

DEVELOPMENTS

Book Review - Yochai Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom* (2006).

*By James Brink**

Yochai Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom* (New Haven, CT: Yale University Press, 2006). ISBN: 0300110561. €34,89. USD 40.00.¹

A. The Culture War

The West is engaged in an escalating culture war. The battlegrounds are the courts, the legislatures, international bodies, local communities, and distant countries that individually may not have much power to affect the outcome though they do have a vital interest in who wins. The war is global – and is one that has little to do with gay marriage, abortion, terrorism, Darwinism, or religion. It is, in one sense, a war going on above our heads, as it is largely concerned with law and policy, and society and property. In another sense, it is very much a war in the trenches, as it affects our ability to choose how we will live and interact with each other as consumers, creators, and citizens. Consider the following story:

Diebold is a leading provider of electronic voting machines in the United States and Brazil. In the 2002 U.S. elections, voting machines were widely seen as an answer to the problem of “hanging chads” or imperfectly punctured paper ballots. Public assurances of the accuracy and security of the machines were taken at face value by mainstream media – not surprising, considering the difficulty of analyzing a ma-

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¹ [*Wealth of Networks*]. An online copy of Yochai Benkler’s book is available under a Creative Commons Noncommercial Sharealike licence; it can be accessed through the author’s website at <http://www.benkler.org>. It will also be interesting to see what becomes of the wiki “learning and research environment” centred around the book which, though largely a blank slate at time of writing, is located at http://www.benkler.org/wealth_of_networks/index.php/Main_Page.

chine whose operation is treated as a state secret. Less trusting internet activists, however, made the investigation of the manufacturer's and election officials' claims a volunteer project. Bev Harris, who ran her own website, blackboxvoting.com, was able to obtain and publish the specifications and code for the machines in 2003, and invited a public review by the computing community. She later also received a cache of email from a Diebold whistleblower that showed the code on some of the machines had been changed *after* being certified for use in elections. Diebold threatened litigation under the Digital Millennium Copyright Act (DCMA). If the company had been successful in its attempt to have the emails declared copyrighted or privileged, it might have escaped unscathed. However, students at various universities had copies of the files and distributed them using peer-to-peer file-sharing technologies that are nearly impossible to suppress. Most likely because of the online discussion, California's secretary of state set up an independent investigation and, within a few months, many of California's voting machines were decertified.

Yochai Benkler, who reports this and other stories in his erudite and expansive book *The Wealth of Networks: How Social Production Transforms Markets and Freedoms*, says we are in "a battle, in the domain of law and policy, over the shape of the social settlement that will emerge around the digital computation and communications revolution."² What do voting machines have to do with computers and communication? They are part of a new economy – a networked economy – centred around information and structured by rules of ownership for intellectual outputs. The question is whether this economy will be mostly proprietary and tightly controlled by corporate interests or if it will give meaningful space to non-market social production? The answer to that question has significant implications for individual freedom, the public sphere, and the shape of our future economy.

B. The Networked Information Economy

The parties in Benkler's book are divided into two camps, the *industrial information economy* – a one-way, capital-intensive, and professionally-produced model that has held sway for 150 years – and the *networked information economy* (NIE) – a many-to-many, low-capital, and cooperative model that has been emerging in the last 15 years. Newspapers, record companies, and broadcasters are members of the former; bloggers, file sharers, and decentralized programmers and encyclopedia writers are members of the latter. The infrastructure that the NIE shares is, of course, the internet, which Benkler describes as "a communications environment built on cheap

²*Wealth of Networks*, *ibid.* at 386.

processors with high computational capabilities, interconnected in a pervasive network.”³ This environment is characterized by (1) non-proprietary strategies, (2) rising non-market production, and (3) more effective, large-scale cooperative efforts; in other words, “peer production of information, knowledge, and culture.”⁴ Benkler identifies the third feature as the most revolutionary because it challenges both our economics and our politics.

I. The Economic Challenge

Benkler sees peer production as an inversion of the conditions Ronald Coase explored in his investigation of the relationship between the market and the firm.⁵ Coase pointed out that firms, while they compete against other firms according to the rules of the market, are not themselves organized according to market principles. Markets are organized largely by the price system. Producers flock to high prices, consumers to low prices. Inside the firm, however, production and consumption are organized by managerial fiat. Workers have significantly less freedom within the firm to contract for their services than the firm has within the market to contract for its products or expertise. Coase argues that firms exist because certain transactions are easier and cheaper to organize within a command hierarchy than within a market. A firm will grow so long as its management can rearrange “the factors of production under its control”⁶ to outweigh the benefit of trading those factors on the open market.

Benkler, in an argument developed in “Coase’s Penguin, or, Linux and *The Nature of the Firm*,”⁷ says that markets and firms are two different ways of solving the problem of information: how does one identify the best person for the job? Markets depend on price signals; firms depend on managerial discretion. Under a third option—one he calls “commons-based peer production”⁸—the best individuals, working on a neutral network, self-identify and self-select for a given project. This option works best for projects with high levels of “granularity;” that is, projects

³ *Ibid.* at 3.

⁴ *Ibid.* at 5.

⁵ Ronald H. Coase, *The Nature of the Firm*, 4 *ECONOMICA* 386 (1937).

⁶ *Ibid.* at 405.

⁷ 112 *Yale L.J.* 369 (2002). The article is available online under a Creative Commons Attribution-Noncommercial Sharealike licence at <http://www.yale.edu/yalelj/112/BenklerWEB.pdf>.

⁸ *Ibid.* at 375.

which can be broken down into many small component parts, such as classifying craters on Mars (NASA Clickworkers), writing encyclopedias (Wikipedia), and even building online worlds (Second Life, a massive multi-player online game). Peer production has a big advantage over markets and firms: transaction costs are reduced essentially to zero (achieving ideal efficiency) so long as the group is large enough to aggregate resources and conduct peer review, and so long as each person has equal access to an informational network.

Up until now, access to the informational network – the internet – has been near-neutral with respect to both the person using it and the data that the person is passing back and forth. The internet operates much like a public highway, in that it is indifferent to the person and his or her destination, as well as the type of data he or she is transmitting. However, the concentration of business and media that has occurred within the industrial information economy is being echoed in the basic infrastructure of the NIE – most people obtain high-speed internet access from either their cable or telephone provider. Moreover, new router technology allows internet providers to distinguish traffic between a subscriber and “undesirable” sites (e.g. a competitor’s or non-rent-paying site) and traffic between a subscriber and “good” sites (e.g. those of advertising partners) and vary the speed of access accordingly. Government regulations support this discrimination. Broadband internet access has been regarded in the United States since the *Brand X* case⁹ last year as an information “service” rather than a telecommunications infrastructure, relieving cable and telephone carriers from the regulatory requirement to permit competition from other broadband service providers. Without significant pushback from citizens and businesses, the effect of these trends will be to needlessly destroy or, at least, inhibit the growth of a promising new arena for economic production.

II. The Political Challenge

The same characteristics that make peer production good at solving large-scale collective action problems in business may also make it better at resolving failures of participatory democracy in complex liberal societies than mass media. At root, Benkler argues, the public sphere, where political understandings are hammered out, is not linked to a particular forum but is rather a *process* of communication between citizens. He draws on Habermas’ definition of the public sphere as

“...a network for communicating information and points of view (i.e., opinions expressing affirmative or negative atti-

⁹ *National Cable & Telecommunications Assn. v. Brand X Internet Services*, 545 U.S. 277 at 281 (2005).

tudes);” which, in the process of communicating this information and these points of view, filters and synthesizes them “in such a way that they coalesce into bundles of topically specified public opinions.”¹⁰

In liberal societies, this public sphere is (supposed to be) free of governmental coercion. The mass media have traditionally been understood to constitute those fora that take in various opinions, filter them, and synthesize them into “something more than private opinions held by some number of individuals.”¹¹ The media are good at this task because they are independent from government and professional researchers, and are almost universal in their reach. The high level of investment required to be in the media business (e.g. for printing presses, television studios, etc.), however, has made the media vulnerable to three criticisms that Benkler lists: first, their intake is extremely limited; second, concentration for business reasons has put the filtration of public opinion into the hands of a very few; and, third, dependence on advertising for cash flow pushes the media away from all but the most caricatured of provocative political discourse.¹²

Peer production in the NIE can ameliorate these weaknesses. In the first place, intake is universal. No barriers (other than lack of a minimum level computer literacy) prevent an individual from, for example, setting up a blog. Second, recent research has shown that the structure of the internet tends to use social filtration and accreditation to resolve potential problems of information overload and fragmentation. Instead of the cacophony of everyone being heard equally, reader attention patterns and the process of “linking” harmonize individual thoughts into larger movements of opinion. The blog, which features short posts, intense dialogue, and extensive mutual linking, is an especially powerful tool for constructing opinions within a given community as well as building consensus or at least carrying on conversations across political lines. The rising influence of blogs has been noted in political campaigns (e.g. Howard Dean’s Democratic leadership bid) and mass media reporters now routinely canvass the more influential blogs when attempting to gauge the mood of the public. Finally, there are no costs incurred in communicating with a broad audience, so individuals do not have to tone down their statements merely for the sake of preserving their cash flow.

¹⁰ *Supra*, note 1 at 181.

¹¹ *Ibid.* at 184.

¹² *Ibid.* at 197.

The internet is not likely to replace mass media, nor should it be seen necessarily as a threat to mass media's existence. However, because the internet is more decentralized and less prone to capture by high-rolling owners and advertisers, it can give a stronger voice to marginal political groups and even serve as a watchdog over the watchdog, as was shown in the story of the Diebold voting machines.

Benkler emphasizes that these virtual associations are forming spontaneously, and that their emergence is not due to laws or marketing, but rather is a function of the internet's architecture and our basic human need to relate to one another. The public sphere precedes politics. Benkler does not argue that the state has no regulatory role, but only that it should take a "wait and see" approach to policy-making. It is too early to measure the potential of the NIE as a space for collective social action and, therefore, too early to impose laws that might privilege actors from the old industrial information economy. While governments could be investing in common, neutral network infrastructures that would allow new institutional spaces to form, Benkler mostly dismisses their "well-intentioned but wrongheaded efforts to optimize the institutional ecology for outdated modes of information and cultural production."¹³ Benkler says "... there is more freedom to be found through opening up institutional spaces for voluntary individual and cooperative action than there is in intentional public action through the state."¹⁴ Unfortunately, governments on both sides of the Atlantic are using the ratcheting rhetoric of competitive advantage and "harmonization" to close off institutional spaces in favour of economic interests. The European Union is even creating quasi-property rights in raw data under the Database Directive!

C. Preserving Autonomy

The benefits of the NIE to democracy are more basic than its power to enhance conversation within the public sphere. One of the foundational aspects of a liberal society is its regard for individual autonomy. The NIE and its peer production culture aims to enhance this autonomy by reconceptualizing the individual as a "user" rather than simply a "producer" or "consumer." The user is a

new category of relationship to information production and exchange. Users are individuals who are sometimes consumers and sometimes producers ... the networked information economy promises to enrich individual autonomy *substan-*

¹³ *Ibid.* at 21.

¹⁴ *Ibid.* at 22.

tively by creating an environment built less around control and more around facilitating action.¹⁵ [Emphasis mine.]

The problem, says Benkler, is that we more often see the law's effect on autonomy in formal terms rather than according to substantive outcomes. This is not entirely negative: trying to achieve outcomes through law can sometimes undermine the very autonomy we are trying to cultivate. However, given that law is a source of constraint, Benkler argues that we must look beyond laws that *directly* limit autonomy to "laws that structure the conditions of action for individuals living within the ambit of their effect."¹⁶ In other words, our laws are already affecting outcomes – if we want our democracy and culture to prosper, we should know what those outcomes are, and whether they are desirable.

For example, Lawrence Lessig, in his book *Free Culture*,¹⁷ criticizes the dramatic expansion in both the term and the scope of copyright that has occurred in the last fifty years. Not only have automatic copyright terms of 95 years – instituted in the 1970s – prevented most of the cultural products of the twentieth century from entering the public domain, the notion of "property is good, more property is better"¹⁸ that Benkler attributes to judges and legislators has effectively turned the concept of "limited copyright" found in the U.S. Constitution into a regime of zero right to copy.

Lessig's description is supported by Benkler's discussion of the case of *Bridgeport Music, Inc.*,¹⁹ where the court held that "any digital sampling, no matter how trivial [in this case, two seconds], could be the basis of a copyright suit."²⁰ Telling our artists, in the name of "intellectual property," that they must be completely original in order to produce anything of artistic value restricts them (and thereby us) from criticizing, glamorizing, spoofing, and learning from our shared cultural history. Decisions such as *Bridgeport Music* have a chilling effect, not only on the creation of rap music, but also on the ability of anyone but the largest studios to immunize

¹⁵ *Ibid.* at 138.

¹⁶ *Ibid.* at 142.

¹⁷ Lawrence Lessig, *Free Culture: The Nature and Future of Creativity* (New York: Penguin, 2004). A copy of the book is available online under a Creative Commons Attribution-Noncommercial Licence at <http://free-culture.cc/freecontent/>.

¹⁸ *Supra*, note 1 at 319.

¹⁹ *Bridgeport Music, Inc. v. Dimension Films*, 383 F.3d 390 (6th Cir. 2004) [*Bridgeport Music*].

²⁰ *Supra*, note 1 at 444.

themselves against lawsuits (e.g. by obtaining insurance), even when an artist's inclusion of copyrighted material falls under "fair use" guidelines.

Intellectual property was created by law to encourage artists to devote themselves to their work, knowing that they would be able to reap the initial rewards. Lawmakers have lost sight of this autonomy-enhancing goal, and have interpreted intellectual property laws in ways that demean the individual, turning him or her into a passive consumer of mass-produced culture. Benkler points out two ways that information law can encroach on personal autonomy: first, it can increase the "relative capacity of some people systematically to constrain the perceptions or shape the preferences of others"²¹ and, second, it can "reduce significantly the range and variety of options open to people in society generally, or to certain classes of people."²²

The failure that Benkler identifies—that is, the failure of supposedly liberal institutions to recognize the counterproductive outcomes of its laws—demonstrates one of the weaknesses of bare liberalism itself, which is its inability to see the cultural structures that stand between the individual and the state, and how the laws of the state reinforce certain cultural choices and groups to the exclusion of others. When bare liberalism encounters cultural change, even if that change is positive and flourishing, its political and legal institutions flounder. The weaknesses are exacerbated when powerful and well-funded interests, such as the Hollywood lobby or the recording industry (which, as Benkler points out, is not an artistic vehicle so much as a distribution channel – and an inefficient one when compared to peer-to-peer networks²³), are able to gain influence and then use it to squelch competition or turn millions of people into so-called criminals for violating regressive copyright laws.

D. Vulnerabilities of the NIE

The strength of a given architecture is often its weakness as well. Democracy builds governmental legitimacy through the electoral system, but voter apathy can result in a cycle of worsening representation that ultimately undermines the legitimacy elections were created to instil. The industrial information economy excels at reaching large audiences; however, it may be captured by a well-capitalized media oligarchy. Benkler, in writing what is at heart a manifesto for the internet (though

²¹ *Ibid.* at 149.

²² *Ibid.* at 150.

²³ *Ibid.* at 427.

philosophically deeper than the cheeky Cluetrain Manifesto²⁴ and less obviously idealistic than the IFLA Manifesto²⁵), doesn't pay much attention to the way in which the NIE is vulnerable to technical capture in the same way the industrial information economy is vulnerable to capital capture. In the NIE, the potential capture point is at the filtration stage. There are only a few search engines that filter most of the information on the internet – Google being the best known among them – and the top tools are provided by corporations using proprietary algorithms. Google's willingness to collaborate with the Chinese government in filtering out "destabilizing" information for the sake of market advantage is troubling to say the least. As Benkler himself states,

A fundamental requirement of self-direction is the capacity to perceive the state of the world, to conceive of available options for action, to connect actions to consequences, to evaluate alternative outcomes, and to decide upon and pursue an action accordingly.²⁶

Yet if potential perceptions are filtered out before they ever get to the screen, if prospective "users" never discovers what actions are available to them, how much use is universal intake of opinion, or even the most efficient accreditation and review structures?

Benkler provides strong ammunition against the assault on the NIE by the old industrial information economy, vigorously defending the internet's right to exist as it is in the face of the self-preservation tactics employed by industries fearing significant losses as a result of the growing popularity of file-sharing. Benkler's support for "municipal funding of open access broadband networks, state funding of basic research, and possible strategic regulatory interventions to negate monopoly control over essential resources in the digital environment"²⁷ better addresses economic and social conditions than the hands-off legal framework that Lessig advo-

²⁴ The Cluetrain Manifesto can be found online at <http://cluetrain.com/#manifesto>. The manifesto was largely aimed at corporations trying to leverage the vast internet audience, and its central message is "We are not seats or eyeballs or end users or consumers. We are human beings – and our reach exceeds your grasp. Deal with it."

²⁵ The IFLA Manifesto (<http://www.ifla.org/III/misc/im-e.htm>) is a paean to the right to freedom of expression and opinion found in Article 19 of the U.N. Universal Declaration of Human Rights, stating that "[internet] access should neither be subject to any form of ideological, political or religious censorship, nor to economic barriers."

²⁶ *Supra*, note 1 at 146.

²⁷ *Ibid.* at 21.

cates. In Benkler's view, the trouble is that the policy driving present regulatory interventions is wrongly framed in

... local specific terms. We ask questions like, Will this policy optimize 'spectrum management' in these frequencies, or, Will this decrease the number of CDs sold? However, the basic, overarching question that we must learn to ask in all these debates is: Are we leaving enough institutional space for the social-economic practices of networked information production to emerge?²⁸

Benkler's book is a comprehensive but readable survey of the policy choices we must make if we are to allow the NIE to flourish (and he clearly signals which parts of the book are of particular interest to the technical illuminati). *Wealth of Networks* is a worthwhile outward- and forward-looking manifesto for an information infrastructure that has come of age. At the same time, internet advocates would do well to take Benkler's lessons in the history of the industrial information economy to heart, and to work hard to fulfil his vision of a true commons-based and non-proprietary ecology within the networked information economy.

²⁸ *Ibid.* at 393.