Intellectual Property vs. The Internet

James O'Connor

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Professor Herbener
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The current system of intellectual property, while it worked “well enough” in the past, is being severely strained by the internet. Reform or reinvention is needed to restore order, and at this point, reinvention will be the most effective method. It is possible to have an alternate system that is privately run and that can effectively deal with issues of enforcement and compensation for creators. This analysis will deal primarily with copyrights and patents when it goes into specifics; trademarks and industry secrets are less cohesively regulated and are less important issues for the present scope of the discussion.

So why is the internet specifically breaking things, rather than anything else that has come about since the printing press? The internet allows people to share data at costs that are close to zero, whether it is by transferring things to specific people in small exchanges or by posting files for all the world to see and take. If it were more manageable, it would not pose such a threat to the current system, but it is instead a centralized system’s worst nightmare: a dispersed, redundant network of decentralized users. It is all but unstoppable, and it can bring resources to bear on any problem it decides to focus on. This poses particular problem for DRM, because it generally takes about two months from time of release before DRM-cracked versions pop up on the internet.¹

This tenacity can sometimes prompt distributors to take potentially dangerous action; the DRM program known as SecuROM, which is the most public example of

such behavior, has been bundled with music and software. SecuROM is a root kit that hides itself in the client’s operating system to evade virus scanners and attacks programs that it suspects will hack or otherwise subvert the program with which it came. It is difficult to completely remove from the computer, sometimes requiring a hard drive reformattting to get rid of it, and it is not mentioned in the license agreements. By the time the user knows about it, it has already been installed, unless he hears about it from another user beforehand. SecuROM has been likened to common malware, with good reason - by strict technical definition, it is malware, with some legal pretense attached. It is a targeted version of a fairly sophisticated virus, and SecuROM has been linked to “prevention of proper launching of games... disruption of antivirus programs and firewalls, computer slowdowns… and complete operating system failure.”

Copyright law has been the subject of some controversy recently, when the United States Congress introduced the Protect IP and Stop Online Piracy acts, which if passed, would grant broad power to shut down and cut off websites with pirated content. At the time of writing, it is unknown whether or not they will be signed into law. According to Harvard law professor Laurence Tribe, those laws grant authority to shut down sites without judicial hearings. If the current system was well-defined, no-one would have come up with such a heavy-handed bill, because appropriate boundaries for enforcement would be either readily apparent from existing law or already in place.

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So as attempts to resolve intellectual property issues are either dangerously overbearing or mostly ineffectual, it becomes apparent that something needs to change. The old system failed to account for an eventuality it did not anticipate; now it is time for it to give way to something new.

One major flaw in current intellectual property law is that it is too complicated and often lacking in axiomatic justification. It has a large body of legal precedent, but legal precedent is should be only an intermediate step. Law needs to be firmly grounded some economic law in order to have economic justification; references to past legal code are insufficient if the references are arbitrary. Facets such as the length of copyright terms are of arguably dubious connection to any sort of homesteading theory, and the amount of control granted by patents is difficult to justify in an Austrian framework. It makes little a priori sense to say that a certain number of years is too long or too short in all cases, or that particular types of intellectual property (for instance, discoveries vs. inventions) do or do not deserve such protection at all.

To figure out intellectual property, it is first useful to examine the simpler case so as to compare and contrast it. Physical items come to be property through either original appropriation or production. In both cases, labor is performed upon the property, noticeably altering it from its previous state. Once a person has appropriated his property, he is maintains absolute control of it, assuming such use does not infringe on his neighbor. He transfers such ownership of it through trading, giving it up entirely in exchange for something else that he prefers. That is simple enough. The current system operates on the idea that intellectual property can be handled the same way.
For the purposes of contrasting the two forms of property, intellectual property will be used to mean property as it applies to ideas. There are gray areas in this definition, but ideas are the general case. Ideas come into ownership through original appropriation (discovering principles from the world) or through building on and synthesizing other ideas. The problem with applying the physical property logic to ideas is that trade is not transferral, but duplication. If Bob and Steve trade apples, each person still ends up with one apple. However, if they trade ideas, they end up with not one idea apiece, but two. Giving someone else an idea does not deprive the original owner of it. It can thus be said that the possession of ideas is non-rivalrous. This means that the production and scarcity of ideas cannot work precisely the same way as the production and scarcity of physical objects. Objects are limited by natural materials and quantity of labor available. Copies of ideas in other people’s minds is limited only by how fast people can spread the word.

Scarcity is not considered to be the beginning and end of private property, or at least not in the common definition. There are other reasons for private property, such as efficiency, ability to plan, and ability to act, all based on security of property. They are all good justifications for private property, but they all come back to having scarce resources. If physical property were non-scarce, then there would be no reason to have a system for determining who gets what; everyone would simply take whatever they needed. This is the basic argument behind Stephen Kinsella’s systems of property, both intellectual and physical.
Kinsella argues that physical property is based upon scarcity and nothing else. He says that physical property is determined solely by first possession; no significant distinction is made between production and appropriation. Intellectual property, however, is infinitely reproducible, and thus needs no property system. This idea offers a number of easy answers and simplifications, but it suffers from exploitability. Kinsella’s system does not put significant weight on previous ownership. So, if products roll off an assembly line, what prevents the worker who takes the product off the line from claiming it as his own, since he is the first possessor? That could be a major flaw in the system; Kinsella’s opinion on the matter is not evident from his monograph.

Perhaps his most important insight is that copyrights are legally-enforced monopolies over ideas. Monopolies are recognized to be detrimental in physical production at large, so what is about intellectual property makes monopoly a good thing? Such monopolization creates scarcity by limiting initial distribution. In the case of media, which will be dealt with in more detail later, it can also limit the consumer’s use of media he buys, through devices such as installation limits and anti-copying measures. Broad copyrights, as they currently work, also bind third parties who were not party to the original arrangement, which only makes the scarcity problem worse.

Murray Rothbard agrees with the basic idea that intellectual property can in some cases be based in a similar fashion to physical property, but not in the way it is

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5 Jeffery Herbener, "Untitled Presentation" (lecture, Students for Liberty, Grove City College, Grove City, October 6, 2011).
used today. He proposes that copyrights might sometimes be compatible with the free market, in the sense that a copyright notice comprises a “do not plagiarize” contract with the user.\(^6\) If the copyright holder suspects theft, he must first prove that the perpetrator had access to the work in order to steal from it. A patent holder has no such restriction; the patent carries a monopoly whether or not the same solution was reached independently.\(^7\) That would make patents incompatible with a free society, because they are a comprehensive monopolistic privilege. Consider the case of two inventors who invent the same thing at the same time, but one beats the other to the patent office. Rothbard argues that they should both have the right to produce the fruit of their labor; while only one might survive in the long run, neither will have been legally have been prohibited from succeeding.

In contrast, Ayn Rand holds a more mainstream position on both issues, arguing that both patent and copyright are “a man’s right to the product of his mind.”\(^8\) Her solution for the “two inventors, one patent” problem is that while both of them might have been first to the office, one of them was not, and hence only one deserves the privilege.\(^9\) While her point that there can only be one copyright holder is technically true, the idea that two similarly worthy ideas should be subjected to such arbitrary


\(^7\) Ibid.


culling leaves much to be desired. Her justification is that “the loser in a case of that kind has to accept the fact that in seeking to trade with others he must face the possibility of a competitor winning the race, which is true of all types of competition.”

This misses the fundamental issue: Rand seeks to satisfy bureaucrats, rather than consumers. If only one inventor is to succeed, then why should success fall to the one who navigates a legal bureaucracy first, rather than the one who delivers the invention to the waiting market first? It is the buyers who will be the ultimate consumers of the invention in question, so they should be the ones to decide what they should be consuming. Stephen Kinsella points out in Against Intellectual Property that the US patent system uses a “first-to-invent” system, rather than a “first-to-file” system, which is common in other countries. The point still stands, considering that both systems are dependent on satisfying a bureaucracy, when the real economic concern is who gets their product to market first and most efficiently.

The exact nature of software and digital media merits some special consideration because it shares some characteristics of intellectual and physical property. On the one hand, it is reproducible in much the same way as writing or sheet music: given appropriate media, it can be copied down and transferred as many times as necessary. However, unlike writing or sheet music, digital files cannot be directly read by a person. It requires a computer to be useful, and its existence is not permanent on its chosen storage devices. To remove the written word from a piece of paper, the paper must be

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10 Ibid.

physically damaged or destroyed. To modify a digital item, the only thing to be changed is the electrical state of a few bits. In other words, digital files exist only as a configuration of computer hardware; they are ethereal configurations of easily reconfigurable goods. Even stories can be said to have a concrete existence in a book and in the minds of its readers, but not so for programs. Taking that into consideration, do programs even qualify as goods? They obviously have value, because people are willing to pay for them and create them. The unique programs (if not their copies) are scarce, because there are only as many of them as people can create. By virtue of being traded like goods, digital files can be legitimately called goods. While they do not squarely fit into the mold of “ideas” or behave precisely like books or other physical media, the differences are not significant enough to create an entirely new classification for them.

Intellectual property economists Michele Boldrin and David Levine make the point that the real problem with intellectual property is not the initial distribution of the idea; the trading of the good for money has few conceptual difficulties. The real problem is what they call “downstream licensing,” which is the attempt to regulate future owners of the good who did not agree to the original contract.\textsuperscript{12} Downstream licensing methods have often met with mixed practical success. Such licensing as a whole sets up perverse incentives so that an inordinate amount of time and effort is spent managing legal issues and licensing minutiae, rather than creating new product.

Legal issues entail costs, both for creating the relevant laws and for enforcing them. As Kinsella proposes, if intellectual property grants legal monopolies, then that raises the price of the final good and, in turn, costs of the means of production. Then the monopoly imposes costs in the form of foregone derivative works, and it prohibits reverse engineering. The end result is significantly higher costs for intellectual products than would be incurred without downstream licensing.

It is commonly argued, however, that that is exactly the problem; without downstream licensing, the costs would be so low that there would no longer be sufficient incentive to produce. Intellectual production would slow drastically or cease altogether. From a praxeological perspective, there is no reason to assume the latter case. Because preferences vary from person to person, some people might find it profitable to produce in less lucrative situations than others. From a practical perspective, the existence of open-source software and non-profit derivative works (such as fan-made modifications for games) shows that even with no monetary incentive, some level of production can still continue. Boldrin and Levine answer with an important clarification and a mathematical analysis of the question. Again, they offer an important insight that the cost of producing an idea is usually assumed to be a fixed cost that is occurred for each copy of the idea. That cost is not fixed; rather, it is sunk. The costs of producing the idea itself are borne entirely by the first “unit” of the idea. The costs associated with other units involve only copying the idea onto new media and distributing it, thus rendering the costs of producing ideas much lower than is typically proposed in such models.
Their mathematical model accounts for piracy, increasing distribution, and original sales in a Neoclassical microeconomic framework to show that there is still money to be made for a producer who cannot use downstream licensing. The model examines the case of an mp3 with many potential consumers who have time preference. In each period of time, the mp3 can be used to generate revenue or be copied. Each new copy seeds at least two additional copies. The seller can either sell the mp3 or rent it out in any given period. The selling or renting price will decline eventually as quantity increases, proportional to the number of copies produced in a given period and dependent on price elasticity.\textsuperscript{13} Whether that is enough money to entice the producer to produce depends on the person, but there is no evidence proving that it necessarily isn’t enough. Obviously, the seller would earn more money under a monopoly situation provided by downstream licensing, but that was never in question. The question is whether production will still occur without monopoly, and Boldrin and Levine answer “yes” as definitely as possible without assuming undue specifics.

Stephen Kinsella also adds to the analysis from an Austrian point of view, refuting the argument on multiple other grounds. First, even if utility maximization were possible through legal restrictions (which presumes that utility can be measured between persons), that would still not justify such restrictions on a fundamental level. True law exists to ensure justice and secure property rights, which is often undermined in the process of enforcing IP laws. Furthermore, there is no conclusive evidence that

\textsuperscript{13} The faster price declines, the higher initial price the idea is likely to fetch, so the initial price and rate of decline balance each other out to a certain extent.
IP laws necessarily increase the amount of social welfare.\textsuperscript{14} There are models based on comparing interpersonal utility, but all they manage to do is compare apples to oranges.\textsuperscript{15} In fact, removing the protection may result in more innovation, because producers will have to innovate more to stay ahead if they had no monopoly to give them shielding from like-minded imitators who might be more efficient.\textsuperscript{16}

Another objection to intellectual property states that ideas are prerequisites for action, rather than means. Ideas are what links means to ends, so treating them like means is a category mistake. That would allegedly disqualify them from being economic goods, which would render any question of intellectual property meaningless. However, this is simply not true. Ideas are often either goods in and of themselves, or bound up in other goods. This gives them value in and of themselves. For instance, one can either use an idea as a recipe, in which case it functions as a simple prerequisite, or one can write a book or a research paper, in which the actor takes previously existing ideas and combines them into a new idea. In the latter case, ideas are both means and ends, so there is justification to treat them as such. Even if they are simply being used as prerequisites, then they still have value because they contribute to the production process by making it possible. The difficulty is that there is no exact way to determine what the value of an idea is as far as its contribution to any specific part of the


\textsuperscript{15} Boldrin and Levine’s model follows monetary prices, rather than utility, so the model is still valid for inclusion in the analysis in light of Kinsella’s critique.

\textsuperscript{16} Ibid.
production process. The only determinant can be the actor’s subjective valuations.

The “idea-expression dichotomy” presents both a fundamental concept and a difficulty for intellectual property.\(^\text{17}\) It states that the owner of a copyright does not have the right to all ideas contained in his work, but to his specific expression of it. So, people may write books using the same ideas, but so long as each is worded differently, there is no conflict. This clears up some issues and establishes some sense of scope, but it leaves ambiguity: how different must expressions of an idea be in order to qualify as separate entities? Could someone fix a typo in an existing work and sell said work as his own? Or could someone just add a word or two? Could a musician cover a song using the same instruments and arrangement, but claim a new entity because the new musicians have different styles? In other words, where precisely does the idea end and the expression begin? If this dichotomy is so important to intellectual property, then the more clearly this boundary can be delineated, the better. The difficulty with that is that there is no binary distinction that can be applied in all cases. The relevant boundaries are different for each type of product. Music will have different boundaries from fiction writing, fiction will have different boundaries from nonfiction, and so on. The issue of what constitutes a truly separate work would have to be judged on an individual basis by people knowledgeable in (or at least familiar with) the relevant fields. In most cases, it should be obvious to the general observer. One could say, as a general rule of thumb, that if the works are so similar as to require a specialist to tell the difference, or to give

the first producer a legitimate reason to claim infringement, then they are too similar, and that might be a legitimate reason for a claims dispute.

As should be clear by now, the internet is the defining feature of the current era, as far as intellectual property law is concerned. Therefore, new system will have to be capable of functioning for the internet as well as the normal world. This raises the question of how the internet and real world fit together. Are they completely separate instances, partially integrated, or the same case? For all of its specific quirks, the internet is still at its most basic form the same as any other free social organization: people voluntarily coming together to meet common goals. As such, the same core principles that apply to the physical world can also apply to the internet. The internet is simply the most difficult case for applying them, because of how quickly and easily information can be transferred and distributed on it. As such, the following portion of this paper will focus on the internet and take most of its examples from it. Cases from the internet are both the most difficult, because poor administration will be quickly swamped, and the most interesting, because they are novel and have received relatively little scholarly attention.

To deal with the internet effectively, a new intellectual property system will need to be decentralized and able to function without an abundance of supervision. Reliance on a small number of patent offices and central legal agencies will be unfeasible in the long run; an easily manageable system that can be administrated locally will be vastly more preferable in that it will have better coverage, better response time, less confusion, and less potential for widespread abuse.
Any system operating in a digital environment will have to deal with piracy. Pirates can be characterized along a spectrum of willingness to buy, which yields three distinct categories: the potential buyers, the would-be buyers, and the free riders. The potential buyers download material because they are unwilling to commit to paying for something before they try it out. They are the least troublesome for a seller, because they will buy the product if they like it and get rid of it if they do not. The would-be buyers are an intermediate case, because they would be willing to buy the product if the price were lower, or they are unable to to purchase goods because of legal restrictions. They are not especially likely to share the product again, but they will actively seek out other people who are willing to share with them. American anime enthusiasts are a good example, because they are often unable to find their favorite shows for sale in America. They have to resort to downloading, even though they would be willing to buy disks of the shows if they were available. The free riders are the most troublesome. They refuse to pay for the product for whatever reason and have no intention of buying it. They are also the most likely to share the product so that others can take part as well. The latter category will always exist, and there is only so much that can be done about them. The best a system can do is to attract as many customers out of the try-before-you-buy and would-buy groups as possible while removing incentives for the free riders.

A new system would be based on agreements between the buyer and the seller only. When the intellectual item is purchased, the buyer and seller may both agree to a contract wherein the buyer agrees not to give it away, pirate it, or otherwise deliberately undermine the seller, in terms delineated by their individual contracts. Copying and
theft by third parties would not be explicitly forbidden under these agreements, but it is and would still be the common law that stealing is wrong. This means that sellers would be able to contractually limit the unauthorized distribution of their work on more practical terms, at least for a certain period of time. Purchasers of a secondhand copy (such as people who purchased a used CD) would be under no contractual obligations, so they could share the work as such. This arrangement would be useful for getting a the “two months” before secondhand copies began to proliferate in earnest. While non-invasive measures such as CD-based copy protection and encryption would not be explicitly illegal, distributors who used such measures would be penalized to varying degrees, because consumers tend to prefer no copy protection to copy protection. However, in the long run, the only difference would be in short-term initial sales, because the copy protection would eventually fail anyway.

Producers for whom having the original copy of something is essential (for instance visual artists, who often suffer from plagiarism) would still be able to seek protection. Without a central copyright office, private agencies will fill the gap if it is indeed worth filling. Either producers will band together, or entrepreneurs will step in to form private verification agencies. These agencies would provide a few simple services. First and foremost, they would provide records of originality, so as to identify who really produced something in case of a conflict. Second, they would provide commonly

available permission schemes stating standardized terms of service that producers can refer to (similar to creative commons licenses today).

If the producers of something do not expect to make a profit, then there are still ways that they can cover their costs without resorting to government intervention. The most notable new case of this is crowd-funding. In crowd-funding, relatively large numbers of interested consumers fund the project directly. With the internet, this has become relatively easy. The producers may simply post a pitch on a website such as Kickstarter, where users can review their pitch and pledge money. If their project receives enough pledges by a set date, then the funds are transferred and production may begin. If not, nothing happens.\(^\text{19}\) The supporters keep their money, and project is not produced.

Pirates have strong incentives to stop pirating if the price offered for a product is suitable for them. Piracy comes with more than its share of risks; there is always the risk of some sort of fraud, malware, reduced quality, or complete unusability. This is the tradeoff that the pirate must make in order to get his media for free, and it is thus the main strength of the pay-what-you-want system. People can decide how much something is worth to them, and then pay that. They then get a legal copy that carries none of the risks of a pirated copy. The current best example of this system in action is what will be referred to as the “humble bundle” model, originated by the Humble Bundle Inc. In this model, independently-produced games are released in batches in a

pay-what-you-want system, available as such for a limited time. Buyers who pay above the average amount usually receive additional games, tech demos, or other benefits. This drives the average up. While many buyers pay the minimum amount of one cent, they are counterbalanced by industry enthusiasts and moguls, who for various reasons pay much more than the list price of the individual games in the bundle. Those reasons can range from maintaining public image to showing genuine appreciation. Other sites, such as Bandcamp (a competitor site to iTunes) also offers pay-what-you-want options, which includes a minimum price that the seller can set.

Opponents of the pay-what-you-want system will point out that the pay-what-you-want price often leads to a lower average selling price than under a normal system. This is true, but as was discussed previously, the downstream-licensing price that is usually charged currently is too high. Pay-what-you-want has the advantage of getting significant numbers of would-be pirates to contribute at least some money to the producer, rather than simply downloading. The system also allows patronizers to conveniently pay more if they want to do so, which helps to offset the less lucrative consumers.

Other methods of rewarding creative activity without downstream licensing is the “top-down” approach, which includes incentive structures such as research grants, prizes, patronage, and commissions.\textsuperscript{20} Under these systems, a specific individual or group pays for an intellectually creative activity; the product is not sold by the producer.

to the general public. Instead, there is only one buyer. The question of downstream licensing is largely irrelevant for the producers, because they are already being paid the amount that they intended to receive. This sort of arrangement would be insulated from the decreased profits, because projects funded this way are frequently either non-profit or specific to the commissioner. For instance, a foundation funding disease research would be unlikely to keep its results secret, unless said group was a company trying to invent a proprietary cure. In that case, it would fall under the more common model, rather than the top-down model. Conversely, if someone commissioned a picture of himself, then it is most obviously a his own likeness in the picture. Few other people could claim that it was a picture of themselves, and the commissioner would be eager to show it off. If another artist were to steal the picture and claim it as his own, then the artist would be able to cite the commissioner as a witness for original creatorship, and the issue would be minimal.

The non-downstream-licensing system will encourage creators to take measures in order to disincentivize downloading the free copies that will inevitably appear on the internet. This stands a good chance of bringing back the demo as a piracy-reduction measure, in addition to its obvious purpose as a simple promotional tool. In the demo system, the potential buyers can get the demo for free, then buy the full work if they liked what they saw. Would-buy pirates would have at least a legal demo, rather than nothing, which might dissuade some of them from getting a free copy of the whole item. Premium content is another method that would work well under the new system. Under the premium content model, the core product is sold at a low price or given away
for free, then enhanced content is made available for a price. This is already a common model for online games and services, where the basic subscription can be free, but enhanced items and privileges come at a cost. The game *Team Fortress 2* recently adopted this model after years of charging for individual copies of the game. The game itself is now free to play, and Steam, the company that handles its logistics, maintains its servers based on proceeds from a multitude of in-game items. Others who use the premium content model attach advertisements to a free version of their service; premium subscriptions then remove the ads. This model is extremely effective at managing piracy, because there can be no piracy; when the good in question is free, the issue becomes irrelevant. The only thing that could be worth pirating is the special content, which is generally easier for the distributor to manage, thus discouraging the average pirate. Less-able buyers can opt for the basic service, and the free riders can be largely sated to whatever degree the distributor chooses.

In addition to handling pirates, creators will have to take a more lenient attitude towards derivative works, since the means of controlling them will be severely limited. Attempts to maintain strict control will be inevitably met with failure, so the more advantageous strategy will be to either ignore the derivative works or encourage the ones with which the original producer would prefer to be associated. Active encouragement tends to create active, involved communities centered around the original producer. Modding (both digital and physical), fanart, and fanfiction groups are all good examples of such communities. They can be a very valuable resource for the producer and consumers alike, but many producers are currently too focused on strict
control to start one. Changing the paradigm of intellectual property could make devoted product communities more common, which would ultimately be beneficial to the producer.

For all that has been said, claiming that major systemic changes are imminent is a time-honored tradition. This paper makes no claim that a non-downstream-licensing system is the necessary legal consequence of the current system, nor that it will has to come about at some point in the near future. This is simply a proposal of a possible system.

An intellectual property system based on contracts between buyers and sellers is the most feasible and most utility-maximizing system would be the most theoretically sound and practicable based on the given analysis. It does not attempt to restrain individuals who do not directly agree to the contract’s terms or maintain control over a good after it should pass out of their control. It is clear and easy to understand, it has adaptability, and it leaves room for market innovation without modifying or calling into question its core principles. Therefore, it is a practicable and worthwhile alternative to the present system.
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