

Corporate open source

Intellectual property and the struggle over value

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I began to worry about open source when the corporate world stopped worrying and learned to love open source. For me the turning point was a drinks party in Paris in 2003, thrown by the wife of an American advertising executive temporarily based in the city. First, a bit of context for the party and its place in the brief story I'm telling here, which is about the capture of open source by the current corporate innovation system, and the battle for the alternatives that endure.

In 1998, I wasn't at all worried about the future of Open Source Software (OSS), because clear lines were drawn between, for example, the GNU Project (Richard Stallman) and the Apache version of open source, on the one hand, and, on the other, the corporate interests that helped pass that year's Digital Millennium Copyright Act (DMCA) and Copyright Term Extension Act. The latter were powerful rearguard movements supported by monopolists who wanted to collect rents on the creations of the past, I thought, while also collecting a tax on the creators of today and tomorrow. But though they'd won those battles, they were going to lose the war.

And in fact the political defeats for open source and free software inspired new open source theory and activism. Microsoft's 'Halloween Documents' on open source, the first of which were leaked in October 1998, were a tribute to the threat open source posed to commercial software. They also specifically acknowledged that a collaborative commons had powers of creativity that even Microsoft at its peak could not match.

Interest in open source continued to spread, and spurred further developments like the creation of the Open Source Development Lab (2000), which helped support Linux, the founding of the Creative Commons project (2001), Lawrence Lessig's Free Culture movement, a boom in legal and other actions conducted by the Electronic Frontier Foundation, and other aspects of a renaissance of open source thinking and organization that had been encouraged by legislative assaults.

By 2000, a whiff of glasnost had also arrived on American university campuses, and appeared in their offices of technology transfer (OTT) or technology licensing (OTL) – more commonly known as 'knowledge transfer' in the UK, and by names like the Office of Intellectual Property and Industry Alliances at the University of California at Berkeley (IPIRA). Previously, the 'Age of Strong IPR' (Intellectual Property Rights) had enfolded nonprofits like universities through the patent legislation known as the Bayh–Dole Act (1980, with related legislation and executive orders appearing over the next few years). Most universities (over)interpreted this legislation as requiring them to take institutional ownership of all employee inventions, patent as many as possible, and then license as many patents as they could for the maximum amount of royalty revenue. A few hugely lucrative patents had inspired all sorts of universities to get into the patent game through the 1980s and beyond, and to use patenting volume and royalty revenues as the way to evaluate the success of their OTTs and even of the quality of

their science faculty. But a handful of patents made nearly all the money, and royalty revenues were a small fraction of extramural research income. For example, University of California, one of the country's biggest patenters, received 67 per cent of its royalty income from its top five patents, and 85 per cent from its top twenty-five. The most successful research universities in the USA generally receive between 0.5 per cent and 3 per cent of their gross research revenues in the form of additional royalty income, and shares going to inventors and general research budgets are much smaller than that.¹

So in the early 2000s, after many years of observing underwhelming returns, and hearing some muted protest about commercial metrics for science progress, some tech licensing staffers began to advocate greater use of licenses like NERFs (non-exclusive, royalty-free) that would aim at supporting platform development and research communities and downplay the search for patent blockbusters. I had been treated to several years of deliberations about mixtures of open and proprietary IP structures on various university committees by the time I turned up at the party in Paris in 2003.

IP relativism

One of my host's friends was an attorney for Microsoft, working on contract and intellectual property issues with the company's partners in France. I'd expected him to become wary or critical when he discovered I worked on tech transfer and favoured open source. Quite the opposite occurred. 'Open source is incredible', he enthused, 'I'm working on a report identifying all the varieties in Europe.' 'Microsoft wants to know what it's up against?' I suggested. 'Not exactly', he replied. 'Microsoft is becoming an open source company.'

Once I got my incredulity under control, we had an interesting discussion of Microsoft's change in tactics away from *exclusive* and towards *inclusive* uses of intellectual property. I didn't know it at the time, but Microsoft had been reassessing its policy of militant assertion of patent rights against competitors and partners alike. A few months before our conversation, Microsoft had hired the legendary intellectual property attorney and executive at IBM, Marshall Phelps, who in the 1990s had taken the company's gigantic patent portfolio and used cross-licensing and other strategies to turn it into a major piece of IBM's overall income – \$1.9 billion by the year 2000.² Phelps's mantra was the 'collaboration imperative': although firms used patents to block, exclude and hold up their rivals, in fact it had been a long time since even the most dominant technology company had been able to make and sell anything without licensing hundreds of patents from many other companies. Phelps's group had demonstrated this to IBM's new CEO in 1993 by putting tiny flags on the non-IBM components in an IBM laptop. They had to stop at 150 when they ran out of physical space for the flags. By the 1990s, Phelps held, it was time for legal practice and corporate strategy to catch up with manufacturing reality and treat the company's IP not as 'a weapon for blocking other companies' but as a 'financial asset and a vehicle for collaborating with other firms'.³

Of course Phelps, IBM, Microsoft and my Paris cocktail friend were not advocating a corporate conversion to open source. Continual patent wars waged by companies like Apple are clear proof that neither corporate America nor capitalism overall have decided to de-enclose the intellectual commons. But these companies and their senior attorneys were acknowledging real overlap between the open and proprietary forms of intellectual property that had been seen as polar opposites throughout the 1980s and most of the 1990s and that had produced the common policy view that content sharing was theft.⁴ These corporations were focusing on collaboration if not on the commons. Their use of the concept of an innovation 'ecosystem' was usually attached to a company name, as in 'Microsoft ecosystem', which would increase the value of the mothership by *including* more companies that build Microsoft into their products

rather than by excluding them. My question to myself after the Paris party, as a veteran of several tech transfer and conflict-of-interest committees, was this: why had I heard the most direct acknowledgement of the power of Open Source Software not from my university colleagues but from a Microsoft patent attorney?

The simple answer has three parts. First, the patent attorneys agreed with management theorists, particularly Henry Chesbrough in his landmark 2003 book *Open Innovation*, that knowledge had gone from 'scarce' to 'abundant' such that no one company could control it. This was a driver of the hyper-competitive capitalism that tech companies had to work within, and that had nearly killed IBM and was in the process of destroying giants like Xerox, Polaroid, Kodak and many others. The only effective response was to stop fighting open innovation and learn to manage it. Second, they recognized that very high quality code was being written in various kinds of commons, in a 'bottom-up' process, by non-hierarchical, decentralized networks of people who were not driven primarily by financial incentives.⁵ Third, they could interpret and control the boundary between open and proprietary IP. As Chesbrough had explained in detail, companies had to define this boundary for themselves by looking at the product and its changing environment. An invention that helped define a standard, platform or sector 'ecosystem' should be put in the public domain. An invention that added unique value to the company's product line should be locked up in the traditional IP fashion. The firm had to 'read' the market and their particular company's 'value-proposition' and make a case-by-case selection from a menu of open and proprietary options. A good IP manager was a good relativist about value. She knew when to build bridges and throw parties and when to cast out and sue people's pants off.

Corporate ecosystems

A major symptom of the shift can be seen in the IP clauses of the current generation of online course providers. There is so far nothing obviously transformative, pedagogically, about the technology over what was available in the 1990s, when a number of American universities offered either free online courses (a prominent example being MIT's Open CourseWare Consortium), or spun off online companies that were to turn a profit.

The 1990s' online commercial ventures attracted good faculty and financial backing at a range of well-known universities: New York University, University of British Columbia, University of Maryland, Temple University, and Columbia University, whose subsidiary, Columbia Digital Knowledge Ventures, created the best-known of these companies, called Fathom, to enter the potentially gigantic 'lifetime learning' market supposedly ready to avail itself of distance learning. All of these companies failed.

The post-mortems cited financial losses, which were considerable.⁶ But David F. Noble's careful analysis of the UCLA failure to launch its version, called Home Education Network, suggests that intellectual property conflicts played a role.⁷ Throughout its attempts to create and launch its courses, the UCLA company insisted on owning all IP created by instructors. Instructors who had initially expressed interest refused to agree to these clauses. Company managers were following the standard corporate practice of turning employee-created materials into company property, which was the orthodox goal of what was known at the time as 'knowledge management'. But faculty resisted. The combination of weak customer demand and struggles for IP ownership doomed the UCLA spin-off, and may have been a major factor in the demise of the other online firms.

In 2012, when MOOCs (Massive Open Online Courses) took the educational world by storm, their arrangements with the faculty course leaders reflected the shift towards open source in the for-profit world. Faculty participants cannot focus on personal returns to their IP, since they net little or nothing in personal income. The \$10,000–\$20,000 fee that one of the leading companies, Coursera, generally provides

the lead instructor is a stipend that the instructor may well spend entirely on production assistance.⁸ Instead, they are using their course to join a collaborative effort that is regularly described by its corporate sponsors as aiming at social transformation. A Coursera contract with a major research university that I have obtained suggests that in fact the IP agreements in this wave will be open – in the Microsoft sense.⁹

The contract rests on the principle of ‘non-exclusivity’, in which Coursera and the contracting university can each ‘host, distribute or otherwise make available’ ‘its Content’ or a third party’s content. ‘University grants to Company a *non*-exclusive, worldwide license to reproduce, distribute’ its Content (emphasis added). In the clause labelled ‘Ownership of Intellectual Property’, the paragraph on ‘Content’ reads as follows:

All right, title, and interest in and to Content created by Instructors or University and provided to Company under this Agreement and all Intellectual Property Rights relating thereto will remain with the applicable Instructor and university, except that all right, title, and interest in and to enhancements made by Company to the Content in the form of translations, adaptations, captioning, encoding, transcripts or video annotations produced in response to accessibility requests (*‘Content Enhancements’*) will be exclusively owned by Company.¹⁰

In contrast to online IP practice 10–15 years ago, the instructor will retain ownership of her intellectual property (if she can wrest it from her university, which is another matter). There is no appropriation of an author’s content by this outside corporation. Coursera does not raise classic red flags by taking the instructor’s IP as its own.

The second half of the sentence is just as important. All of Coursera’s contributions are owned by Coursera. This has a prima facie fairness: it seems to be ‘to each according to her contribution’, which is a common standard in business contracts. But since the product is a MOOC, which depends on ‘adaptations, captioning, encoding, transcripts’ and ‘video annotations’, the instructor whose content created the course cannot as a practical matter actually use the course independently of a partnership with Coursera. The individual retention of the content as such has little practical value. The commercial value of the individual intellectual property exists only in the context of the Coursera business ecology. This is considered normal in a knowledge economy.

This issue becomes clear in the next paragraph, on the Platform:



All right, title, and interest in and to the Platform, related documentation, the Company Website and all updates, modifications, enhancements, improvements, upgrades or corrections thereof, including any assessment features added thereto, and all related Intellectual Property Rights will be exclusively owned by the Company.

Although the University will retain sole ownership of ‘any software, interfaces or assessment features created or developed solely by University or an Instructor, and the Intellectual Property Rights thereto’, the paragraph goes on to grant Coursera a ‘royalty-free and non-exclusive license’ to use any of these University or Instructor-authored elements. You have your property, but we, Coursera, can use it free of charge. Coursera has set up the course IP as though it were non-rivalrous, in solid open source fashion. It will then commercialize this IP in its own financial interest.

The Coursera contract is an excellent illustration of what we might call *corporate open source* in the ‘open innovation’ era of the knowledge economy. Individual elements may be owned by company partners, and many elements of contracts may rest on non-exclusivity and joint ownership. Some patents are given away for free as ‘building blocks’ for the corporate ecology, as IBM famously did in 2005.¹¹ But these forms of ‘open’ do not prevent ownership of other elements of the overall product. They are a variant of the ‘permissive’ type of free software licence whose best-known example is the BSD licence family (Berkeley Software Distribution). One could take open code and combine it with proprietary material to create a proprietary product (with proper credit). The point for the firm is to own the elements that create the products’ commercial value within a larger product environment that ‘open’ helped create.

In the case of Coursera, the valuable asset is the platform and its international brand, which the company owns lock, stock and barrel. Few professors or universities will try to go it alone against a course platform or technical ecology that already has widespread acceptance. Once a company has established solid market share, even at a financial loss, new users will follow existing users onto a dominant platform. To own one’s intellectual property independently of the platform is to own something of next to no market value. At the same time, to share IP with the platform owner is to operate in practical subordination to the owners of the platform. This is how Microsoft set up its version of open or at least shared IP – as a way to entangle all potential competitors in alliances that create a *Microsoft* ecosystem. And such is increasingly the fate of open source in knowledge economies – to be blended with a proprietary platform over which the great majority of the players have no control.

Mind the gap

What kind of response does this call for? A crude summary of the story thus far might be, ‘Microsoft discovered that Foucault trumps Marx.’ But this is a false opposition. The corporate world was inadvertently borrowing from Marx’s insight that capitalism advances only by socializing labour-power in ways that create new quantities of surplus value, which capital has then to fight bitterly to appropriate. The battle continues as to who will decide how ‘Content’ will acquire both financial and social value and become public.

Much of the current interest in open source borrows from Marxian and autonomist traditions in Italy, France and elsewhere that have been working for years on post-industrial labour systems, focusing in particular on cognitive capitalism and immaterial labour.¹² I share this tradition’s interest, in Michael Hardt’s phrase, in the potential for immaterial goods ‘to escape the boundaries of property and become common’. Hardt continues with a staple aspect of both Marxian and open source accounts of value:

If you have an idea, sharing it with me does not reduce its utility to you but usually increases it. In fact, in order to realize their maximum productivity, ideas, images, and affects must be common and shared.¹³



The catch, as we have seen, lies in the meaning of ‘shared’. With the spread of corporate open source, ideas can be shared and owned, credited and appropriated, open and proprietary at the same time. This is a core lesson of the evolution of post-industrial economies, information and communications technology, Silicon Valley, the knowledge economy, and cognitive capitalism. There is a coexistence and stand-off between open source and corporate open source, between my right to create and use, and your right to own and charge through the platform.

Efforts to defend or establish various commons will need to confront, systematically, the symbiosis between open source and the proprietary platform. ‘Open’ cannot simply be asserted against a form of the proprietary that includes it. A similar dilemma faces the ‘right to the city’, or, in my research domain, what we might call the ‘right to the university’. While working within this paradoxical yet stable intellectual property system, how can the multitude not just evade the platform but create and control it?

Notes

1. For sample calculations, see Christopher Newfield, *Unmaking the Public University: The Forty-Year Assault on the Middle Class*, Harvard University Press, Cambridge MA, 2008, ch. 12. For the most recent statistics for the University of California, see *Technology Transfer Annual Report 2011*, www.ucop.edu/ott/genresources/documents/IASRptFY11.pdf; accessed 15 July 2013.
2. Marshall Phelps and David Kline, *Burning the Ships Transforming Your Company's Culture through Intellectual Property Strategy*, John Wiley, Hoboken NJ, 2009.
3. *Ibid.*, ch. 1.
4. The everyday use of both proprietary and open software is well documented. See, for example, Mark A. Lemley and Ziv Shafir, ‘Who Chooses Open Source Software?’, *78 University of Chicago Law Review* 139, 2011, <http://lawreview.uchicago.edu/sites/lawreview.uchicago.edu/files/uploads/78.1/78-1-Open-Source%20Software-Lemley%20%26%20Shafir.pdf>.
5. For a thorough analysis of the social dimensions of open source development practices, see Steven Weber, *The Success of Open Source*, Harvard University Press, Cambridge MA, 2005.
6. See, for example, Goldie Blumenstyk, ‘Temple U. Shuts Down For-Profit Distance-Education Company’, *Chronicle of Higher Education*, 20 July 2001, <http://chronicle.com/article/Temple-U-Shuts-Down/23877>; Scott Carlson, ‘After Losing Millions, Columbia U. Will Close Its Online-Learning Venture’, *Chronicle of Higher Education*, 7 January 2003, <http://chronicle.com/article/After-Losing-Millions/110813>.
7. David F. Noble, *Digital Diploma Mills: The Automation of Higher Education*, Monthly Review Press, New York, 2001.
8. Cathy N. Davidson, ‘Clearing Up Some Myths About MOOCs | HASTAC’, *HASTAC*, 11 June 2013, <http://hastac.org/blogs/cathy-davidson/2013/06/11/clearing-some-myths-about-moocs>.
9. The Coursera contract is similar to the document that *Inside Higher Ed's* Ry Rivard obtained through a public records request: ‘Amendment to the Online Courses Hosting Agreement Between Georgia Tech Research Corporation and Udacity, Inc.’, <https://s3.amazonaws.com/s3.documentcloud.org/documents/703593/udacity-gtrc-amendment-5-13-2013.pdf>.
10. ‘Online Course Hosting and Services Agreement’, document in author’s files; emphasis in original.
11. Steve Lohr, ‘I.B.M. Hopes to Profit by Making Patents Available Free’, *New York Times*, 11 April 2005, www.nytimes.com/2005/04/11/technology/11ibm.html.
12. One particularly good treatment appeared in another book in 2003, André Gorz, *L'immatériel: connaissance, valeur et capital*, Galilée, Paris, 2003. For a helpful synthesis of core elements of the Italian tradition, see Gigi Roggero, ‘Five Theses on the Common’, *Rethinking Marxism: A Journal of Economics, Culture & Society*, vol. 22, no. 3, July 2010, pp. 357–73, as well as other articles in this special issue on ‘The Common and the Forms of the Commune’.
13. Michael Hardt, ‘The Common in Communism’, *Rethinking Marxism*, vol. 22, no. 3, July 2010, pp. 346–56, www.informaworld.com.proxy.library.ucsb.edu:2048/smpp/section?content=a926294138&fulltext=713240928, accessed 16 September 2010.