

From Open Stacks to Open Source:

Technology, Libraries & the Intellectual Commons

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Attraction to “Open Source”

- Cultural Construct
- Innovation & Flexibility
- Engineering
- Economics



Defining “the Commons”

Paraphrasing the OED:

A resource held in common to its users

Lawrence Lessig’s examples:

Streets

Parks

The theory of relativity

Writings in the public domain



Yochai Benkler's definition In *Wealth of Networks*:

“Commons” refers to a particular institutional form of structuring the rights to access, use, and control resources.

It is the opposite of “property” in the following sense.

With property, law determines one particular person who has the authority to decide how the resource will be used. ...



Benkler's definition, continued:

The salient characteristic of commons, as opposed to property, is that no single person has exclusive control over the use and disposition of any particular resource in the commons.

Instead, resources governed by commons may be used or disposed of by anyone among some (more or less well-defined) number of persons,

under rules that may range from “anything goes” to quite crisply articulated formal rules that are effectively enforced.



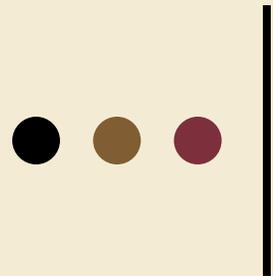
The Library as a Commons

Libraries are situated within the domain of the commons

They provide their communities with open access to intellectual and cultural resources.

No single individual controls or “uses up” the resources of a library.

Accessibility to all translates into “open stacks,” in which materials are available to any who use a particular facility.



A Provocative Conjunction

Libraries facilitate the creation of new ideas by preserving and extending the intellectual commons.

Stephen Weber, in *The Success of Open Source*:

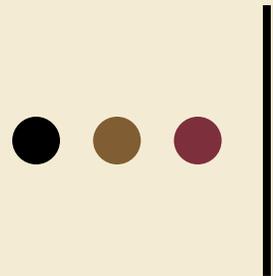
“Open source intellectual property aims at creating a social structure that expands, not restricts, the commons.” (p. 85)



A Foundational Claim

The cultural assumptions and social practices embedded within Open Source software are congruent and co-extensive with the values and missions of libraries writ large.

Embracing Open Source software =
Deepening & enhancing our cultural mission & social function.



An Expanded Vision

The emergence of Open Source software with the “library space” enhances the library as a center for participatory culture and collaborative enterprise.

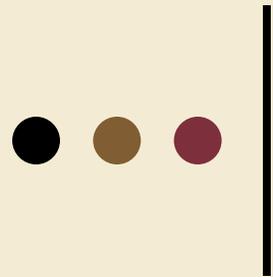
Libraries are profoundly social: they function to put different ideas and different perspectives adjacent to each other, yielding new insights and discoveries.

Open Source software development is a powerful instance of, and rich paradigm, for this function.



What Is “Open Source?”

Software that is developed by an individual or group
with an interest in a particular application or tool
distributed in un-compiled (source) form, with no licensing fees,
to a broader community that has a use for it,
allowing for local development & enhancement of the source code
including in many cases a means for contribution of local
enhancements back to the common code base.



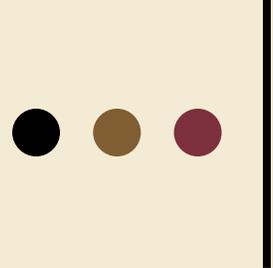
More on “Open Source”

Open Source software is not “non-commercial.”

It is often supported by commercial entities.

In distinction from proprietary software, those commercial entities neither own nor control access to the code base

Open Source development processes can often (but not always) yield superior results to proprietary software development regimes.



Weber on Process vs. Product

“The essence of open source is not the software. It is the *process* by which software is created. Think of the software itself as the artifact of the production process. . . . Production processes, or ways of making things, are of far more importance than the artifacts produced because they spread more broadly.” (p. 56)



Use vs. Ownership: Weber again

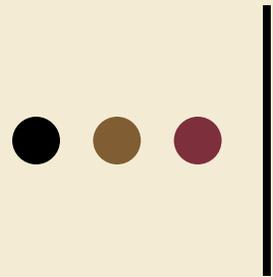
“The principal goal of the open source intellectual property regime is to maximize the ongoing use, growth, and development of free software. To achieve that goal, this regime shifts the fundamental optic of intellectual property rights away from protecting the prerogatives of an author toward protecting the prerogatives of generations of users.”
(p. 84)



Open Source Development: Some Basic Principles

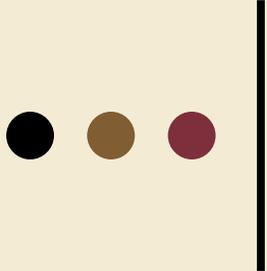
Eric Raymond, in *The Cathedral & the Bazaar*, identified principles for successful OSS development. Others have extended Raymond's paradigm. Principles include:

- “Scratch an itch”
- Build on or extend what's already been done
- Modularize
- Use simple standards & methods to link components
- “Smart data, dumb code”
- Release early & release often
- “To many eyes, all bugs are shallow”



Open Source Economics

- Open Source is only “free” as in “speech,” not as in “beer” (Stallman)
- Migration & implementation costs
- Ongoing support needs & costs
- Investment in development
- Hardware is cost-neutral in OSS & proprietary software
- Licensing costs are eliminated, as are maintenance fees figured as a portion of purchase price



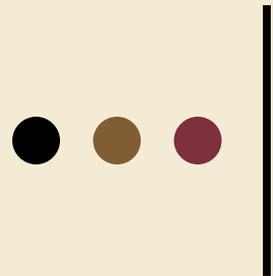
A Thought Experiment: How to Get Over the Hurdles

- Libraries in aggregate make large ongoing payments to commercial software vendors
- Re-direction of even 25% of this investment to OSS could initiate a revolution in library technology
- New business: high-quality low-cost migration & support services for OSS (from networks & consortia?)
- Deeper culture of technical collaboration & resource sharing
- Re-direction of technical effort into OSS development at libraries with means
- Re-allocate positions to technology development where possible
- Take the risk of cutting off commercial software payments for stable or static systems



Making It Happen

- A collective commitment to realizing such a vision makes OSS more than intellectually appealing
- It makes it economically viable, even in the near term
- Library leaders need to understand and aggressively push this agenda
- It can be done, and we can do it!



A Few Key Works Pertinent to Open Source Software

Benkler, Yochai. *Wealth of Networks: How Social Production Transforms Markets and Freedom* (Yale UP, 2006).

Lessig, Lawrence. *The Future of Ideas: The Fate of the Commons in a Connected World* (Vintage Books, 2002).

Raymond, Eric. *The Cathedral & the Bazaar; Musings on Linux and Open Source by an Accidental Revolutionary, revised edition* (O'Reilly Books, 2001).

Weber, Stephen. *The Success of Open Source* (Harvard U. P., 2004).



Questions?