12.2: Intellectual Property

One of the domains that digital technologies have deeply impacted is the domain of intellectual property. Digital technologies have driven a rise in new intellectual property claims and made it much more difficult to defend intellectual property.

Merriam-Webster Dictionary defines Intellectual property as “property (as an idea, invention, or process) that derives from the work of the mind or intellect. This could include song lyrics, a computer program, a new type of toaster, or even a sculpture.

Practically speaking, it is challenging to protect an idea. Instead, intellectual property laws are written to protect the tangible results of an idea. In other words, just coming up with a song in your head is not protected, but if you write it down, it can be protected.

Protection of intellectual property is important because it gives people an incentive to be creative. Innovators with great ideas will be more likely to pursue those ideas if they clearly understand how they will benefit. In the US Constitution, Article 8, Section 8, the authors saw fit to recognize the importance of protecting creative works:

Congress shall have the 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.

An important point to note here is the “limited time” qualification. While protecting intellectual property is important because of its incentives, it is also necessary to limit the amount of benefit that can be received and allow the results of ideas to become part of the public domain.

Outside of the US, intellectual property protections vary. You can find out more about a specific country’s intellectual property laws by visiting the World Intellectual Property Organization.

There are many intellectual property types such as copyrights, patents, trademarks, industrial design rights, plant variety rights, and trade secrets. In the following sections, we will review three of the best-known intellectual property protection: copyright, patent, and trademark.

12.2.1: Copyright

Copyright is the protection given to songs, movies, books, computer software, architecture, and other creative works, usually for a limited time. An artist can, for example, sue if his painting is copied and sold on T-shirts without permission. A coder can sue if another Web developer verbatim takes her code. Any work that has an “author” can be copyrighted. It covers both published and unpublished work. Under the terms of copyright, the author of the work controls what can be done with the work, including:

- Who can make copies of the work?
- Who can create derivative works from the original work?
- Who can perform the work publicly?
- Who can display the work publicly?
- Who can distribute the work?

Often, work is not owned by an individual but is instead owned by a publisher with whom the original author has an agreement. In return for the rights to the work, the publisher will market and distribute the work and then pay the original author a portion of the proceeds.

Copyright protection lasts for the life of the original author plus seventy years. In the case of a copyrighted work owned by a publisher or another third party, the protection lasts for ninety-five years from the original creation date. For works created before 1978, the protections vary slightly. You can see the full details on copyright protections by reviewing the Copyright Basics document available at the US Copyright Office’s website. See also the sidebar “History of Copyright Law.”

Example:

The author of a book about Dr. Seuss sought to reproduce several Dr. Seuss images under fair use doctrine to analyze the imagery. However, the company that owns the Dr. Seuss intellectual property sued for copyright infringement and won, preventing use of the images.

12.2.2: Obtaining Copyright Protection

In the United States, copyright is obtained by the simple act of creating the original work. In other words, when an author writes down that song, makes that film, or designs that program, he or she automatically has the copyright. However, it is advisable to register for a copyright with the US Copyright Office for a work that will be used commercially. A registered copyright is needed to bring legal action against someone who has used a work without permission.

12.2.3: First Sale Doctrine

If an artist creates a painting and sells it to a collector who then, for whatever reason, proceeds to destroy it, does the original artist have any recourse? What if the collector, instead of destroying it, begins making copies of it and sells them? Is this allowed?

The protections that copyright law extends to creators have an important limitation. The first sale doctrine is a part of copyright law that addresses this, as shown below:

The first sale doctrine, codified at 17 U.S.C. § 109, provides that an individual who knowingly purchases a copy of a copyrighted work from the copyright holder receives the right to sell, display or otherwise dispose of that particular copy, notwithstanding the interests of the copyright owner.

So, in our examples, the copyright owner has no recourse if the collector destroys her artwork. But the collector does not have the right to make copies of the artwork.

12.2.4: Fair Use

Another important provision within copyright law is that of fair use. Fair use is a limitation on copyright law that allows for protected works without prior authorization in specific cases. For example, if a teacher wanted to discuss a current event in her class, she could pass out copies of a copyrighted news story to her students without first getting permission. Fair use allows a student to quote a small portion of a copyrighted work in a research paper.

Unfortunately, the specific guidelines for what is considered fair use and what constitutes copyright violation are not well defined. Fair use is a well-known and respected concept and will only be challenged when copyright holders feel that their work's integrity or market value is being threatened. The following four factors are considered when determining if something constitutes fair use 9 :

- The purpose and character of the use, including whether such use is of commercial nature or is for nonprofit educational purposes;
- The nature of the copyrighted work;
- The amount and substantiality of the portion used concerning the copyrighted work as a whole;
- The effect of the use upon the potential market for, or value of, the copyrighted work.

If you are ever considering using a copyrighted work as part of something you are creating, you may be able to do so under fair use. However, it is always best to check with the copyright owner to ensure you are staying within your rights and not infringing upon theirs.

Sidebar: The History of Copyright Law

As noted above, current copyright law grants copyright protection for seventy years after the author's death or ninety-five years from the date of creation for a work created for hire. But it was not always this way.

The first US copyright law, which only protected books, maps, and charts, protected for only 14 years with a renewable term of 14 years. Over time, copyright law was revised to grant protections to other forms of creative expressions, such as photography and motion pictures. Congress also saw fit to extend the length of the protections, as shown in the chart below. Today, copyright has become big business, with many businesses relying on copyright-protected works for their income.

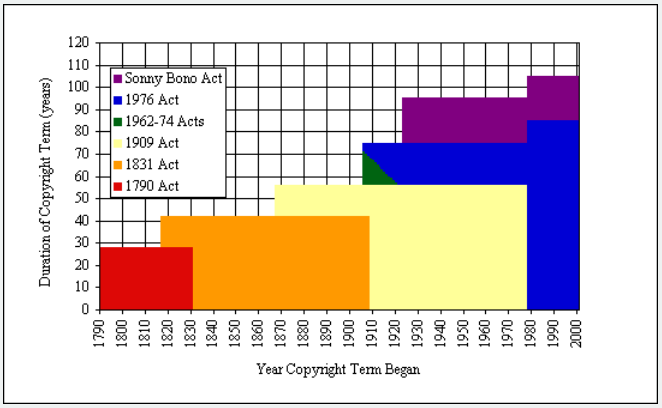

Figure 12.2.1: Expansion of U.S. Copyright act by Tom Bell licensed CC-BY-SA 3.0

Many now think that the protections last too long. The Sonny Bono Copyright Term Extension Act 1998 has been nicknamed the "Mickey Mouse Protection Act," as it was enacted just in time to protect the copyright on the Walt Disney Company's Mickey Mouse character. It extended copyright terms to the life of the author plus 70 years. Because of this term extension, many works from the 1920s and 1930s were still protected by copyright and could not enter the public domain until 2019 or later. Mickey Mouse will not be in the public domain until 2024.

12.2.5: References

ACM Code of Ethics. *Preamble*. Retrieved November 10, 2020, from https://www.acm.org/code-of-ethics.

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