees. Governmental initiatives like the E-Rate are burdened by censorware⁵⁵ requirements⁵⁶ and there is little indication they

55. The Censorware Project, What is Censorware? <http://censorware.net/article.pl?sid=01/02/10/2241204> (last visited Feb. 5, 2007) (defining censorware as "software which is designed to prevent another person from sending or receiving information (usually on the web)").

56. American Library Association, E-Rate and Universal Service, *available at* <http://www.ala.org/ala/washoff/WOissues/techinttele/erate/erate.htm>; Nancy Kranich, *Why Filters Won't Protect Children or Adults*, 18 LIBR. ADMIN. & MGMT. 1, (2004), *available at*

will be expanded. The corporate Internet is laced with toll roads, and only people with financial resources and expensive computers can take optimal advantage of them. Low cost Internet access is slow and it subjects the user to constant advertisements and chronic monitoring. Even when people with economic challenges manage to purchase computers, their machines and software will quickly require new peripherals, maintenance and updating to remain fully functional, and resources devoted to computers and Internet service reduce the funds available for other life expenditures.

Consider also telephones and telephony. As Benkler noted repeatedly, those with access to high speed broadband connectivity and sufficient financial resources can obtain phone service over the Internet.⁵⁷ This can be supplemented with portable cellular phones, such that people can have extensive, almost seamless access to telephone services. Except, of course, when they don't. Before widespread adoption of cell phones, pay phones were in plentiful abundance. Expansion of the cell phone market shrank the pay phone customer base dramatically, such that people without cell phones have much less access to distributed telephone services than they did previously.⁵⁸ If Benkler's prediction that the Internet will replace traditional telephone service comes true, even assuming there are federal subsidies for rural residents, the digital divide will become a gaping chasm that divests people without constant Internet access of their only reliable means of communication.

Finally, a few words about public libraries. Benkler expresses understandable excitement about developments like Project Gutenberg⁵⁹ and the Public Library of Science (PLoS), which are making large amounts of information accessible to the interested public.⁶⁰ It is also true that as a general matter libraries benefit from the availability of networked electronic publications, but often only in the sense that demands placed on the physical space of a library facility are reduced. Budgetary demands preclude infinite access to pay per view resources, and subscriptions to electronic periodicals may cost as much or more as ink and paper versions, with the added drawback that libraries lose the benefits of the first sale doctrine under copyright law.⁶¹ Most electronic publica-

<http://www.ala.org/ala/oif/ifissues/issuesrelatedlinks/whyfilterswontp>.

57. See, e.g., BENKLER, *supra* note 1, at 86, 421 (mentioning Skype).

58. See, e.g., The Payphone Project, <http://www.payphone-project.com/> (last visited Sept. 26, 2006); Wikipedia, Payphone, <http://en.wikipedia.org/wiki/Payphone> (last visited Sept. 26, 2006).

59. See BENKLER, *supra* note 1, at 80-81, 137, 142.

60. *Id.* at 271, 313, 324.

61. See Ann Bartow, *Electrifying Copyright Norms and Making Cyberspace More Like a Book*, 48 VILL. L. REV. 13, 13 (2003); Ann Bartow, *Libraries in a Digital and Aggressively Copyrighted World: Retaining Patron Access through Changing Technologies*, 62 OHIO ST.

tions are licensed rather than sold, under terms and conditions that may not be readily negotiable. It is not at all clear that digitalization enhances access, and it may instead be true that it decreases the scope of collections over time, because when a subscription runs out, even the back issues of a periodical may be rendered unavailable.

The bankruptcies of publishers could extinguish access to certain works, and technology changes will serve to remove resources from library collections as well. Just as in real space where information contained exclusively on seven inch floppy disks is functionally lost to most of us and the means to play music contained on eight track tapes is woe-fully hard to come by, as platforms and formats on the Internet improve and evolve, information that is not in regular use may become functionally lost as well. You can experience this phenomenon firsthand by simply finding a website that hasn't been updated in several years, and attempting to open or play associative files. Chances are, the document readers and media players on your computer will no longer recognize or know how to interact with this data. Libraries can repurchase access to old content that is recast in new media, but only if it is both available and affordable, and sometimes neither will be the case.

Also, instead of merely providing seating space to patrons, libraries must now provide them with computer terminals and passwords for access to library-subscribed e-collections and online services.⁶² Resources that might have previously been used for acquisitions may be invested instead in computers and broadband access and of course the almost obligatory filtering software.⁶³ And patrons desiring access to online collections may have to wait in line for computer terminals alongside people needing to check their e-mail accounts, creating library resource demand bottlenecks that had no analog homology.

CONCLUSION

"The Wealth of Networks: How Social Production Transforms Markets and Freedom" is a book well worth reading. The author still has a bit more work to do, however, before his Grand Unifying Theory of Life, The Internet, and Everything is satisfactorily complete. It isn't enough to concede that the Internet won't benefit everyone. He needs to more thoroughly consider the ways in which the lives of poor people actually worsen when previously accessible information, goods and services are rendered less convenient or completely unattainable by their migration

L.J. 821, 821 (2001).

62. See generally Bartow, *Electrifying Copyright Norms*, *supra* note 61, at 13.

63. See Ann Bartow, *Women in the Web of Secondary Copyright Liability and Internet Filtering*, 32 N. KY. L. REV. 449, (2005), available at <http://ssrn.com/abstract=755724>.

online.

Additionally, the Internet is easy enough to be optimistic enough as a technological achievement, but just as nuclear fission can be harnessed both for electrical power generation and annihilating destruction, the raw communicative capabilities can't be qualitatively assessed without reference to specific content. Pornography and its symbiotic relationship to the Internet require thoughtful scrutiny. Astroturf and other targeted attempts to instrumentally distort democratic discourse need to be recognized and analyzed, so that mechanisms of re-channeling and containment can be theorized and developed. Finally, the impact of moving resources online upon people who substantially live in an offline, analog world, needs to be contemplated more fully. I hope that Benkler decides to undertake all these projects in the future.