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How Should Intellectual Property Be Protected in the Internet Age?

Introduction

The introduction of Gutenberg's printing press allowed the mass distribution of the printed word. Before Gutenberg, documents had to be copied by hand; after Gutenberg, it became easy to copy and distribute written work. As new types of products of the mind – books, music, films and similar materials – were invented, each invention was accompanied by a trend towards making those inventions easier and faster to distribute in a fixed form. Wax cylinders were replaced by LP records, cassette tapes, compact discs, and ultimately digital music files. Movies have begun to shift from distribution on physical film to digital distribution as well. Even books have begun the shift from paper to digital. But the growth of digital distribution, combined with the ease of communication provided by the Internet, has led to conflict between content creators and content consumers. Creators want their content to be protected from illegal distribution, while content consumers want ease of access to the content they wish to consume. How should these conflicting goals be balanced? How should intellectual property be protected in the Internet age?

Significance

The question of protecting intellectual property in the Internet age has gained a great deal more significance since the introduction of two major pieces of legislation in the 112th Congress

session: the Stop Online Piracy Act (SOPA), introduced in October 2011 (United States Cong. *H.R. 3261*), and the Protect IP Act (PIPA) introduced in May of 2011 (United States Cong. *S. 968*). Both of these proposed bills would have greatly expanded the authority of the United States Government to pursue violators of laws protecting "intellectual property", even if those violators were located in other countries or using resources outside of the United States. The Attorney General would have been granted authority to seize web sites alleged to be engaging in infringing activities, even if those web sites were located outside of the United States. The proposed legislation would also have required Internet service providers to shut down all access to sites that the Attorney General ruled were infringing (United States Cong. *H.R. 3261*). This legislation was supported by several large groups representing the entertainment industry, including the Recording Industry Association of America (RIAA) ("Chairman Lamar Smith") and the Motion Picture Association of America (MPAA) (O'Leary). Standing in opposition to the proposed bills was a collation of Internet service providers (such as Google) and Internet user groups, primarily represented by the Electronic Frontier Foundation (EFF) ("Stopping Dangerous Blacklist"). At the time of this writing, both bills have been tabled, but concerns remain that these bills may be revived, or similar legislation may be proposed again.

Definitions

There are several terms that should be defined to aid understanding of the issue. First of all, what is "intellectual property"? Generally, the term "intellectual property" is used to refer to things created by the human mind (or a group of human minds), such as music, art works, books, films, and similar items ("What is Intellectual"). While these items may have a tangible, or fixed, implementation (record album, painting or sculpture, DVD, etc.) they are still primarily a product of intellectual activity. This is distinct from "physical property", such as land, houses, or

automobiles, which is either pre-existing (in the case of land) or the product of industrial activity. It is perhaps easiest to consider "intellectual property" rights as rights to intangible things, and specifically as rights to ideas. Those ideas may be fixed in an invention, in which case we call them "patents". Or those ideas may be a form of expression, such as music, books, or art. The form of expression may be fixed, but "copyright" protects the underlying idea, not the fixed method (Kinsella 9).

Intellectual property is generally protected in several ways. "Trademarks" are used to identify the products of a specific person or company ("What is a Trademark?"). For example, "Kleenex" is a trademark owned by the Kimberly-Clark corporation. In general, trademark protection lasts as long as the trademark is in active use by the owner ("Frequently Asked Questions"). "Patents" grant exclusive rights for the use of an invention to the inventor for a limited period of time. During this period, other people are not allowed to make use of the invention in question. In the United States, the period of a patent is defined as twenty years from the date the application was filed. During this period, the inventor may produce products, license others to produce products using his invention, and stop the import of products using his invention. However, patents granted in the United States are not enforceable in other countries ("General Information Concerning").

"Copyright" is also a form of protection for intellectual property. Copyright protects original works (that is, something an individual or a group of people created) from unauthorized reproduction or reuse for a limited period. The key distinction between "copyright" and "patent" is that "copyright" is designed to protect mostly artistic works (books, music, art, etc.), while "patents" are designed to protect inventions, processes, or discoveries ("Copyright in General"). In general, copyright protection in the United States for recently created works lasts for the life

of the author plus 70 years. For works with no author (such as works for hire or works published anonymously) copyright lasts for the longer of either 95 years from the year the work was first published, or 120 years from the work's creation ("How Long Does").

Secondary Issues and Scope

For the purposes of this paper, I will be discussing copyrights and patents. Trademark regulation, while interesting, is out of the scope of this discussion. I will also not be considering the secondary issue of whether current criminal penalties for copyright infringement are excessive. I believe this is more of a matter for debate on criminal law and what constitutes reasonable and just punishment, not a matter for debate in discussing copyright reform. In addition, I will not be discussing in detail alternative forms of intellectual property licensing, such as the Creative Commons license or the GNU General Public License for computer software. These forms of licenses are interesting, but are generally variants of existing copyright law, or rejections of copyright completely (in the case of the GNU General Public License). Also out of scope for this paper is the question of whether the "moral rights" of an artist deserve recognition in copyright law. This is a deeply complicated question about which an entire separate paper could be written, and is simply too long to cover within the scope of this work.

Assumptions

A key assumption in this paper is that copyrights and patents should exist; that is, that the government should enforce protection of intellectual property, either by civil or criminal means. The United States Constitution grants Congress the authority "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" ("Article I U.S."). Until recently, the assumption that

copyrights or patents were the only way to protect intellectual property was widely accepted. The growth of the Internet, however, allowed people who were searching for alternatives to copyrights and patents to network and join forces, which in turn led to the growth of alternative forms of intellectual property protection such as the "Creative Commons" license ("CC Wiki").

History and Background

As noted above, the Constitution of the United States gave Congress the authority to establish intellectual property protections. The first United States copyright law was enacted in 1790, and granted copyright protection for fourteen years, with the right to renew for another fourteen years ("United States Copyright"). The term of copyright was extended to 28 years (with a fourteen year extension) in 1831, and extended again to 28 years with the right to renew for another 28 years in 1909 ("Copyright Timeline").

The United States, of course, is not the only country that has had to deal with intellectual property issues. The first copyright law was actually established in Great Britain. The 1710 "Statue of Anne" provided for an initial fourteen-year copyright term, with a second fourteen-year term available if the author was still alive. Works published by 1710 received a term of 21 years. However, there was considerable confusion at the time about what copyright actually meant. "Booksellers" (the equivalent of publishers today) claimed the "common law" gave them an exclusive right to print works they had originally published, even after the "copyright" term expired. It was not until 1774, in the case of *Donaldson vs. Beckett*, that the English courts established what we think of as the modern concept of copyright. In that case, it was held that once the copyright term of a book expired, it entered the "public domain" and was available to be reprinted by anyone who desired to do so (Lessig *Free Culture* 85-94).

European countries joined together in the Berne Convention of 1886 and standardized copyright law for the members of the Convention. In 1908, the term of copyright under the Berne Convention was set at the lifetime of the author plus 50 years. In 1928, the convention added recognition of the "moral rights" of authors to the protections provided; authors were allowed to protest the modification or destruction of their works. Significant differences between the Berne Convention and United States copyright law (particularly in the areas of moral rights) kept the United States from adopting the Berne Convention ("Copyright Timeline").

United States copyright law was revised again in 1976 to provide life of the author plus 50 years protection. The 1976 revision also attempted to codify what was meant by "fair use" of copyrighted material, and established the concept of "first sale". ("First sale" basically means that, once you purchase a copyrighted item such as a book, record, or DVD through legitimate channels, the copyright holder cannot prevent you from reselling that item through other channels, such as used book stores.) In addition, the 1976 revision dropped the requirement that works be registered with the Copyright Office before they could receive protection (Lessig *Free Culture* 250). The 1976 protections were very similar to the Berne Convention protections, and the United States fully adopted the Berne Convention in 1988 ("Copyright Timeline").

In 1998, Congress adopted the "Copyright Term Extension Act", which extended protection to the life of the author plus 70 years ("Copyright Timeline"). This was challenged in court by a group of plaintiffs who argued that the extension of copyright protection to that term violated the "limited time" condition established in the Constitution. Further, the plaintiffs argued that the Congressional extension violated the provision of the Constitution that states "Congress shall make no ex post facto law", since the extension of the copyright term brought back into copyright works which had previously been in the public domain ("Article I U.S."). This case

became known as *Eldred v. Ashcroft*, and ended on January 15, 2003, with a Supreme Court ruling that the act was constitutional (MacMillan).

Also in 1998, Congress adopted the "Digital Millennium Copyright Act" (DMCA). The DMCA contained several provisions; two key ones involved "copyright circumvention" devices and "takedown" provisions. In brief, the DMCA banned the production of tools designed to "circumvent" copyright, even if the circumvention is to make a legal copy of a copyrighted work (Lohmann and Seltzer). Further, the DMCA established certain protections against liability for infringement with respect to "service providers" (as defined in the act). However, in order for those protections to apply, defined "service providers" are required to maintain a designated agent for the receipt of "takedown" requests for copyrighted material, and to remove copyrighted material in a reasonable length of time after receiving notification ("The Digital Millennium").

Parties to the Controversy

There are three parties to the intellectual property question. Those are content creators, content distributors, and content consumers. Each of these three parties approaches the question of intellectual property protection with a different set of views and values. Those views and values are influenced, in turn, by the parties they represent.

"Content creators" are the people who actually produce intellectual property: writers, musicians, artists, and such. In general, content creators believe they should be fairly compensated for their work, and are usually opposed to the illegal redistribution and sale of their works. Lars Ulrich, drummer for the rock group Metallica, is perhaps the most famous example of a musician who is in favor of stronger intellectual property protection ("Metallica's Ulrich"). However, other artists specifically oppose either SOPA/PIPA (Masnick) or copyright in general ("Free Music").

"Content distributors" are the primary party pushing for stronger enforcement of intellectual property law. Content distributors do not actually create intellectual property, but serve as the distributors of intellectual property to the public. Examples of "content distributors" include record companies, movie studios, and music labels. The two largest organizations involved in lobbying for SOPA and PIPA are organizations of content distributors; the Motion Picture Association of America, led by former Senator Chris Dodd (Dodd) and the Recording Industry Association of America (RIAA), led by Cary Sherman (Sherman).

"Content consumers" are the people who actually consume intellectual property – the people who buy books, watch movies, listen to music, and such. There is a wide range of interests among "content consumers". For example, there are some consumers who are interested in the total abolition of intellectual property for moral reasons (Martin) or because they are unable to afford everything they wish to consume. Other content consumers would be quite happy to pay someone for the content they consume, but have found that the works they are looking for are out-of-print or unavailable through legitimate means. Still other content consumers have no problem paying for content that they wish to consume, but they resent "protections" that require them to purchase the same content multiple times for use on different systems. Because the group of "content consumers" is so diverse, it is difficult for one organization to represent all of their interests. However, in the case of the SOPA/PIPA debate, opposition to the bills was primarily led by the Electronic Frontier Foundation (EFF) ("Stopping Dangerous Blacklist").

Arguments of the Parties

Arguments of copyright proponents

The proponents of the current copyright system base their arguments primarily on property issues. Specifically, they view "intellectual property" as being equivalent to real property, and wish to invoke the same government protections for it. The MPAA estimates that $58 billion a year is lost to the economy due to "theft" of copyrighted material ("The Cost"). The RIAA estimates the cost of music piracy at $12.5 billion a year ("Who Music").

A further source of dispute on both sides is the nature of "intellectual property". Unlike "real property" such as land and cars, "intellectual property" can be copied and distributed infinitely and indefinitely without depriving the content creator or content distributor of anything except their royalties. Many people who argue against the current state of copyright point out this distinction, and some use it to defend infringement. Those who argue for the current state of copyright suggest that, if "intellectual property" is to be treated as property, the term of copyright should be unlimited. After all, land can be handed down through generations: what reason is there to treat the rights to a book or a piece of music differently?

Finally, another argument used by copyright proponents is one that might be called the "technological" argument. From the copyright proponents point of view, technological advances have made it increasingly easier to violate copyrights. In the pre-Internet days, distributing illegal copies of a book or an album of music or a movie required some level of technology, such as a printing press, a record press, or the ability to copy movie prints (and later VHS tapes and DVDs). As books, movies, music, and other media shift to digital formats, it becomes increasingly easier to make illegal copies of those works and increasingly easier to distribute

them illicitly (Lessig *Remix* 37-38). The MPAA has estimated that 25% of all Internet traffic is "pirated" content (Morrison and Dodd).

Arguments of copyright opponents

Those who are opposed to the current state of intellectual property law in the Internet age make several key arguments. Those arguments can be divided into those related to patents and those related to copyrights. The arguments related to patents cover the difficulty of discovering relevant patents, the existence of prior art, and the economic effects of patents. The arguments related to copyright cover the current length of copyright, the difficulty of determining "fair use" of copyrighted material, "orphan works", the impact of copyright and patent on poorer countries and in educational use, and the impact of the DMCA.

Before a company can produce a product, it must check for relevant patents that cover the product. Today, the cost of discovering relevant patents is enormous: Mulligan and Lee estimate that it would take two million patent attorneys working full time to review the products of every software company against the current patent database for infringement. This is clearly not economical. As a result, many companies do only partial reviews, and are left open to claims of infringement. Further, many patents are being stretched to cover things that are not originally specified. Several large companies were sued for violating a patent on a "remote query communications system"; the infringing behavior in question was placing images on their websites (Mulligan and Lee). The combination of these factors, opponents argue, discourages innovation and raises the cost of implementing new ideas.

The primary argument against the current state of copyright is the length of copyright. As stated above, the Constitution established copyright for a "limited period". In the first one hundred years of United States history, the term of copyright was increased once (to a 42 year

maximum). In the next fifty years, the term was increased once more (to a maximum of 56 years). In the past forty years, Congress has increased the terms of existing and future copyrights; most recently, in 1998, Congress extended existing copyrights by twenty years (Lessig *Free Culture* 133-135).

This prevents many works from entering the "public domain" and becoming part of the common culture. A good example of this is Walt Disney's "Steamboat Willie", the first appearance of Mickey Mouse. Before the 1998 copyright amendments, "Steamboat Willie" would have become public domain in 2003: now, it is under copyright until 2023, assuming the law is not changed again. This is particularly ironic, given that Walt Disney and the Disney corporation have made extensive use of "public domain" works (such as *The Hunchback of Notre Dame* and *Treasure Island*) in their own production of derivative copyrighted works. Indeed, "Steamboat Willie" is itself a parody of a contemporary Buster Keaton film, "Steamboat Bill Jr." (Lessig *Free Culture* 21-24).

"Fair use" is a controversial provision in copyright law because it is not clearly defined. The U.S. Copyright Office states "The distinction between fair use and infringement may be unclear and not easily defined. There is no specific number of words, lines, or notes that may safely be taken without permission" ("Fair Use"). In practice, it is up to the user to defend his "fair use" right and bear the legal costs of doing so. Jon Else, a documentary filmmaker, was quoted a $10,000 fee to license four and a half seconds of a *Simpsons* episode that was playing in the background of one scene in a documentary about opera. When he suggested that this was covered under "fair use", Fox (the copyright distributor) threatened to sue him, leading Else to edit the scene (Lessig *Free Culture* 95-97).

In some cases, it is difficult or impossible to find the original copyright owner, especially since copyright registration is no longer required. These works are commonly called “orphan works”. Without permission, these works cannot be reprinted or redistributed, and disappear from the culture. When Carnegie Mellon attempted to obtain permission to digitize works in their libraries, they found that 22% of the publishers of those works could not be contacted (“Report on Orphan”). If the owners or publishers of a work cannot be contacted, there is no way to reach an agreement on reprinting and reproduction rights. Without such an agreement, the work in question will eventually become unavailable, except possibly through resellers of used media or through illicit channels.

Both copyright and patents have a large impact on poorer countries. For example, countries such as Brazil and Thailand have been unable to afford production of patented drugs for the treatment of AIDS, leading them to bypass those patents and being producing drugs on their own (“Brazil”). Similarly, copyright piracy is rampant in India, at least in part because the country cannot afford to license all the materials needed to educate the Indian population. The Indian copyright office notes that foreign technical and trade books are frequently pirated due to both high prices and high demand (“Study).

The DMCA also poses significant issues for copyright consumers. The provisions of the DMCA that ban “circumvention technologies” have been interpreted by the courts to prevent the sale of software for extracting content from DVDs (for example, to play on your laptop computer), even if you own the DVD in question (Lohmann and Seltzer). It can be argued that if the VCR were released today, content distributors would be able to block it from coming to market due to the anti-circumvention provisions of the DMCA. Content distributors have aggressively pursued the makers of digital video recorders (DVRs), the successor to the VCR, in

one case driving a company's product off the market because they could not afford the legal costs to defend their product (Lohmann and Seltzer).

The "takedown" provisions of the DMCA have also been abused by content distributors. In one recent case, the TechDirt website had posts related to SOPA and PIPA removed due to improperly filed DMCA takedown requests (Masnick). In other cases, content distributors have filed DMCA takedown requests for content they do not own (Gaskin). Those opposed to the current state of the law argue that the penalties for knowingly filing false DMCA "takedown" requests are not sufficiently severe, and that the scope of the DMCA's takedown requirements is too broad. No court order or judicial review is required under the provisions of the DMCA: simply sending a notice of infringement (rightly or wrongly) is sufficient to get content removed, and there is no provision for damages for a wrongful takedown ("Unsafe Harbors").

Copyright opponents also make use of the "technological" argument. In this case, their argument is that copyright has evolved over time in response to technological changes. The first English copyright was in part a response to the lowered costs of entering the printing business, and in part a response to foreign printers being able to export works to England efficiently (Lessig *Free Culture* 40-41). The 1909 changes in United States copyright law were intended, in part, to clarify the rights of musical performers with respect to mechanical reproduction of their work (Rudd). There is a general expectation that the law will change to address advances in technology, and many copyright opponents argue that the current law is not doing so. Lawrence Lessig, in his book *Remix*, takes this argument a step further, pointing out that we have shifted away from an "analog" and a "read only" world of creation, where books, music, and movies were all difficult to reproduce and make use of. Lessig sees the world of today as a "digital" and a "read-write" culture, where the availability of media in digital form allows not just for easy

redistribution, but also the easy creation of new works based on other works ("derivative" works) (Lessig *Remix* 28-31).

Values in Conflict

The values of content creators and content distributors can be treated as one set. Both parties hold property rights as a value. Specifically, both parties view copyrighted material or patented ideas, or "intellectual property", as being equivalent to "real property" such as land or physical possessions. As such, their view of unauthorized distribution of copyrighted material or use of patented ideas is the same as their view of car theft or bank robbery: that is, as the illegal appropriation of property. Since these are illegal activities, both parties believe that their property rights should be enforced by the government.

Further, both parties believe in a general right to control and profit from the products of the human mind. One might call this value "capitalism", to distinguish it from the "socialist" viewpoint that "the production of society [should be] used for the benefit of all humanity, not for the private profit of a few" ("Socialist Party USA"). But there is more to this right than just making money. Both parties also place a value on controlling how their works are used. Copyright creators, for example, may not wish for their works to be used by political candidates they disagree with ("Rush Follows Peter"). Likewise, copyright distributors may not wish to have works whose rights they control used by competing copyright distributors to make derivative works.

The concepts outlined above and attributed to copyright creators and distributors might loosely be taken together as an idea called "fairness". Copyright consumers also value "fairness", but use that term in a different sense. What does "fairness" mean in the context of copyright consumers? I am using it in the context of copyright consumers as a shorthand word for several

values that are hard to describe in a single word. One part of this value could perhaps be called "cheapness". There are many copyright consumers who could best be described as wanting everything, for free, right now; those are the stereotypical "copyright pirates". Other consumers, though, are quite willing to pay for content, but do not wish to pay for the same content over and over again. Thus, they see nothing wrong with downloading songs from a CD they own, but which is tucked away in a box somewhere. Likewise, this group sees nothing wrong with removing restrictions from purchased content so they can play it on multiple machines. For example, the LINUX operating system does not support the rights management used by digital music files on the Apple platform; thus to use purchased music on a LINUX machine, the user has to remove that rights management (Orlowski).

Another part of this value might be called "efficiency". Again, many people are willing to pay for content, but the content they are looking for may not be available through content distributors. In the case of old television shows, for example, people may be willing to pay for them, but content distributors do not see this as a profitable market. Thus, content consumers feel forced to turn to methods that bypass content distributors in order to get what they want, legally or illegally. As discussed above, there are cases in which the current copyright holder has disappeared or is unknown; this makes it impossible for content distributors to license the content and distribute it legally. Content consumers in many cases see their redistribution of this content, which has fallen into an "ownership gap", not just as a way to obtain the content, but as a way of keeping the content alive and part of the culture until these ownership issues are settled.

A final aspect of the "fairness" value comes closer to what we think of as literal "fairness". For example, content consumers feel that is "unfair" that a short excerpt from a television show used in a documentary (as in the John Else example given above) is not accepted by content

distributors as “fair use”. As another example (also discussed previously), content consumers in poorer countries believe that the fees charged by content creators and distributors prevent those countries from participation in the common intellectual heritage of civilization, and thus deprive their people of knowledge and culture. Finally, many content consumers believe that the current structure of patent law poses an excessively high barrier to innovation (Mulligan and Lee).

Position Thesis and Justification

Nobody is pleased with the current state of the law. The content creators and content distributors would like to see intellectual property protections extended as far as possible, while content consumers would like to see a relaxation of those protections. How can we balance these concerns, and what would a fair intellectual property policy in the Internet age consist of? I believe that an intellectual property policy that tries to strike a balance of fairness between content creators and content consumers, maintaining the rights of creators to profit from their work and the rights of consumers to enjoy purchased works, is the best approach to balancing the values in conflict.

One way to approach this question of whether this proposed policy is fair and moral is to apply the philosophy of utilitarianism. In general, utilitarianism argues that the ethical, or right, thing to do is the thing that maximizes “goodness” in society. A shorthand form of this is “the greatest good for the greatest number” (Pojman 111). Utilitarian theory divides into two main branches. Philosophers such as Jeremy Bentham advocated an “act utilitarian” philosophy, holding that the rightness of an act depended on whether “it results in as much good as any available alternative” (Pojman 115). Other philosophers, most famously John Stewart Mill, advocated a “rule utilitarian” philosophy, in which the rightness of an act is determined by the utility of the act. Specifically, “an act is right if and only if it is required by a rule that is itself a

member of a set of rules" that would lead to greater social utility than any other alternative (Pojman 116).

Mill argues that "actions are right in proportion as they tend to promote happiness". But what does "happiness" mean in this context? For Mill, "happiness" is defined as "intended pleasure" (Pojman 113). But Mill does not argue that we should only look out for our own happiness. Rather, he argues that our morality should strive for the greatest amount of happiness altogether; not just that we should strive for our own happiness, but we should also strive to make other people happier, or at least to not cause them unhappiness (Pojman 113).

So how can we maximize happiness in the context of intellectual property? Content creators might argue that infinitely extending copyright, eliminating "fair use" totally, and expanding the power of government would "maximize happiness". Certainly it might maximize their happiness in the short term. However, since many works (such as the Disney examples cited above) are built upon work that is already in the public domain, and since infinite extension of copyright would effectively eliminate the public domain, this happiness would be short lived. In the long term, infinite extension of copyright would make it vastly harder to create creative works, since any idea could be claimed to be derived from another idea still in copyright.

On the other hand, eliminating copyright totally would certainly maximize the happiness of content consumers. But who would produce works, if those works could be freely redistributed without compensation? Where would the motivation for creative production come from? Certainly, some artists might be able to obtain patronage from rich individuals, as they did in the era before mechanical reproduction of art. But would those patrons share that art, or keep it to themselves for their private enjoyment? And would there be enough patrons to keep artistic

endeavor at a level satisfactory to society? It seems likely that elimination of copyright would destroy the creative world by eliminating the incentive to create and share.

Since neither of these alternatives seems satisfactory, I come to the conclusion that striking a balance between creators and consumers is the "best" approach, or the one that maximizes "happiness". Taking this as a given, what would such a policy consist of? There are several possible components to such a policy. The components I will outline include a re-evaluation of the patent system, a return to a limited time frame for copyrights, clarification of some fuzzy areas of copyright law (such as "fair use"), a copyright registration system that included mandatory use rights, a reduced payment schedule for educational use, modification of the DMCA, and finally a shift to civil enforcement of copyright law rather than criminal enforcement.

In the current system, patents last for twenty years. While that may have been more than sufficient for inventions in the 19th and much of the 20th Century, the twenty-year period has the disadvantage of being too long for some things, and too short for others. A twenty year patent period in technologies related to computing locks up results for what is basically a lifetime in computer science; compare the computing environment from twenty years ago to that of today, and imagine what that environment would be like if technologies such as the graphical user interface (GUI) had been held hostage by a patent owner starting in 1992. A one or two year patent period on computer technology would balance the ability of patent holders to profit from their inventions with the ability to incorporate new technologies into computing. On the other hand, the expensive and time consuming nature of drug development makes it difficult to recover investments in a new drug within the twenty year time frame. Extending the patent period for

drugs to twenty-five years would allow for research and development investments to be recovered over a longer period.

However, extending the patent period on drugs also extends the monopoly drug companies have on new drugs, and thus allows them to charge higher prices since there is no alternative or generic drug available. This will have a disproportionate impact on developing countries, which may not be able to afford the patent payments for new drug. This is perhaps not as important in the case of a drug that controls foot fungus, but becomes critically important in the case of a drug that suppresses symptoms of AIDS, for example. How can we balance these interests in a utilitarian fashion? One possibility would be for patent holders, in return for extending the patent period on drugs, to agree to a mandatory staggered royalty payment based on a country's Gross Domestic Product (GDP). "First world" countries such as the United States would be at the top of the payment schedule, and drug companies would be allowed to collect whatever licensing fees they desire. Less developed "second world" and "third world" countries would pay a fixed licensing fee, possibly determined as a percentage of their GDP. This seems like a fair balance: drug companies gain extended patent protection and more time to recoup research and development costs, but in turn must give up some of those fees for the benefit of the less developed world.

It is also important to return to a limited time period for copyright, as outlined in the Constitution and as established for many years prior to the late 20th Century. What would a fair copyright period be? Life of the original author plus 25 years, with no renewal after that point, seems reasonable. 25 years after the death of the original author, the last of his children should at least obtained an undergraduate degree, if not a graduate one, from an established college and be well on their way to establishing their own lives. The royalty stream from copyright should be

helpful to them during their childhood and early adulthood, but once they embark on their own lives, should they continue to be entitled to that stream of revenue? Or is it better that the works of the copyright holder become part of our common heritage, available for everyone to build on?

I believe Mill would argue that works entering the common heritage maximizes overall happiness. Certainly the heirs of the copyright holder may be unhappy at losing an income stream, but they have the estate of the copyright holder (including royalties he saved in his lifetime) plus 25 years of post-death royalties to help mitigate that unhappiness. Further, just because a work is out of copyright does not mean that there are not opportunities to profit from it. The original copyright holders could reissue the out of copyright work with supplemental material that remains in copyright (such as original work by family members; essays, poems, pictures, music, etc.). Even if they chose not to add supplemental material, just making a work easily available (especially in an "authorized edition") can bring in a good revenue stream if the work remains in demand.

What about works created by a corporation ("works for hire")? What is the lifetime of a corporation? While the Supreme Court may consider corporations as people, copyright law has traditionally made a distinction between the individual artist (or artists) and the corporation in terms of copyright. This seems to be a fair distinction, as it acknowledges both that corporations have rights and that they are not completely equivalent to people. If we are going to limit copyright for the artist to life plus 25 years, it is only fair to place a limit on corporate copyrights. I suggest 50 years as an upper bound on corporate copyrights, with no renewal after that point. Under the proposed 50-year term, Disney's "Steamboat Willie" would have entered the public domain in 1978.

Additionally, a utilitarian reform of copyright law should clarify some of the less clear aspects of the current system. One good example of this is the concept of "fair use". As discussed previously, disputes over what does and does not constitute "fair use" are a major source of copyright conflict and uncertainty. A system of copyright law based on utilitarian principles would include a clear and expanded definition of "fair use", thus balancing the interests of both copyright holders and copyright consumers. What would such a definition consist of? One possibility is a multiple point test for "fair use". For example, is the material being used incidental (for example, a brief segment of a television show in the background)? If the use is not incidental, is the material being used in the context of criticism or analysis of the material (for example, a long quote from a book as part of a book review)? Is the material being used for profit by someone else? These are some example "fair use" tests. As time goes on, others could be developed, but I believe these are a good starting point.

Another utilitarian reform to the copyright system would be a return to mandatory copyright registration. Before the Berne Convention, in order to claim copyright protection, an author (or corporation) had to send a copy of their work to the Copyright Office and register a copyright in the work. Post Berne, works are automatically copyrighted; this has led, as we have seen, to lawsuits seeking to prevent quotations from an author's unpublished works, as well as some frivolous legal threats. Requiring registration of copyright would make authors put some "skin in the game"; they would be able to gain the full protection of copyright, but they would have to make some effort to protect their material by providing copies of the works they wanted to protect. This also serves as a public benefit by making sure archival copies of those works remain available to the people, or at least those people who are willing to seek them out in the Copyright Office.

Further, mandatory registration could be used to resolve the problem of "orphan works". The registration process could be set up to require that the name and address of the copyright holder (or their designated licensing agent) be available in a public database. Anyone wishing to make use of copyrighted material would be able to use this database to contact the responsible parties. If there is no response to reasonable contact efforts (say, two certified letters to the registered address), at that point, the person wishing to use the copyrighted material would be allowed to use that material at a reduced royalty rate set by law. Since the person using the material would not have a contact point for payment of the royalty, payments would be made to the Copyright Office and held in trust until the copyright owner claimed them. (Much like the various states do each year with unclaimed property, the Copyright Office could publish a list of unclaimed copyright royalties.) This provides an incentive to keep one's copyright registration up to date, and provides a way for works still in copyright, but lost to the public due to confusion about who holds proper rights, to be brought back into public view and availability. Further, the Copyright Office could hold the interest on the monies kept in trust; depending on what the statutory rate is set at, how many "orphan works" there are, and what the demand for those works is, the interest income could possibly make the office a self-funding entity.

In addition to the statutory "non-registration" royalty outlined above, a further utilitarian modification of copyright law would allow for a statutory "educational" royalty. This would allow for the use of copyrighted material in an educational context, for purposes of analysis and criticism, at a reduced rate. The problem with this proposal is defining what is meant by "educational context". Again, we can use a multiple point test to determine this. Is the work intended for the general public (sold in mass market bookstores)? Are there a limited number of copies of this work printed? Are those copies primarily used in educational settings such as

schools? Publishers could be required to certify that the work in question would be used in a limited educational setting, and not distributed in the mass market, in order to pay the statutory "educational" royalty. If it turns out that they lied or falsified the certification, they could be required to pay a fine of (for example) triple the "educational" royalty and destroy any remaining copies of the work.

Much like the drug patent proposal outlined above, the utilitarian approach to copyright could also make use of a staggered royalty tier for more prosperous and less prosperous countries. Countries with a lower GDP could pay a substantially reduced royalty rate for works in copyright. The copyright owners would benefit from this in several ways. In the immediate term, they would receive some royalty from their works rather than having them pirated. In the longer term, the additional exposure to their works may result in greater sales of those works outside of the poorer countries; as immigrants move to richer countries and build new lives there, it seems likely they will purchase works they are previously familiar with. Also, for technical and educational works, the reduced royalty payment will allow wider distribution of information; ideally, a more educated population will result in a larger GDP and eventually increased royalty payments to the creator.

Additionally, a fair system of copyright would include modifications of the Digital Millennium Copyright Act (DMCA). Specifically, the DMCA's provisions against "circumvention tools" should be repealed. When an individual pays for a copyrighted work, that work should be theirs to use as they please, as long as they do not violate the rights of the copyright holder by illegally redistributing the work for profit. Is it reasonable for digital materials that you have paid for to be locked up by a proprietary copy protection technology from a company that is no longer in business, and whose technology is no longer supported on

any platform? I believe that Mill would agree with my position that individuals have the right to make use of things they have paid for; tools that allow for the unlocking of digital content are an important part of this. Further, the DMCA's restrictions represent a restriction on **tools**, not on **activity,** which is unique in the law. Repealing this restriction would make the law more consistent with our treatment of such things as cars; we punish the act of reckless driving, but we do not ban the tools (such as cars capable of going from 0-60 in 3.9 seconds). Likewise, we can punish copyright infringement for profit without unfairly restricting tools that have a legitimate use.

Further, a re-evaluation of the DMCA should include a revision of the act's takedown provisions. Currently, almost anyone can file a DMCA "takedown" claim and have a work taken down, even if they are not the copyright holder. The provisions of the DMCA encourage a "shoot first" mentality, which results in takedowns of material that is obviously covered by the "fair use" provisions of the law, or even material that does not infringe in any way. The current provisions result in an imbalance of power between content creators and distributors, and content consumers and Internet service providers. A fair system consistent with utilitarian ethics would restore the balance between these two groups, perhaps by requiring a higher standard of proof in order to file a DMCA "takedown" claim, and by imposing penalties for the mistaken or wrongful use of the DMCA "takedown" provision.

In writing these proposals, I have concentrated on striking a balance between content creators and content consumers. I have not attempted so far to address the effects of this balance on content distributors. The content distributor is in an unusual position, in that it serves as basically a middleman between the other two parties. Content distributors generally do not create works and hold copyright in them (with the exception of works for hire) and are generally interested in

getting as many copies of the works they distribute as possible into the hands of the public, while maintaining their own profits.

Obviously, these proposals will have some impact on content distributors. Cutting back the copyright period to life plus 25 years (50 years for works for hire) will reduce the time they have available to profit from creative works. On the other hand, the increase in new creative work, based on older works entering the public domain at the end of the shorter copyright period, may offset those losses. The proposed mandatory registration system should make it easier for copyright distributors to find the rights holders for works, and for them to license those rights at a mutually acceptable rate, thus increasing the profits for both sides. Reduced royalties for educational purposes and poorer countries will, of course, result in lower revenue for the content distributors. However, in the current system, works are massively pirated in poorer countries, so the content providers receive no revenue at all, and the current rate structure prices many educational users out of the market. The content distributors are already receiving nothing in many cases; these provisions would, at least, change that nothing to something.

Are these proposals fair to copyright distributors? I believe the interests of copyright distributors are almost entirely the same as those of copyright creators. Thus, I conclude that a policy that is fair to copyright creators can also be said to be fair to copyright distributors. The changes I propose are indeed fair to both copyright creators and copyright consumers, as they strike a balance between the competing interests of both sides. It follows logically that since copyright distributors have the same interests as copyright creators, these policies strike the same balance between their interests and those of copyright consumers, and thus are equally fair to those sides.

Although this is somewhat outside of the scope of this paper, I do want to touch briefly on another issue related to the question of fairness for copyright creators. The history of mechanical reproduction of intellectual property has generally required some level of investment in what we can call "infrastructure". Books needed printing presses. Music needed machines to press records, at first, and later high-speed tape duplicators and CD burners. Movies needed the ability to duplicate thousands of prints and send them to theaters, and later the ability to make many copies of VHS tapes and DVDs. This "infrastructure" has historically been provided by the content distributors, who ran the printing presses, CD burners, and movie distributors.

The shift to digital content has fundamentally changed that equation. Now anyone can publish a book with no need for a printing press. Now anyone can distribute music as an MP3 file with no need to burn CDs. Now movies are sent to theaters digitally, and can be downloaded and watched online. With no need for an infrastructure, content is becoming increasingly disintermediated. Instead of finding someone who has a printing press and is willing to print your book, you can distribute thousands of copies for only the cost of creating a single digital file.

This dramatic cost reduction enables content creators to deal directly with content consumers, instead of relying on content distributors to produce physical media. This in turn has diminished the role of those content distributors. I believe in the near future content distributors will become more like curators, pointing out materials that they consider worthy and perhaps collecting small fees from creators for services provided, instead of functioning as "gatekeepers" deciding what does and does not get distributed. As a side effect of this, I believe that the relative importance of content distributors will become smaller, and the intellectual property debate will be dominated by just creators and consumers.

Conclusion

The Internet has changed everything, and arguably not for the better. The growth of digital media technology has made distribution and redistribution of copyrighted material by both legal and illegal means vastly easier than it was in the pre-Internet era. Many copyright creators and copyright distributors have been slow to adjust to the expectations of copyright consumers in the post-Internet era, leading to conflicts over the rights of each party. The speed at which technology grows and expands in the Internet age has brought about conflicts over patent rights and whether they are holding back technology, or represent a necessary incentive for invention. Balancing all these competing interests requires a fair intellectual property policy that respects the rights of each interest group. I believe a theory of intellectual property based on Mill's utilitarian theory best balances the interests of all these competing groups.

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