

The Source in Free Culture[§]

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In the recent years the production of free / open source software has become a powerful metaphor for collaborative production of a wide range of cultural goods. The term “open source” is increasingly used as a synonym for “open” and “free.” It is often applied to products that have little to do with *source code*. We often hear of “open source text books,” “open source music,” “open source cinema.” Such extension of the label “open source” has been beneficial as it helped the formation of communities dedicated to production of free culture by making it easier to imagine the success of such efforts by analogy with the success of open source software. This extension, however, masks important differences between production of free / open source software and the networked production of other cultural goods. The historic success of open source has much to do with the technical nature of source code. Scholars and advocates of free culture must consider the extent to which other cultural goods do or do not share in this nature.¹

Free / open source software has achieved remarkable success. It now extends to countless domains and is the *dominant* form of production for many kinds of software. Many individuals and businesses can rely on free software for a large proportion of their software needs. Some use free software exclusively. While some accounts of free software present it as a *low cost* alternative to proprietary software, the desire to save money on software licenses can hardly explain why Linux is used in most of the world’s fastest supercomputers.² In many domains free software is clearly chosen for reasons other than price. While some of the credit for this success is due to academics and hobbyists, free software is also increasingly produced by profit-oriented corporations. According to Kroah-Hartman *et al* (2009), no less than 70% of the Linux kernel development is now funded by such companies.

The attempts to provision other kinds of cultural goods under the same terms have had some success in the recent years, with the Wikipedia as the most notable example. This success, however, is so far bleak in comparison with that of free software. While much content is available on the Internet for free, a grim fate awaits an individual who decides to only read books that have a license allowing free *redistribution*, not to mention creation of derived works. This could be a matter of time – perhaps open literature has simply not had a chance to catch up. It may, however, have to do with the important differences between software and literature.

§ The author thanks Michael Schwarz for his comments in preparation of this essay.

1 Oram (2009) and Cheliotis (2009) also discuss the difference between free / open source software and free culture. The short length of this essay does not allow me to discuss the differences between their arguments and mine, but a reader interested in this topic should look at those two papers.

2 According to <http://www.top500.org/> some form of Linux is used by all of this year’s ten fastest supercomputers, and by nine of the next ten.

In a recent article, Michael Schwarz and I explore some of the economic factors enabling public provision of software, showing how such factors have played out over the half-century history of software development (Schwarz & Takhteyev, forthcoming). Instead of explaining the success of free software in terms of the general principles of networked production, we look at the long term factors that have motivated the repeated attempts at the public provision of software over many decades, since the earliest days of computing. Many of such factors are specific to software and may have no equivalent for free culture.

One of the most important factors has to do with the “hold-up” problem inherent in use of software. To get any real benefits from software, users often must make long-term complimentary investments. For example, a company acquiring new payroll software may have to invest in training its personnel, while a user of a web server may have to purchase compatible hardware and develop additional software to link the web server with its business processes. For many kinds of software such investments can be quite substantial and may take a long time to recoup. Continued use of the software – and hence the ability to recoup the complementary investments – often requires acquiring modified versions of the software.

If the original vendor of the software has a monopoly on making changes by virtue of their possession of the *source code*, they have an opportunity to “hold up” the user, demanding a high price. The unpredictable nature of the required future modifications may make it hard to solve this problem through a prior contract. Anticipation of hold-up may lead the potential user to either forgo the purchase of the software or to reduce complementary investments, which may dramatically diminish the utility of the software.³ Writing software in-house often becomes an attractive alternative to acquiring software without rights of modification. Since such in-house software often cannot be easily sold to other potential users (due to *their* hold-up concerns) the producer may choose to share it freely, with the hope of attracting contributions and increasing the beneficial network effects.

The situation is quite different for many forms of cultural goods. Books, music and film typically offer their users guaranteed value that does not depend on future cooperation of the vendor. Many such products can be used continuously without a need for unforeseeable modifications. For example, physical books do not need to be “patched” against the latest security exploits. The vendor often also loses control of the work after the sale. Finally, for many such products the user can make modifications privately without a need for any “source.”

Even works covered by DRM schemes, however, typically offer certain guaranteed utility. While DRM reduces the expected life of the product and what can be done with it, it leaves the user with a known value. Cultural products are often consumed quickly and DRM cannot take away the pleasure of a book that has already been read. While a user may see some *additional* value in being able to read a book a second time later, they are often willing to accept the shorter expected use of the product for a reduction in price. They do, after all, often choose to *rent* books and films.

Finally, cultural goods rarely require long-term relationship-specific investments. While

3 For a general discussion of inefficiencies due to hold-up see Williamson (1975, 1979), Klein, Crawford and Alchian (1978) and Hart and Moore (1990).

people may spend a lot of money on audio and video equipment (and more recently on electronic book readers), they do not make such investments for the sake of any one work. A sudden disappearance of a song would not destroy the value of an iPod. Even if Apple were to suddenly disable *all* the songs covered by its FairPlay DRM scheme, the users' losses would be limited to the price they paid for the songs. They will continue to enjoy their iPods.⁴

We must also consider the extent to which those arguments apply to organizations rather than just individuals. Organizations often need software, face the risk of hold-up and make a decision to write the software in-house. They usually do not face the need to produce their own cultural goods to avoid hold-up. Even more importantly, hold-up affects the producers of complementary products, as it discourages purchase of such products. Manufacturers of computer hardware, for example, have an interest in providing their users with free software *not only* because of simple complementarity effects (a reduction of price in a complementary good increases demand), but also because free software gives the users additional guarantee that their hardware investment would be recouped. In case of cultural goods, makers of complementary goods may have an interest in availability of low-cost works, but this interest would be limited to simple complementarity. This difference may be one of the reasons why makers of TV screens do not provide free movies.⁵

This reasoning should not imply that free culture is not important. Free circulation of ideas and “remixability” of culture is essential not only for cultural innovation but often also for social justice. Rather, the analysis presented above suggests that free culture faces a more serious challenge under the current copyright regime than does free software – a fact that deserves attention of advocates and scholars of free culture. In the case of software, a substantial number of users have individual reasons for choosing free software *apart from any differences in price*. For many other cultural goods, however, consumers have few individual incentives to seek out remixable works. Few people would abstain from watching a Disney cartoon just because it cannot be legally remixed. Few would avoid reading *Gone with the Wind* because its license might prevent publication of critical derived works such as *The Wind Done Gone*. Even the most ardent supporters of free culture stop short of avoiding use of cultural works that they are not allowed to modify or redistribute. In many cases, the collective motivations may also be weak: the remixers and their audiences may be members of an entirely different community, whose interests and concerns – for example, about the problematic representation of race relations in Margaret Mitchell's book – could be rather foreign to the people who purchase the original work. Producers of complementary goods may also lack the incentives to support production of free culture. The most obvious implication of this is that while free software has managed to develop a system of private institutions and to thrive under the current legal regime, the success of free culture may, after all, require a change in the law.

4 In this sense, Amazon's use of DRM with Kindle is different from Apple's use of FairPlay in an important way. Since Amazon controls what can be loaded on a Kindle, the device does represent a relationship-specific investment. The users therefore must trust Amazon to continue supplying Kindle books at reasonable prices.

5 Note that simple effect of complementarity is generally not sufficient to encourage a subsidy. While makers of TVs may have an interest in availability of free movies, the cost of producing such movies would likely surpass the additional revenue they would get from selling more TVs.

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