Review by Paul Duguid

Yochai Benkler

The Wealth of Networks:
How Social Production Transforms Markets and Freedom
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Thirty years ago, the 19-year-old General Partner of Micro-soft announced his graduation from their

ranks by denouncing computer hobbyists. "Most of you," Bill Gates wrote in an "open" letter aimed at

the Homebrew Computer Club, "steal your software." (The Club, which included founding partners of

Apple and Osborne computers, had circulated a computer program developed by Gates.) If no one

pays, Gates demanded, "will quality software be written?" The question was rhetorical. Standard

economics argues that without payments there is no incentive to produce. Yochai Benkler's *Wealth of*

Networks suggests that standard economics may no longer hold. A combination of social and digital

networks has changed how "quality software" is written and, Benkler believes, will change much else

besides.

The following two decades vindicated Gates. Payments made Microsoft the dominant

software company and Gates the richest man in the world. In 1998, however, a leaked Microsoft

memo, suitably called the "Halloween Document," showed that freely distributed software was

haunting Gates again. The concern was not software piracy. To Microsoft that was another cost of

business, like shoplifting to a supermarket. The new threat was more serious. "OSS poses," the memo

reported, "a direct, short-term revenue and platform threat to Microsoft."

"OSS" stands for Open Source software, a growing body of software created and distributed

voluntarily. This movement began in the U.S. as opposing views of software production clashed again.

On the East Coast, a firm established to sell products from MIT's Artificial Intelligence Laboratory

denied students access to software they had helped write. On the West, where Berkeley students had

been freely developing and distributing "Unix" software, AT&T encumbered the process with

expensive licenses. Software code is a written set of instructions for machines. As a text, these can be

copyrighted, but as instructions they can, with effort and expertise, be reformulated to maintain their

import but avoid copyrighted language. So programmers at MIT and Berkeley wrote substitute code and left it "open" (unlike Microsoft's, which is firmly closed), so that others could inspect it and even contribute to it. With the rise of the Internet, these and similar projects began to corral contributions from programmers worldwide.

Such a haphazard process might seem amateur and inept. In fact, Open Source software underpins much of Google and Yahoo's operations, Apple's computers, and IBM's business. The majority of "servers" providing Web pages on the Internet use an Open Source program called Apache. A growing number of people reach those pages with an Open Source "browser" called Firefox. Having undermined Microsoft's dominance of both server and browser software, Apache and Firefox alone make the threat to Microsoft significant. Benkler proposes that similar networks of volunteers will threaten more than Microsoft. Working in a similar fashion but outside software, they are capable of transforming the entire "information and cultural production sector." In the process, they will increase political autonomy, enrich the public sphere, and replace mass culture with a more spontaneous folk culture.

The vision is expansive. Yet Benkler emphasizes these grand ends or even the means to reach them less than the means--legal, political, and commercial--that might be used to thwart them. To protect their entrenched interests, giants of the "industrial information economy" are resisting the shift to the "networked information economy," Benkler argues. Among his villains are firms of the not-so-new economy like Gates's Microsoft, barons of the old media, and above all Hollywood.

A story of unscrupulous corporations opposing democratic change itself sounds like a Hollywood script, but it is not unfounded. Benkler and other scholars of "Internet Law" have long fought commercial-political alliances that seek longer copyright law, broader trademark protection, and stronger patent enforcement. These alliances maintain that if strong intellectual property laws are good, stronger must be better. Benkler responds that in a networked economy this isn't necessarily true and summons Open Source software as evidence. Stronger controls, he argues, have worrying implications not only for open software (which is directly threatened by software patents), but also for open political discourse. New networks offer a glimpse of a new polity. The ancien régime is struggling to prevent its birth. *The Wealth of Networks* is a reveille for netizens.

Opportunities within our grasp and tides to be taken at the flood have become standard

rallying calls of the digital "revolution." Here they stimulate interest and generate urgency for what is at base a dense discussion about the "institutional ecology of the digital environment." The argument is undoubtedly important, but Benkler's combination of analysis and polemic, swinging in tone from the formality of a legal brief to ingratiating illustrations for the jury, is not always convincing.

His examples are noticeably partial. The society in view is a noble place where bloggers shame big media and volunteers help identify planetary craters for a NASA website. Its not, evidently, a place where bloggers post details of abortion providers "wanted dead or alive" or vigilantes identify illegal immigrants for Texas websites.

A Panglossian innocence is particularly evident in the discussions of cultural production. The issues here have substance. As William St. Clair recently showed, commercial interests and over-restrictive copyrights have previously enmeshed important cultural works and might do so again. The issues are also appealing. It's not hard to raise outrage over the idea that the Shakespeare of tomorrow will be doomed if Disney binds the Holinshed of today or to elicit sentimental approval for volunteers creating open cultural resources. Benkler plays more for the sentiment than the substance.

He may do so because his democratic view of culture as "self-expression" is an overly limited one. With network connections, he seems to suggest, we will all prefer to create culture ourselves than to watch commercial products. It's easy to appeal from the perspective of a "gift economy" against Hollywood greed; it's harder to appeal from the perspective of a do-it-yourself culture against Hollywood quality. Many studio products are not as deplorable, nor their audiences such dupes as Benkler would have us accept. Even netizens, I suspect, might prefer to see *The Mighty Wind* than be entertained by a revival of the "open, participatory, transparent folk culture" it parodies.

Benkler's sustained comparison with Open Source software implies that Open Source cultural production will achieve the highest standards too But when Open Source methods are taken beyond software, we need to ask whether their quality assurance methods travel too. Just to use much Open Source software can take a fair level of skill. To read its code and diagnose problems takes a much higher level. To make changes demands even greater skill. Furthermore, changes made are accountable to the hardware, which will refuse to operate if the software is ineptly written. Thus in numerous ways Open Source software projects inherently select for skill. Indeed, difficulties projects have had developing software for ordinary users reflect difficulties their skilled contributors have in

understanding the limits of the unskilled.

Benkler doesn't examine cultural projects in any detail to allow comparison. He points to a few, including Project Gutenberg, an online library of digitized books, and Wikipedia, an online encyclopedia. Both are "open": each is free and anyone can participate in their construction (and many do). Neither project has the inherent selection measures that software projects have. Neither has approached in their world the sort of prominence or respect that Open Source software has achieved in its. Benkler himself will only go as far as claiming, "Anecdotally, *Wikipedia* appears to be a reasonable substitute for most commercial encyclopedias." Such hedging doesn't breed confidence.

Given their openness, both Project Gutenberg and Wikipedia are surprisingly good and unsurprisingly bad. Some thirty years in the making, Gutenberg offers about 17,000 "etexts." Many seem unexceptional, but for some the need to avoid copyright entanglements has led contributors to resurrect editions better buried. Its version of *Pan,* by the Nobel prizewinner Knut Hamsun, for example, puts William Wurster's ridiculously prudish translation of 1921 before unsuspecting readers. Relying on a communications medium admired for its ability to "route around censorship" yet driven by a certain contempt for scholarship, Project Gutenberg threatens to make a number of poor editions-- some bowdlerized, some originally corrupt, and some newly corrupted for the new medium--the Internet standard.

Wikipedia has grown much faster, producing a million entries in five years. (Benkler oddly calls them "definitions," suggesting unfamiliarity with the form.) These tend to be good when reliable sources are found on the Internet and poor when they are not. Once again, some odd antecedents are revived. The entry for Lawrence Sterne, for example, contains passages lifted without acknowledgement from the 1828 periodical *The Mirror for Literature* and the 1911 *Britannica*, not because either passage is insightful (neither is), but presumably because both texts are on line. The use of the *Britannica* leads this up-to-the-minute encyclopaedia to provide only one books published after 1912 among the dozen works suggested for further reading on Sterne.

It's hard to assess overall quality from small samples, but such oddities suggest these projects, while benign and even useful for those with a discerning eye, may be treacherous for the general readers they ostensibly wish to serve. Here we see a major difference between such cultural resources and Open Source software. Standard use of Open Source software is usually a testament to

skill. Standard use of an encyclopedia, by contrast, is a confession of ignorance. With the library or a reference work, we expect to defer to the authority of the text, not, as we are asked here, to find problems and fix them.

Other aspects of reference works question the applicability of open networks to these kinds of cultural production. In an earlier essay called "Coase's Penguin" containing the germ of the argument presented here, Benkler emphasized the "modularity" and "granularity" of Open Source software: it is made up of units that can be worked on independently and those units are relatively small. These features make software ideal for numerous contributors to work on small, uncoordinated contributions without disrupting overall coherence. They may also support the assumption that entities providing information, whether software or books, are built up in an open-ended fashion from well-formed, atomistic and autonomous units of information.

Benkler makes less of these features in his book, perhaps because such assumptions sit less well with cultural projects. Libraries and reference books may be more modular than novels or symphonies, but even they resist decomposition of the order of software. The granule of a reference book might feasibly be the entry. Wikipedia makes it the sentence or even the word. Participants regularly make changes at this level, often without any sense of obligation to the entry as a whole. Hence internal contradictions, repetition, and non sequiturs are regular failings of Wikipedia entries. Moreover, reference books are not open-ended collections of modular articles. They are intentionalistic selections. Inclusion and exclusion are in themselves significant. Sir Walter Elliot found consolation in the *Baronetage* because he was included and others excluded, not because anyone could be added. Encyclopaedias are also (as their name implies) bounded selections and so provide significance through relative length given to articles. We can tell a certain amount about the merits of Wikipedia, but relatively little about the relative merits of the subjects at issue, when we see it allocates some 11,000 words to Seinfeld and 5,000 to Shakespeare, or 4,800 to Barbie (the only entry Benkler discusses) and 1,800 to Bellow.

Of course, Benkler's book is not about Project Gutenberg or Wikipedia, it is about the "transformation of the information and cultural production sector." Few are not aware that this sector is undergoing transformation, and Benkler's identification of major forces at work is important and enlightening. His underlying vision, however, builds on the possibility of extending "peer production"

beyond software to social and cultural projects. Doubts about the equivalence he assumes suggest that, for all the thought that has gone into this book, there is more work to do here, particularly on that question of quality Gates raised thirty years ago.