

# Free Licenses & The Intellectual Commons

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# Table of Contents

Introduction.....	3
What Is a Commons?.....	3
Background.....	4
Information is non-scarce.....	5
Innovation Always Builds on the Past.....	6
.....	6
Freedom Should Be the Norm.....	6
"The Tragedy of the Commons" .....	7
The Software Commons.....	8
Default Restrictions in Copyright Law.....	8
The Academic Commons.....	8
Copyleft.....	9
Fragmentation of the Commons.....	10
Conclusions.....	11
Bibliography.....	13

# Introduction

In this essay I am going to present the idea of an intellectual, or creative, commons. My main reason for this choice of topic is that I feel that this is something that most people do not think about.<sup>1</sup> When we think about copyright, most of us almost instinctively identify with *the author*. People do not seem to see the other side, the restrictions placed on everyone (including authors). In practice, many people simply disregard restricting laws and licensing terms and copy whatever they want anyway. However, few seem to question the rules themselves.

Copyright, and similar rights (patents), are a bargain with two parties. One party (the public) has to give up some rights in order to give them to the other party (rights holders). For most, if not all, people this means giving up more than they receive. Even the most prolific writers are likely to read more than they write during a lifetime.

Copyright is often portrayed as an incentive to create. However, if copyright is used as an incentive it is absolutely crucial that it is not too restrictive. Otherwise it will make creativity impossible. All creative work draws on previous works. For this reason, there needs to be a commons to recycle from, a large body of previously created works that can be used as building blocks for new works. This can be achieved under copyright if

1. copyrights are for a limited time and eventually expire or
2. copyrights are narrowly defined and one is allowed to build upon the works of others even if they are under copyright.

In other words, there must be *a commons* to build upon. Alternatively, such a commons can be deliberately constructed through licensing, as done in the free software community.

## ***What Is a Commons?***

The word commons is used to describe a shared resource. Traditionally, this might have meant a piece of land that was not owned by any one individual but used by a whole community, such as field for cattle grazing.

An intellectual, or creative, commons is an intangible resource. The works of Shakespeare, for example, can be said to exist in a commons. Any actual books have owners, of course, but the works *as such* are free. This is due to the fact that copyrights eventually expire. 70 years after the death of the author, the works become part of what is known as *the public domain*. They are free for anyone to "rip, mix and burn" as they see fit.

Such a commons can also be constructed by liberal licensing of copyrighted materials. The best example of this is the free software movement. The *GNU General Public License (GPL)* places a copyrighted work in a commons and keeps it there by means of copyleft (see below).

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<sup>1</sup> The fact that I thought I could quickly jot down something that will look like an essay on this topic was not entirely irrelevant . . .

# Background

First, we need to establish some of the fundamental facts that serve as the basis for this essay. When intellectual property is mentioned, e.g. in the news, we often hear about “theft” on the internet. People are “stealing” music by downloading it from the internet without paying for it. Obviously, the logical response to this behaviour is to restrict these possibilities as much as possible with laws and technology that make copying difficult and keep track of what people do.

But is this the true picture? If we look at it from the other side, should not free speech be the rule in a democratic society? Copyright limits the free flow of ideas and should be viewed as an exception. With this in mind, it is no longer a question only about whether it should be possible to download unauthorised copies of the latest hit songs or not. It is also about the right to speak your mind and the possibilities for future creative work. In the words of Lawrence Lessig, “[c]reativity and innovation always builds on the past.”<sup>2</sup> If we take away the rights and possibilities to build on previous works we will kill creativity. If we are restricted, by laws or by technology, we will be unable to create.

Conventionally when intellectual property is eulogised, it is on the basis of the protection of the creator, the owner of such knowledge which is made property. Their rights are protected so as to act as a general spur to innovation and socially useful activity. Arguments about just desert, and selfhood are allied to the need for social efficiency in the allocation of resources. However, Jeremy Waldron argues all this talk of property “sounds a lot less pleasant if ... we turn the matter around and say we are imposing *duties*, restricting *freedom* and inflicting *burdens* on certain individuals for the sake of the greater social good”<sup>3</sup>

In many traditions, copyright is perceived as a bargain between authors and society. The general public gives up some of their natural freedoms in return for more creative work being done. In the USA, for example, this is the very foundation of copyright.

The Congress shall have power . . . To *promote the progress* of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries<sup>4</sup>

My main concern is that traditional freedoms are being taken away to stop this perceived “theft”. The scope of “intellectual property” can be greatly increased by the use of DRM technology and laws that protect it.<sup>5</sup> For example, when e-books become commonplace, previously unregulated uses of books, such as lending, reselling or even reading, will suddenly become subject to the copyright holders approval.

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2 Lessig, Lawrence, Keynote from OSCON 2002 – transcript available at <http://www.oreillynet.com/lpt/a/2641>

3 May, Christopher, “Digital rights management and the breakdown of social norms” *First Monday*, volume 8, number 11 (November 2003), URL: [http://firstmonday.org/issues/issue8\\_11/may/index.html](http://firstmonday.org/issues/issue8_11/may/index.html) (italics in source)

4 Constitution of the United States of America, Article I, Section 8. (my italics) Available online: <http://www.law.cornell.edu/constitution/constitution.articlei.html#section8>

5 DRM is short for *Digital Restrictions Management* or *Digital Rights Management*, depending on your point of view. Laws such as the American *Digital Millennium Copyright Act* and the EU Copyright Directive *2001/29/EC* (Swedish implementation proposed in *Ds 2003:35*) include provisions that prohibit bypassing DRM.

At no time, however, until the enactment of the access-control anticircumvention provisions of the DMCA, did congress or the courts cede to copyright owners control over looking at, listening to, learning from, or *using* copyrighted works.<sup>6</sup>

## ***Information is non-scarce***

Information can be copied infinitely at a marginal cost approaching zero and this cost can be borne by the copier. This becomes especially clear when it comes to information in digital form but, in theory, it applies to all information.

If nature has made any one thing less susceptible than all others of exclusive property, it is the action of the thinking power called an idea, which an individual may exclusively possess as long as he keeps it to himself; but the moment it is divulged, it forces itself into the possession of everyone, and the receiver cannot dispossess himself of it. Its peculiar character, too, is that no one possesses the less, because every other possesses the whole of it. He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me. That ideas should freely spread from one to another over the globe, for the moral and mutual instruction of man, and improvement of his condition, seems to have been peculiarly and benevolently designed by nature, when she made them, like fire, expansible over all space, without lessening their density at any point, and like the air in which we breathe, move, and have our physical being, incapable of confinement or exclusive appropriation. Inventions then cannot, in nature, be a subject of property.<sup>7</sup>

As Jefferson so eloquently explains, information is not a scarce resource. If I know something and I tell it to you, you know it *as well*. I still know it. If I give you my book I cannot read it myself but the actual *information* can be shared. If I read the book and then lend it to you we both get access to the information contained in the book. The intangible contents of the book is not intrinsically linked to the tangible object, i.e. the book. This also means that each additional copy of the book does not have to cost the author anything. There are, of course, printing costs etc associated with the printing of books. But if I copy a book myself and I pay for the paper and ink etc, my copy does not cost the author anything. In fact the author will, in most cases, not even be aware that my copy exists.

”[W]hether you run or change a program I wrote affects you directly and me only indirectly. Whether you give a copy to your friend affects you and your friend much more than it affects me. I shouldn't have the power to tell you not to do these things. No one should.”<sup>8</sup>

Or in the words of Eben Moglen, ”when everyone can possess every intellectual work of beauty and utility - reaping all the human value of every increase of knowledge - at the same cost that any one person can possess them, it is no longer moral to exclude.”<sup>9</sup>

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6 Litman, Jessica *Digital Copyright* p.176 (italics in source)

7 Thomas Jefferson, quoted in Barlow, John Perry, ”The Economy of Ideas - A framework for patents and copyrights in the Digital Age. (Everything you know about intellectual property is wrong.)” *Wired Magazine* Issue 2.03 - Mar 1994, available online: [http://www.wired.com/wired/archive/2.03/economy.ideas\\_pr.html](http://www.wired.com/wired/archive/2.03/economy.ideas_pr.html)

8 Stallman, Richard ”Why Software Should Not Have Owners” *Free Software, Free Society: Selected Essays of Richard M. Stallman*, Boston 2002 p. 47. Also available online: <http://www.gnu.org/philosophy/why-free.html>

9 Moglen, Eben ”The dotCommunist Manifesto” <http://moglen.law.columbia.edu/publications/dcm.html>

## ***Innovation Always Builds on the Past***

Isaac Newton reportedly once said that "If I have seen farther than others, it is because I was standing on the shoulder of giants." This illustrates clearly how creativity and innovation always builds on the past. Creative works are not created in a vacuum. Thus, we need a commons to build upon and the absence of a commons threatens creativity.

The most obvious example, in this context is, of course, the free software community and the GNU project. The existing commons of free programs makes it easier to write new programs by modifying existing programs or reusing parts of them. The *GNU General Public License* (or other copyleft licenses, see below) then ensures that the modified versions get contributed back to the free software commons. Thus, the more the commons is used, the larger and more useful it becomes.

Other examples of works that build on other works include, for example, films based on books. If I want to make a film, I can use the commons of classic literature for my storyline. I can base the film on a Shakespeare play, an ancient Greek tragedy or the Bible. All of these works are in the *public domain* and I am free to use them in this way. However, if I would like to base my film on *The Lord of the Rings* or *Harry Potter and the Philosopher's Stone*, I would need to get permission from someone since, unlike Shakespeare and the ancient Greeks, neither J.R.R. Tolkien nor J.K. Rowling, have been dead for seventy years.<sup>10</sup>

Most music produced nowadays uses *samples* in some way. Samples are sound recordings that are replayed to create new music, from the sampled drum sounds in a drum machine to the recycling of entire "loops" of music. In this way, old recordings of music (and other sounds) are used to create new audio productions. Similarly, a DJ can mix two songs together and rap over them. However, copyright, in most cases, limits the available source material.<sup>11</sup> When copyright is seen as a way to encourage creativity, this effect must be included in the evaluation of its effectiveness.

## ***Freedom Should Be the Norm***

The freedom to think, say or write whatever one chooses is fundamental in a free society. Intellectual property rights are an exception and, as such, they can only be accepted to a certain extent.

The desire to protect authors from "pirate" publishers who would print and sell books without paying the authors is often highlighted in debates over copyright. Copyright can prevent this. However, as pointed out above, this comes at a price. Furthermore, copyright cannot ensure that authors get paid. They still have to write something that, at least some, people want and are willing to pay for. The copyright to a work that no one wants has no financial value. What copyright can do is to prevent, to a certain extent, the above mentioned situation where a rouge publisher sells the work without paying the author.

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<sup>10</sup> Tolkien died in 1973 and Rowling is alive at the time of writing.

<sup>11</sup> There are other so called "related rights" involved as well but for our purposes here, it is enough to know that intellectual property rights control the reuse of audio.

In this context I would like to point out that this system, however reasonable it may seem, is not a law of nature. It is a deliberate societal construction. The USA, for example, for a long time choose not to recognise foreign copyrights. This was perfectly consistent with the idea of copyright as a way of promoting progress. Not granting foreign authors a copyright to their works meant that those works could be freely distributed in the USA, which doubtless led to a higher level of literacy.

## ***"The Tragedy of the Commons"***

"The tragedy of the commons" is a well known concept in economics. The idea is that the individual's benefit of over-exploiting a common resource outweighs his loss, even if the loss to the community is great. Thus, in this theory, a commons is doomed.

The tragedy of the commons develops in this way. Picture a pasture open to all. . .

As a rational being, each herdsman seeks to maximize his gain. Explicitly or implicitly, more or less consciously, he asks, "What is the utility *to me* of adding one more animal to my herd?" This utility has one negative and one positive component.

1) The positive component is a function of the increment of one animal. Since the herdsman receives all the proceeds from the sale of the additional animal, the positive utility is nearly +1.

2) The negative component is a function of the additional overgrazing created by one more animal. Since, however, the effects of overgrazing are shared by all the herdsman, the negative utility for any particular decision-making herdsman is only a fraction of -1.

Adding together the component partial utilities, the rational herdsman concludes that the only sensible course for him to pursue is to add another animal to his herd. And another; and another. . . . But this is the conclusion reached by each and every rational herdsman sharing a commons. Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit--in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all.<sup>12</sup>

This is, obviously, not an undisputed theory, but it seems to have a strong following among economists. However, this theory is completely inapplicable to intangibles. First of all, information is non-rivalrous. Its value is not automatically decreased by increased use. Thus, this is not "a world that is limited". If we consider the previously mentioned commons consisting of free software, increased use actually increases the value of the commons. There are several reasons for this.

Eric Raymond points out that "[u]sers are wonderful things to have, and not just because they demonstrate that you're serving a need, that you've done something right. Properly cultivated, they can become co-developers."<sup>13</sup> And when they become co-developers, they contribute back to the commons.

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12 Hardin, Garret, "The Tragedy of the Commons" *Science*, Volume 162, Number 3859, Issue of 13 Dec 1968, pp. 1243-1248.

13 Raymond, Eric S. *The Cathedral and the Bazaar* Online version: <http://www.catb.org/~esr/writings/cathedral-bazaar/cathedral-bazaar/ar01s03.html>

In fact, they are often *required* by licenses to contribute their changes back to the commons (if they publish them at all). The commons is, thus, enlarged through copyleft.

Once could also see the intellectual commons as a network economy. "The new economy" is sometimes described as a *network economy*.<sup>14</sup> Shapiro and Varian explain this concept thoroughly in their book *Information Rules*. Markets can be divided into "networks" like the network of Apple users or the network of Microsoft Windows users. When an individual is choosing which "network" to join, or switch to, the larger network will appear more beneficial, even if the other one is technically superior. Growth of the network benefits all its users.

## The Software Commons

To illustrate things a bit further, I will give a few examples of what can be seen as three different types of software.<sup>15</sup> I will look at proprietary (or "non-free") software, software under an academic license and software under a reciprocal license, such as the GNU GPL. I will point out the differences in terms of the possibilities to make derivative works from these different classes of software.

### ***Default Restrictions in Copyright Law***

By default, copyright law restricts what one individual is allowed to do with the works of another individual. Just as I cannot republish a copyrighted book without the consent of the copyright holder, I cannot redistribute software without a license from the copyright holder. This applies even if I have created a "derivative work" that clearly would add value to the work. As long as my work incorporates another work, I need a license for that other work. For software, there is also the additional question of source code availability. The fact that source code is distributed or not distributed does not affect the legal situation, but it is (more or less) required to *enable* a third party to make useful derivative works.

Thus, even if I manage to create a modified version of Microsoft Windows, I am not allowed to distribute my new version without Microsoft's permission. This software is not a part of the commons. I cannot use it to create new programs.

### ***The Academic Commons***

If the original work is in the the public domain (which is highly unlikely for software but a possibility for other works) or has been released under a more permissive license, the work can be a part of a commons. These licenses include the "academic" family of licenses, such as the BSD and X11 licenses. These licenses permit the licensee to do almost anything with the licensed work.

In this situation, derivative works created from the original work are allowed but the author of such derivative works may elect to prevent derivative works of *his* works. Apple's MacOS X is based on FreeBSD. FreeBSD is free software released into the commons under a BSD license. However, nothing in such licenses prevents a license from keeping derivative works proprietary. Thus, Apple is free to

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<sup>14</sup> See for example Shapiro/Varian – *Information Rules*

<sup>15</sup> These ideas could be applied to any kind of information, however, not just computer software.

create a derivative work of FreeBSD, label it Mac OS X and keep it proprietary. In this case, a licensee is allowed to draw from the commons without contributing anything back to it.<sup>16</sup>

Slightly simplified, the academic licenses permit the licensee to do anything with the licensed software. It is, therefore, entirely up to the licensee to decide whether any improvements should be contributed back to the commons or not.

## **Copyleft**

The commons of "academic" software is, thus, dependent on voluntary contributions of improvements. The existing commons will remain but there are no guarantees that there will be new software added to it. The authors of new and improved versions may just as easily choose not to contribute their improvements back to the commons. *Copyleft* is intended to solve this problem. Copyleft creates and *protects* a commons.

The most important copyleft license is doubtless the *GNU General Public License*. Works licensed under this license include anything from operating system kernels (Linux) to screensavers. These works are still free in the sense that the licensee is allowed to use them for any purpose, including the creation of derivative works. However, any derivative works must either be distributed under the same license or not at all. Section 2(b) of the GNU GPL reads:

You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties *under the terms of this License*.<sup>17</sup>

Eben Moglen explains:

Section 2(b) of the GPL is sometimes called "restrictive," but its intention is liberating. It creates a commons, to which anyone may add but from which no one may subtract. Because of §2(b), each contributor to a GPL'd project is assured that she, and all other users, will be able to run, modify and redistribute the program indefinitely, that source code will always be available, and that, unlike commercial software, its longevity cannot be limited by the contingencies of the marketplace or the decisions of future developers.<sup>18</sup>

These works thus form a commons of software that anyone is free not only to use but to improve. However, unlike the commons of software under academic licenses the GPL commons *requires* that you contribute your improvements back into the commons. The preservation and growth of the commons is thereby secured.

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16 Please note that this is merely one example and I have no idea about whether Apple contributes anything (money, code) back or not. The point is simply that they are not required to.

17 *GNU General Public License* <http://www.gnu.org/copyleft/gpl.html> (italics mine)

18 Moglen, Eben "Anarchism Triumphant: Free Software and the Death of Copyright" First Monday 1999 [http://www.firstmonday.org/issues/issue4\\_8/moglen/](http://www.firstmonday.org/issues/issue4_8/moglen/)

## ***Fragmentation of the Commons***

Unfortunately, the use of incompatible licenses can split the commons into several separate commonses. The above mentioned *GNU General Public License*, for example, requires not only that derivative works be free software according to the *Free Software Definition*.<sup>19</sup> It requires them to be distributed "under the terms of this License" (§2(b)), i.e. they have to be licensed under the GPL. This requirement is not unique for the GPL. The *Mozilla Public License (MPL)*, for example, has a similar requirement, elegantly paraphrased by Lawrence Rosen:

*If you create and distribute a Modification to one of the files containing Original Code or previous Modifications, or create and distribute a new file containing Original Code or previous Modifications, those files must be released as Modifications under the same MPL license.*<sup>20</sup>

These requirements to use the same license for derivative works have the effect of splitting the commons. There is one GPL commons and *another* MPL commons. Anyone writing a new free program has to choose which commons it will belong to. This choice is probably going to be based on what license the existing parts he intends to recycle are under. In any case, he cannot combine parts from the two groups since that would require him to violate one of the licenses.<sup>21</sup>

In the words of Lawrence Rosen:

The proliferation of open source licenses creates a serious problem: It risks additional fragmentation of the public commons of free software. While software under some academic licenses can be combined without restriction, combining software under different reciprocal licenses—particularly the more complex reciprocal licenses used by large companies—requires that lawyers or skilled licensing professionals review each of the licenses for incompatibilities.<sup>22</sup>

Free software development is often a grassroots activity where "lawyers or skilled licensing professionals" simply are not available. The multitude of reciprocal licenses therefore, in practice, splits the commons.

So, how can this be avoided? The optimal way would be for everyone to use the same license (i.e. the GPL). At the very least, one should avoid the creation of new reciprocal licenses that are incompatible with the existing ones. Academic licenses are generally compatible with the reciprocal licenses, since they allow the licensee to change the terms of distribution. Thus, BSD-licensed code can, typically, be included in a GPL-licensed program. However, the opposite is not true, since the GPL requires you to use the same license for derivative works. Furthermore, reciprocal licenses are typically incompatible

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19 <http://www.gnu.org/philosophy/free-sw.html>

20 Rosen, Lawrence *Open Source Licensing: Software Freedom and Intellectual Property Law*, Prentice Hall, Upper Saddle River, 2004 p. 143

21 This assumes that he writes *one* program. It may, of course, be possible to split his work into separate programs, which may enable him to satisfy the requirements of both licenses. However, if he has to do so purely for licensing reasons, that in itself is a negative effect of the divided commons.

22 Rosen p. 235

with each other, since they require redistribution under *the same* license.

Another way to avoid this problem could be dual licensing. The MPL, for example, has a special section (13) about this:

Initial Developer may designate portions of the Covered Code as "Multiple-Licensed". "Multiple-Licensed" means that the Initial Developer permits you to utilize portions of the Covered Code under Your choice of the or the alternative licenses, if any, specified by the Initial Developer in the file described in Exhibit A.<sup>23</sup>

If, for example, the alternative license is the GPL, the incompatibility is eliminated for that work. A licensee can choose to abide by the terms of the MPL *or* the GPL. This kind of dual licensing is possible in most cases. However, only the copyright holder is allowed to re-license a work, so this may not be an option for some existing projects with complicated ownership structures.

Another way to avoid some of these issues is to issue an exemption. The MySQL database is currently licensed under the GNU GPL.<sup>24</sup> The recent change from the previously used *GNU Lesser General Public License (LGPL)* caused some confusion in the free software world, especially with regard to some PHP-related projects.<sup>25</sup> To solve this problem, MySQL AB created the *FLOSS License Exception v0.2*.<sup>26</sup> The stated intent is to allow

specified Free/Libre and Open Source Software ("FLOSS") applications to be able to use specified GPL-licensed MySQL client libraries (the "Program") despite the fact that not all FLOSS licenses are compatible with version 2 of the GNU General Public License (the "GPL").<sup>27</sup>

The Exception lists common licenses that conform to the *Free Software Definition* or the *Open Source Definition* and grants additional rights to eliminate the incompatibilities.<sup>28</sup>

## Conclusions

To avoid incompatibilities and maximise the size and usefulness of the free software commons, it is important to carefully consider the choice of license for a project. Because of the "network effects", the largest commons is likely to be the most useful one to join and the one that will grow the most. In any case, choosing an existing, standard, free software license ensures that the project will belong to a commons. Creating a new reciprocal license also creates a new separate commons and the licensor will need to attract participants to that commons and this creates wasteful competition and increased

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<sup>23</sup> *Mozilla Public License Version 1.1*, Section 13 - <http://www.mozilla.org/MPL/MPL-1.1.html>

<sup>24</sup> It is, in fact also available under the *MySQL Commercial License*, but that is not important for our discussion. <http://www.mysql.com/company/legal/licensing/commercial-license.html>

<sup>25</sup> <http://www.gnu.org/copyleft/lesser.html>

<sup>26</sup> <http://www.mysql.com/company/legal/licensing/foss-exception.html>

<sup>27</sup> *ibid*

<sup>28</sup> <http://www.gnu.org/philosophy/free-sw.html> and <http://www.opensource.org/docs/definition.php>

fragmentation.

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