
UNBUNDLING COPYRIGHT FROM PATENTS TO INFORM THE ANALYSIS OF NOTICE COSTS AND MONOPOLY

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Copyright and patent law are often treated as two peas in a pod. Perhaps economists are more guilty than are lawyers of conflating the two, but I am not so certain. Yet, we all know that there are differences between these two fundamental components of intellectual property. Nevertheless, when critics of intellectual property use a particular brush (say, monopoly) to tar one, it is the rare critic who is able to keep from claiming that the same brush can be used to tar the other. At least that has been my experience.

This is not to say that some important differences between copyright and patent have not been noted. But it is my belief that even when noted, the differences are not well understood in the literature.

In this paper I wish to focus on what I believe to be two crucial differences between copyright and patents that, to my mind, require very different analyses and conclusions.

The first consideration is the treatment of notice costs, which I believe are of much more import in the case of patents than they are in the case of copyright. The second and older difference is in the claim that intellectual property creates a monopoly. This claim, while possibly correct for patents, is not at all correct for copyright.

The reason that these two fundamental components of intellectual property discourse differ from one another is that copyright, while preventing copying, does not prevent independent creation, whereas patent law prevents both copying and independent creation.

Because independent creation is allowed by copyright law, creators have a simple rule for avoiding infringement—do not copy other works.¹ This renders

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notice costs irrelevant for the large class of creative works that do not literally copy any prior works. The real-world limitations on the copyright “property right” (such as duration and fair-use) raise information costs. Contrary to some claims in the literature, however, it is still not clear that notice costs for copyright are particularly high relative to other types of property. Patents, by not allowing independent creation, impose much higher notice costs on potential users of patented inventions than those imposed by copyright on users of creative works.²

Copyrights and patents provide ownership rights to the creators of works and innovations. Analysts, and particularly critics of intellectual property, often refer to these ownership rights as “monopolies,” but doing so is erroneous in the case of copyright. Because copyright does not prevent independent creation, it does not create a monopoly. That does not mean that a copyrighted good cannot have a monopoly in a market. If such a monopoly exists, however, the monopoly must be due to some other aspect of the work, not to copyright. Because patents prevent independent creation, they can create monopolies. Therefore, a patent is more than merely a property right over a particular innovation whereas copyright is mere ownership over a creative work.

I. THE KEY DIFFERENCE BETWEEN PATENT AND COPYRIGHT

There are some terminological issues that are best dealt with upfront. Copyrights provide ownership over creative works. Patents provide ownership over innovations. In principle, either ownership right could endure for as long or as short as society would wish. In principle, either could allow exceptions under certain conditions, restricting the owner’s ability to contract (as is the case with compulsory licenses).

The economic argument for copyright and patent is based on promoting conditions that allow creators or innovators to reap financial rewards for producing works and innovations.³ One potential problem occurs when free-

¹ See, e.g., *Feist Publ’ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 345 (1991) (“To qualify for copyright protection, a work must be original to the author. . . . Originality does not signify novelty; a work may be original even though it closely resembles other works so long as the similarity is fortuitous, not the result of copying.”).

² See, e.g., *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 477-78 (1974) (“If an invention meets the rigorous statutory tests for the issuance of a patent, the patent is granted, for a period of 17 years, giving what has been described as the ‘right of exclusion.’ This protection goes not only to copying the subject matter, which is forbidden under the Copyright Act, but also to independent creation.” (citations omitted)).

³ See, e.g., Jonathan M. Barnett, *Cultivating the Genetic Commons: Imperfect Patent Protection and the Network Model of Innovation*, 37 SAN DIEGO L. REV. 987, 991 (2000) (“The incentive theory correctly states that patent protection stimulates private investment by warding off low-cost imitators and promising monopolistic profits that will at least cover

riding in the market prevents creators or innovators from covering the costs of invention or creation. Those who would copy an innovation or artistic work (i.e., free riders not paying for the costs of creation) can produce their copies at lower average cost than the producers from whom they copy, because these free riders do not have the burden of incurring the costs of creation. Allowing the copying of such works would tend to reward free riders at the expense of the creators and innovators. This result runs contrary to both the moral rights of the creators and the logic of inducing creation and innovation.

The copyright and patent systems are actually based on an economic-welfare rule of thumb, that allowing private ownership and market transactions provides sufficient incentives to ensure that products with social value will be produced. In spite of the enormous apparatus built by economists demonstrating conditions under which market economies will produce efficient outcomes, the strongest evidence for markets is empirical in nature—economic systems based on other rules of thumb have achieved far inferior results. There are many imperfections in capitalism, but it has performed far better at generating wealth than any of the alternatives, as numerous natural experiments have verified to the detriment of the hundreds of millions of guinea pigs forced to endure those experiments.

Independent of the alignment of copyright with market transactions, the logic behind the moral rights of creators strikes most people as fair—you should be able to reap what you sow. If revenues are generated from a book that I write, should I not be able to benefit from those revenues? Copyright is the marriage of this view of just compensation grafted onto the economic rule of thumb that ownership and trade helps lead to a productive society.

The dimension of ownership that is central to this essay has to do with breadth of rights that is provided to the copyright or patent owner. In particular, copyright as it currently exists allows similar or identical creative works from different authors to compete in the market, as long as they are not copies of previous works. That is because the breadth of ownership under copyright is exceedingly narrow, although it is sometimes difficult to define the borders of the concept of “independent creation.”⁴ Patent law, as it currently exists, is much broader. It does not allow for independently created innovations if the later innovations are similar. Nevertheless, one of the great difficulties of real world patent rules is determining how broad the ownership rights actually are.

product development costs.”). Of course, patent law cannot promise any profits at all, but it makes the existence of economic profits less likely to be competed away.

⁴ When parts of a melody appear in someone else’s song it is difficult to know whether it was independently created or, assuming the second creator is not lying when he claims independent creation, whether the second creation may have been unconsciously copied from the first.

This differential treatment of independent creation between these two components of intellectual property laws is what causes errors of analysis when lumping both copyright and patent together.

Is this difference in the treatment of independent creation inherent in the nature of the two rights? For artistic works covered by copyright, the very narrow breadth of protection seems to be a natural element inherent in the nature of the works themselves. For simplicity, let's focus on the market for books, the first copyrighted works. Further, let's ignore variations in the duration of copyright by assuming that it lasts forever. Finally, we can assume that copyright grants full ownership rights, so activities that might be considered fair use are ruled out unless those engaging in these activities acquire permission of the copyright owner. These assumptions, which I shall later address, can be merged under the rubric of "fundamental copyright." Under these circumstances, it is useful to examine, in principle, how broadly copyright in written words could be construed before the protection would become clearly inefficient, if not absurd.

Most agree if the first act of writing allowed a copyright over all acts of writing, the result would be nonsensical because the first author would be able to control the entire market for written works even though most later written works would have nothing to do with the original work. There would be no economic or moral linkage suggesting that the first author should receive payment for all later works written by others. Nor would this monopoly over *all* later written works be necessary to provide incentives for the creation of the first written work. The first book written by the first author need not even be particularly valuable on its own.

Next, we can imagine the first author in a particular genre of works, such as travel books or fantasy, being given a copyright over the entire genre. The same arguments made in the previous paragraph are applicable here. While it is possible that a great work can dominate a genre for many years, and influence many authors, those works are not necessarily the first works in a genre. While authors may be influenced by previous writers, they are likely less dependent on prior works than are scientists, who famously claim to stand on the shoulders of giants.

An economic case could be made for providing broad copyright for works that are highly influential on other authors, instead of solely providing copyright for those who are first. The problem is that there would need to be some method, no doubt very controversial and somewhat arbitrary, to choose the most influential works and the nature of the control over the market given to these works. This process would be very messy and probably impossible to implement with any degree of precision.

Understandably, a narrow conception of copyright has been adopted to eliminate these potential pitfalls, although others, derivatives, translations, and so forth, still provide a small amount of unavoidable messiness.

The protection of actual copyright is so narrow that it does not exclude other works that are virtually the same, or even, in principle, identical, as long as the

new versions were created independently. In essence, copyright gives creators ownership over only *their creation* of the work. In other words, if a different author put in all the work to create a second version of the work, without copying from a prior author (although there is some messiness in the meaning of “copying”), that second author is also given ownership over his version of the work and both creators can reap the rewards the market provides. This result is also perfectly sensible from a moral rights perspective, because there is no reason to prefer one independently created work over another.⁵

The second work would naturally cut into the revenues of the first work, if the market had not yet been saturated. Of course, this hypothetical case is unlikely to happen in the real world because neither a book, nor a chapter, nor even a page is likely to ever be an independently created duplicate. This is because writing is a characteristic closely tied to an individual’s unique personality.⁶ Only short or small artistic works (such as a few dozen bars of music) are ever likely to be independently duplicated.⁷ For this reason, a legal rule (i.e., allowing for independent creation) concerning an event that is unlikely to occur, is easy to adopt.

Providing ownership through copyright is also a natural policy to recommend because it merely provides ownership. Copyright does not restrict competition in the creation of competing works, because it allows independent creation. It mimics almost perfectly the template of how private competitive markets are supposed to work.⁸

⁵ According to moral rights theory, intellectual property rights aim to incentivize creation, but unlike utilitarianism, does not encourage one type of creation over another. See Rebecca J. Morton, Note, *Carter v. Helmsley-Spear, Inc.: A Fair Test of the Visual Artists Rights Act?*, 28 CONN. L. REV. 877, 912 (1996) (“Traditional moral rights theory . . . ‘represent[s] a certain legislative judgment about the relationship of incentive and creation which presupposes a broad societal interest in the creation of fine art.’” (quoting Thomas J. Davis, Jr., *Fine Art and Moral Rights: The Immoral Triumph of Emotionalism*, 17 HOFSTRA L. REV. 317, 359 (1989))).

⁶ In his *Philosophy of Right*, Hegel concludes that objects are personal because a “person becomes a real self only by engaging in a property relationship with something external.” See Margaret Jane Radin, *Property and Personhood*, 34 STAN. L. REV. 957, 972-73 (1982) (“Hegel’s theory can be seen as consistent with the idea of personal property. Whereas the theory of personal property begins with the notion that human individuality is inseparable from object relations of some kind, Hegel makes object relations the first step on his road from abstract autonomy to full development of the individual . . .”).

⁷ Michael Steven Green, *Copyrighting Facts*, 78 IND. L.J. 919, 947 (2003) (“The shorter the series of letters or numerals, the more likely it is that a number of people will stumble upon it.”).

⁸ That is, it allows groups to individually develop their property and sell it in the marketplace at some market price. See STEPHEN E. LANDSBURG, *PRICE THEORY AND APPLICATIONS* 183 (3d ed. 1995) (describing the behaviors and activities of perfectly competitive firms in competitive markets).

Patent law is different because it does not allow independent creation. Patent law goes out of its way to prevent independent creators of very similar innovations from being able to compete with the patent holder to also receive patents.⁹ And unlike copyright, it is common for inventors to come up with the same or very similar technique for solving whatever problem their patent addresses.

Why does this key difference between patents and copyright exist? We can only speculate, but there are some good reasons to prevent independent but later innovators from competing with the first innovator (patent) whereas there are no good reasons to prevent independent but later creators from competing with the first creator (copyright). These reasons are purely economic in nature and not moral in any sense, since a later independent innovator would seem to have the same moral standing to an invention as an earlier innovator.¹⁰

The provision of ownership over an innovation in order to allow the innovator to generate revenues and possibly profits seems straightforward enough, and as far as this goes, is similar to copyright. But if all independent innovators were allowed to bring their products to market, the profits generated by the group holding the patents would be less than the profits generated by a single patent holder, assuming the patent holders competed to some extent with one another. It is possible that the profits (excluding costs of the innovation) generated by the shared patent owners might still be high enough to make the investments worthwhile. Even if the profits were not sufficient, antitrust laws could be modified to allow the firms to cartelize and try to earn profits closer to monopoly level, although the profits would then be shared among the independent creators instead of just the single first patent holder. Nevertheless,

⁹ See 35 U.S.C. § 102 (2012) (“Novelty; prior art. A person shall be entitled to a patent unless—(1) the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention”); *id.* § 112 (“In general. The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.”).

¹⁰ Under a Lockean Natural Rights regime, people earn property rights by mixing their labor with the object. See JOHN LOCKE, TWO TREATISES OF GOVERNMENT 287-88 (Peter Laslett ed., Cambridge Univ. Press 1988) (1690) (“[Y]et every Man has a *Property* in his own *Person*. This no Body has any Right to but himself. The *Labour* of his Body, and the work of his hands, we may say, are properly his.”). Therefore on natural or moral rights grounds, both an initial and later inventor, having mixed their labor with the invention, would have property rights in the invention. *Id.* (“Whatsoever then he removes out of the state that nature hath provided, and left it in, he hath mixed his Labour with, and joined to it something that is his own, and thereby makes it his Property.”).

later versions of a patented innovation, even if created independently, are not given ownership rights under our patent laws.

Why not award a patent for independent creations? Later innovations may not be considered “novel” because the earlier version of the innovation removed the novelty, but this is a mere technicality. A more serious problem with allowing independent creation in patent law is that it might not be possible to know whether the creation was actually independent. Clearly, such a determination would be difficult, but innovators could presumably hire firms specializing in verifying whether the later firm avoided copying the first innovator. This would be akin to reverse engineering a piece of software while trying to avoid copyright infringement by ensuring that the coders do not have access to the original code (i.e., a clean room design).

It is also possible that sharing whatever profits come from the patented item will leave each inventor with too little profit to make the innovative effort worthwhile. It might be thought that anticipation of such a division of profits would cause inventors to fail to bring many worthwhile innovations to market. Of course, the current system causes the second and later potential innovators to generate zero revenues for their independent creations, and uncertainty with regard to whether there will be a payoff might also have a more deleterious effect on the incentive to innovate.

Regardless of why patent law fails to allow independent inventors to share in the fruits of the innovation, I will assume, from this point on, that patents do not allow independent creation whereas copyright does. This will be the crucial difference that makes lumping copyright and patent in the same analysis questionable, particularly with regard to “monopoly” and “notice costs.”

II. NOTICE COSTS

Notice costs have been defined as the costs that a property owner incurs in trying to demarcate the boundaries between his property and any adjoining properties.¹¹ In the case of land, for example, fences can demarcate the boundaries fairly easily, although at some cost since creating fences or posters is not free. Notice costs are incurred by those wanting to keep trespassers out (e.g., by building a fence) or those wanting to make sure that they do not trespass on someone else’s land (by looking for fences or other property demarcations).

It is claimed that notice costs are considerably higher (relative to real property) for intangible properties such as copyrights and patents because they

¹¹ Peter S. Menell & Michael J. Meurer, *Notice Failure and Notice Externalities*, 5 J. LEGAL ANALYSIS 1, 9-10 (2013) (“In general, inadequate resource notice imposes four types of costs on other resource developers . . . [including] (i) costs of determining owners of potentially conflicting property rights; [and] (ii) costs of ascertaining boundaries of those properties . . .” (footnote omitted)).

do not have the simple boundaries found in three-dimensional physical properties. Here are two such claims:

- (1) "Compare land with intellectual property. Information costs are more significant in intellectual property than in real property and personal property law. Because they are intangible, determining and measuring the boundaries of intellectual goods are more difficult than determining and measuring the boundaries of real property"¹²;
- (2) "In contrast [to land], developers of many intangible resource projects face significant problems in identifying potentially conflicting rights, ascertaining the boundaries of those properties that they can find, locating the owners of potentially conflicting properties, and assessing the scope of potentially conflicting rights."¹³

This logic seems correct because physical items need demarcation in only three physical dimensions, or in the case of land, two dimensions (the surface of the earth) whereas the "borders" of intangible properties are not limited by physical dimensions and so afford many more potential adjacencies (boundaries).

In spite of this method's intuitive appeal, however, looking at the number of potential borders separating these properties may not be the most useful way to think about notice costs. In spite of all the possible multiple intersections of various intellectual properties, there are some simple reasons that notice costs for intellectual properties need not be higher than for physical items. This is particularly true for copyright.

To simplify an analysis that attempts to examine this question, I use the term "fundamental copyright," as previously described, or "fundamental patent" to designate a simple copyright or patent regime where each property right has no limitation on its duration and no limitation on its ownership rights. Under fundamental copyright, any copying of any portion of a work is a violation of copyright. Thus, limitations on ownership, such as fair use or compulsory licenses, are ruled out.

In the case of "fundamental copyright," it is quite easy to conclude that notice costs are essentially zero for the many works being created without the intentional copying of other works. The reason that notice costs are so low is that copyright owners need not spend any resources on demarcations intended to alert potential infringers to possibly infringing acts. The reason is simple: an infringer will always know that infringement is taking place, meaning that no creator can *accidentally* use part of an earlier copyrighted work in a manner

¹² Clarisa Long, *Information Costs in Patent and Copyright*, 90 VA. L. REV. 465, 483 (2004) (citing Richard A. Epstein, *Property Rights in cDNA Sequences: A New Resident for the Public Domain*, 3 U. CHI. L. SCH. ROUNDTABLE 575, 576 (1996)).

¹³ Menell & Meurer, *supra* note 11, at 18 ("Neither the PTO nor the Copyright Office can look up a development tract and provide the names, addresses, and contours of all 'neighboring' property owners.").

that infringes the original work. Thus prior owners need not spend resources trying to alert these future infringers.

Why does the infringer always know when infringement is taking place? The potential infringer merely needs to determine whether he is creating a new work from whole cloth or whether he is copying the work or works of others, a determination that is easy to make. Due to the narrowness of copyright, independent creation is entirely sufficient to create a legal property right under copyright, whether or not the resulting work is similar or identical to a previously created work. Creators, therefore, do not need to know the demarcation lines of any other prior works as long as they are not directly copying someone else's work. I hazard to claim that almost everyone knows, at every moment in time, whether they are copying someone else's work.¹⁴ For this class of original works, notice has no role to play. Therefore, for this class of works, notice costs are zero.

The only logical complication might be situations such as a person with a photographic memory who cannot distinguish between works sitting in memory and works being created *de novo*. A related example requiring less than a photographic memory would be the possibility that someone might unconsciously know a musical tune and then recreate it thinking that it is an original creation when in fact it was not. Obviously there could be other similar difficulties, but such cases are likely rare.

There are many works that do not contain material copied from others, including a large percentage of works meant to entertain, such as novels, movies, music, television, videogames, and so forth. These works are, collectively, of great market value.

Nevertheless, there are notice costs for creators intentionally copying the works of others but aiming to not violate copyright law. These individuals or organizations need to obtain the rights to the works they wish to copy.¹⁵ The costs of discovering the owner of the rights they wish to obtain depend on notice expenditures by owners of prior works, or third parties, or notice expenditures on the part of the creators of the newer works. In these instances a registry can prove very beneficial in lowering such costs.¹⁶

¹⁴ This may be a bit of a simplification as cameras (or microphones) might inadvertently capture (copy) a copyrighted work of art in the background of certain types of creative works.

¹⁵ See Peter DiCola & David Touve, *Licensing in the Shadow of Copyright*, 17 STAN. TECH. L. REV. 397, 399 (2014) (explaining that copyright licensing is “a priority for copyright reform,” because as new “technologies for performing, distributing, or otherwise transmitting copyrighted works have been developed,” so too have “licensing dispute[s] between copyright owners and technology companies—a dispute that often leads to a call for reform”).

¹⁶ Christopher Sprigman, *Reform(aliz)ing Copyright*, 57 STAN. L. REV. 485, 487 (2004) (“From the first copyright statute in 1790, Congress required [among other things,] that authors register their copyrights Taken together, these formalities created data

But it is also important to remember that those earlier works that are most popular with creators copying older works, will have relatively low notice costs because of their very popularity. A large community will know the information regarding ownership of these works. It is really the more obscure older works that will have larger *per item* notice costs. But the very obscurity of the high notice cost works means the aggregate value of these notice costs, or the aggregate value of the forgone works due to the high notice costs for these works, is likely to be relatively small.

Therefore, it is not clear that the average notice costs for copyrighted items is relatively greater than that for tangible goods. This uncertainty exists because there is no equivalent zero notice cost situation for physical goods. Thus even if some creative works have higher notice costs (than for tangible goods), perhaps in part because registries are not as well developed for intangible goods, notice costs are lower for the large portion of intangible creative works that do not directly copy prior works.

Finally, there is one more class of copyright user that imposes costs on copyright owners in the case of fundamental copyright. For example, some individuals may choose to copy someone else's work without permission. This avoidance of payment will cause the owner of the original work to use resources to try to detect and/or deter unauthorized copying. These costs, however, are not notice costs, but instead are ordinary property enforcement costs. When someone intends to violate copyright, notice costs are irrelevant. There is no point in telling a thief that the item he is stealing is protected by a property right because he doesn't care.

So let's summarize the result for copyright. Notice costs are zero for the large set of works that are created without copying. Notice costs only exist for the cases of intentional copiers who wish to follow the law. These notice costs are likely to be small for the popular works that are routinely copied. Although notice costs are likely to be large for more obscure works, it is not clear whether the aggregate notice costs in these cases are particularly large. Given that creators of many copyrighted items do not directly copy from other copyrighted items and that the costs of finding the entity capable of providing copyrighted permissions for valuable copyrighted products need not be very high,¹⁷ it is unclear that copyrighted goods have higher notice costs than most categories of tangible goods.

This result is not consistent with the intuition mentioned above that notice costs are unusually high for intangible goods. The reader will rightly object that copyright is not this simple in the real world, that "fundamental" copyright

about . . . who owned the copyright. Formalities also facilitated licensing by lowering the cost of identifying rightsholders . . . [and] by lowering the cost of confirming that a work was available for use.").

¹⁷ This cost needs to be separated from the negotiated price of a copyright permission, which might be high but is not a notice cost.

does not exist in the real world, and I accept this point. I will return to the real world case in the next section. Before doing so, however, I wish to contrast fundamental copyright with fundamental patent.

With respect to notice costs, copyright and patent are quite different. Although fundamental copyright often leads to very low or zero notice costs, fundamental patents do not have the same low notice costs. The reason that notice costs would still be high for fundamental patents is simple. Unlike copyright, there is no strategy of independent creation that allows innovators to get on with their work while ignoring previous creations.¹⁸ Even innovating in something like a “clean room” environment does not protect the later innovator from being considered an infringer by a patent holder.¹⁹ Thus, inadvertent infringements on the part of innovators with imperfect patent searches will occur, and the patent holder would like to reduce these infringements by incurring notice costs to generate royalties or avoid litigation. Going after inadvertent infringers is not as efficient as arranging negotiations before the later “innovations” are brought to market, and rational patent owners should be willing to undertake notice investments up to the point where the marginal gain from additional profits is equal to the extra notice costs.²⁰

Notice costs are high for fundamental patent because innovators will wind up with no ownership over their innovation if they are not the first to patent the innovation. They do not have the option of waiting to use the patented idea when the patent expires, because the patent doesn’t expire. Thus they will want to ascertain, as best and as early as they can, whether previous innovators have already patented the innovation. They also will want to learn, as best they can, who else is working on similar innovations and how far along those competitors are. Discovering this information can help avoid the potentially

¹⁸ *SRI Int’l, Inc. v. Advanced Tech. Labs.*, 127 F.3d 1462, 1465 (Fed. Cir. 1997) (recognizing independent invention as a partial defense to willful infringement because “independent invention or attempts to design around and avoid the patent or any other factors tending to show good faith” may be exculpatory factors).

¹⁹ *Sega Enters. v. Accolade, Inc.*, 977 F.2d 1510, 1526 (9th Cir. 1992) (holding that while a clean room environment may help inventors avoid copyright infringement by creating an environment for innovation that prevents copying a competitor, it did not do so here because “the use of a clean room would not have avoided the need for disassembly,” and “[d]isassembly of object code necessarily entails copying”).

²⁰ Other writers have brought up the possibility of the patent holder hiding the patent and then holding up other innovators of substitute innovations after significant investments have been made. *See, e.g., Menell & Meurer, supra* note 11, at 15 (“Opportunities to profit from hiding or obfuscating notice information will depend on the nature of resources, the efficacy of notice institutions, the scope of resource rights, and the remedies available for trespass and infringement.”). This is certainly possible but, as Menell and Meurer admit, such behavior depends on how damages are calculated and whether courts and legislators allow the system to be gamed in this manner. It is not necessarily a result that flows from the basic conception of patent law.

very costly investment in an innovation that will not bring any return if someone else gets the patent. Thus expenditures will be made with the hope of identifying previous and current competitor innovations where the boundaries overlap. Fundamental patent only exacerbates these costs.

It is also the case that the exact demarcation of what a patent protects seems less precisely defined than the boundaries of a plot of land or other tangible good, or even fundamental copyright. Patent holders naturally want to claim the widest boundaries for their innovations and competing innovators want those boundaries to be narrower. Because patent holders are likely to have greater latitude in their claims, and because there is imprecision in knowing where exactly the boundaries are, these costs are likely to be higher for patents than for many other properties, such as land, and especially higher than the creative works covered by the narrow boundaries of copyright.

These might be the costs that other scholars are thinking about when they suggest that notice costs are higher for intangible products. Note, however, that it is only patents and not copyright for which these costs are high. It is not clear, however, that these costs are a form of notice cost, *per se*. They are costs imposed by the imprecision of the system, akin to adjudication costs.

But even if we classify these as notice costs, the intuition that leads to a belief that intangible goods have higher notice costs may be true for patents, but it seems unlikely to be true for copyrights. This is an important reason not to lump patents and copyrights together.

C. COPYRIGHT NOTICE COSTS IN THE REAL WORLD

Because notice costs for patents do not differ greatly between fundamental patent and actual patent laws, I will focus in this section on the difference between fundamental copyright and real world copyright. The “fundamental” copyright regime described in the previous section is obviously not the actual intellectual property system that exists, although it seems a feasible system if governments were so inclined to set one up.²¹ Actual intellectual property laws have limited ownership rights in terms of duration and breadth of ownership. Fair use, for example, is a defense against copyright infringement although the four factors important for determining fair use make it often difficult to know when an act of copying will actually be considered fair use.²²

Do these real world restrictions on copyright duration and breadth alter notice costs? Although individuals creating works *de novo* still face zero notice costs, individuals copying previous works now face uncertainty in knowing

²¹ The U.S. Constitution limits the government’s ability to set up this system in the U.S. by requiring that the duration of copyrights and patents be limited. *See* U.S. CONST. art. I, § 8, cl. 8 (“The Congress shall have Power . . . To promote the Progress of Science and useful Arts, by securing for *limited Times* to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.” (emphasis added)).

²² *See* 17 U.S.C. § 107 (2012).

whether permissions are legally required. These copiers, instead of knowing with certainty that they are violating copyright if they do not acquire permission, as they did in the hypothetical fundamental copyright of the previous section, might now not be violating copyright if the copying is considered fair use or if the copyright has expired.

Is the cost of determining what constitutes fair use a notice cost? Menell and Meurer certainly classify it as such. For example, they state, “[s]omewhat distinct notice problems arise in the development of expressive works. While tangible resource boundaries tend to be well-defined and capable of precise measurement, the scope of copyrighted works and the permissible extent of fair use can be difficult to ascertain.”²³

I agree that fair use imposes costs and uncertainty on the copiers of copyrighted works and the owners of the works they copy. But I wonder whether these additional costs are best classified as notice costs. After all, the copyright owner does not get to decide what constitutes fair use, nor does the potential infringer. Each has an incentive to either diminish or overstate the likelihood of fair use.²⁴ Therefore, neither party can provide notice to the other about whether any particular action is fair use or not.²⁵ Nor can the copyright owner be expected to expend resources providing notice of when copyright has expired. So while there are notice costs for those making copies, as there were under fundamental copyright, the extra costs in this case do not appear to be notice costs.

We should also remember that these extra costs need to be balanced against the presumed social gain from providing a fair use exemption or restricting the duration of copyright. Society imposed these additional costs by restricting the ownership rights of copyright owners. There is an implicit expectation that these extra information costs brought about by allowing fair use and shorter durations are more than compensated for by the benefits to society. The social gain, if there is one, must come from the extra works created under a fair use regime, since a social gain cannot arise due to a pure transfer from copyright owners to follow-on creators.²⁶ In the case of copyright duration, the removal

²³ Menell & Meurer, *supra* note 11, at 4.

²⁴ Major league baseball, for example, used to end all broadcasts with a copyright “notice” that went far beyond what was legally permissible, essentially telling listeners or viewers that not a single instant of the broadcast could be copied.

²⁵ The copyright owner could provide guidelines under which potential infringements will not be challenged. If the guidelines were enforceable, the copyright owner could strengthen fair use by providing wider latitude to potential infringers, but the copyright owner cannot unilaterally weaken or narrow fair use. In this limited sense, the copyright could lower costs to copiers by stating, for example, that no potential infringements will be challenged. Making this information available would be a notice cost. One would not expect many copyright owners to voluntarily restrict their property right in this way.

²⁶ See Wendy J. Gordon, *Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and Its Predecessors*, 82 COLUM. L. REV. 1600, 1612 (1982)

of some notice costs (it is still costly to determine if a work is covered by copyright, but when copyright has expired there are no longer costs in finding the copyright owner) may provide sufficient justification for a finite life.

D. THE “MONOPOLY” IN PATENT AND COPYRIGHT

There is another fundamental difference between copyright and patents that is often ignored, if not misunderstood, having to do with the nature of the “monopoly” provided by copyright or patent.

A property right provides a nominal monopoly over the item covered by the property right. I have monopoly control of the automobile that I own, over the smartphone that I own, and over my person (which can be thought of as self-ownership). Ownership allows the owner, and only the owner (subject to legal limitations), to determine how the item in question is used. This, however, is almost never referred to as a monopoly.

That is because the nominal monopoly provided by ownership does not, in general, provide an economic monopoly. Does my auto provide me an economic monopoly in transportation, or my cell phone provide me an economic monopoly in telecommunications? Of course not. Nor does the “ownership” over their personal talents necessarily provide most workers with monopoly power in the labor market.²⁷

That is not to say that ownership plays no role in the exercise of monopoly power. Legal ownership, or some other similar form of control, is a necessary condition for the sale of products, including those with economic monopolies. A monopolist sells products without the hindrance of competitors. If I own the property rights to all of the world’s diamonds, then my ownership rights in diamonds allows the exercise of monopoly power in the diamond market. Being able to sell the diamonds is a requirement for this monopoly, but it is not the key ingredient leading to monopoly. Having *all or almost all* the diamonds is the key ingredient.

The distinction between ownership and monopoly in the case of copyright is one that has been made many times, over many generations, by many

(“The requirement that a notice of copyright be placed on all publicly distributed copies facilitates identification of those works that are not in the public domain and cannot be used without purchase of a copyright license, and also facilitates identification of the works’ owners.”); STAN J. LIEBOWITZ, CONSUMER & CORP. AFFAIRS CAN., THE IMPACT OF REPROGRAPHY ON THE COPYRIGHT SYSTEM 4 (1981) (“This study . . . offers another example of how new technology affects traditional forms of reproducing and using copyrighted works.”).

²⁷ I discuss in more detail the distinction between ownership and monopoly in Stan J. Liebowitz, *A Critique of Copyright Criticisms*, 22 GEO. MASON L. REV. 943, 946 (2015) (“Copyright provides ownership rights to the creators of works, preventing others, without permission, from making copies or products that employ the creations that those rights protect. Critics of copyright often refer [sic] these ownership rights as ‘monopolies,’ but this is a misnomer.”).

individuals. A relatively early mention comes from Thomas Huxley (“Darwin’s bulldog”), in 1877:

[S]o that in my apprehension the application of the word “monopoly” to persons who possess rights under the copyright law is an entire mistake; it is merely a contrivance arising out of the peculiar nature of book property, to put that property upon the same footing as other kinds of property.²⁸

Edmund Kitch complained in 2000 that economists and lawyers were still failing to make the distinction between ownership and monopoly in the case of intellectual property, what he called “elementary and persistent errors.”²⁹ This distinction continues to be lost upon many, such as Boldrin and Levine in their 2008 book, so aptly titled “Against Intellectual Monopoly” in which the term “monopoly” is misapplied.³⁰

How does this understanding apply to copyrights and patents? It seems clear that copyrights and patents both give ownership of an intangible work or innovation to the party receiving the right. But copyright provides only ownership. Patent, by way of contrast, provides more than ownership because independent creation is prohibited. Patents provide a limitation on the technologies that can be used to compete with the patented technology, limiting competition for the products produced with the innovation. Patents can create a monopoly when the breadth of a patent restricts most other related technologies, but a patent does not necessarily lead to a monopoly.

Obviously, the breadth of patent protection depends on the behavior of the patent office and courts. Some patents will confer monopoly power and others will not. A patent is not a sufficient condition for the provision of monopoly power, but it has characteristics that enhance the *possibility* of providing monopoly power. That is because even when there are many other similar, independently created innovations with the potential of competing with the patented products, those potentially competing innovations are likely to be preempted by the patent. As previously noted, copyright does not preempt competing independently created works.

This distinction between simple ownership versus ownership that also restricts competition is what separates copyright from patents. The different treatment of independent creation between copyright and patent is what causes

²⁸ THE ROYAL COMM’N ON COPYRIGHT, MINUTES OF THE EVIDENCE TAKEN BEFORE THE ROYAL COMMISSION ON COPYRIGHT 304 (1877).

²⁹ Edmund W. Kitch, *Elementary and Persistent Errors in the Economic Analysis of Intellectual Property*, 53 VAND. L. REV. 1727, 1728-29 (2000) (“Scholars made considerable progress over the last century understanding the economics of intellectual property rights . . . [but a] continuing problem is that the literature contains a number of elementary but persistently repeated errors.”).

³⁰ MICHELE BOLDRIN & DAVID K. LEVINE, AGAINST INTELLECTUAL MONOPOLY 149 (2008).

the difference in whether a monopoly is brought about by the granting of patent or copyright, just as the different treatment of independent creation was at the heart of the difference in notice costs between the two.

This distinction is why it is inappropriate to lump copyright and patents together when discussing various types of intellectual property.

But this still begs the question, deserving of scrutiny, with regard to the frequency with which the charge of “monopoly” is applied to copyright and patent. Why do academics, particularly economists (and economically trained lawyers) writing about copyright, frequently repeat the claim that copyright is a form of monopoly? Why, in other words, do they keep making “persistent” and “fundamental” errors, as Kitch labels it?³¹

Another question is whether this claim is a real belief, or a contrivance. Although it is quite possible to be against the assignment of a property right for creative works without resorting to claims of monopoly, the argument that copyright creates monopolies seems to have more force in the court of public opinion. But academics will deny that they are trying to score debating points instead of searching for truth, supposedly our overriding goal.

So let’s assume that those copyright critics who claim that copyright creates a monopoly are not just looking to score debating points. In that case it seems likely that they are looking not at the nature of the rights created but instead at the market where copies of works are sold. Looked at in this way, particularly through the lens of models found in economics textbooks, the market for a creative work might superficially look like a monopoly because the demand curve for individual titles is downward sloping.³²

The idealized perfectly competitive market found in basic economic textbooks contains many firms, with each producing products identical to those produced by the other firms in the market, such as bushels of a particular grade of wheat. This model also portrays competitive firms as facing horizontal demand curves.³³ This model, although it is useful, is not a realistic representation of the competition that occurs in most markets.

By way of contrast, the markets for creative works, whether books or music or movies, consist of many heterogeneous titles that are not identical to one another. Because they are not identical, they are not perfect substitutes and the demand curve for these titles is downward sloping. Holding all else equal, the seller of a particular novel, for example, will sell more copies if he charges a lower price, and fewer copies if he charges a higher price. Even within a particular genre, such as science fiction, the story and writing found in each book title are usually quite different from what would be found in other book titles.

³¹ See Kitch, *supra* note 29, at 1729.

³² See, e.g., LANDSBURG, *supra* note 8, at 343 (“[T]he word *monopoly* [is] in reference to any firm that faces a downward-sloping demand curve for its output.”).

³³ See, e.g., *id.* at 183-84.

Titles must be different from one another. What kind of book market would it be if all the books were the same and consumers would satiate their desire for reading fiction, say, by reading the same book over and over again, the way that young children can consume the same story or movie over and over? Yet having numerous publishers of this single book is what would be required for a creative works market, such as the book market, to qualify as perfectly “competitive” under economic textbook standards.³⁴

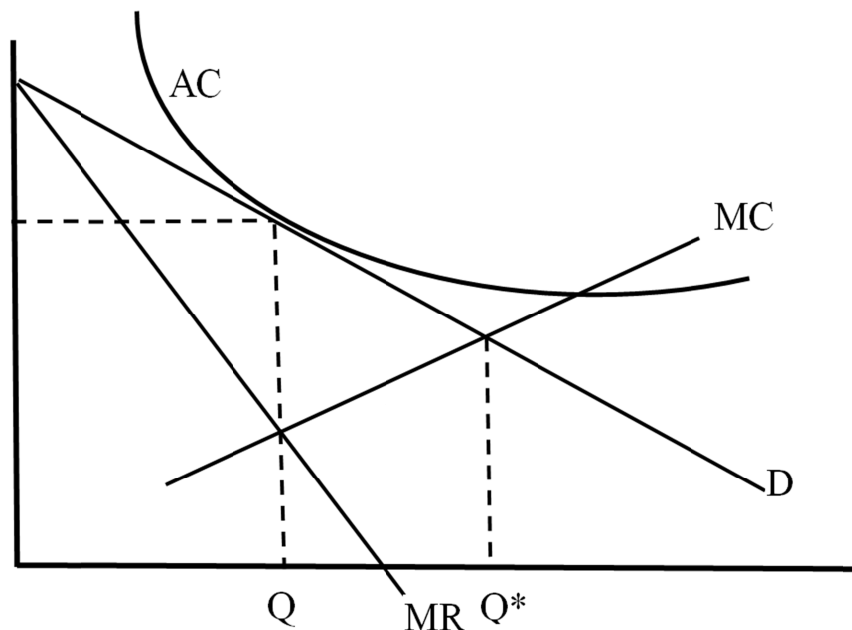
Any product produced by firms facing a downward sloping demand superficially looks like a textbook monopoly. Any profit maximizing firm facing a downward sloping demand curve will produce an output where price is not equal to marginal cost and will not be on the bottom of the firm’s average cost curve even though both of those unmet conditions are used to define competitive markets.

This leaves us with two questions: (1) Are all firms facing downward sloping demands deserving of the term “monopolist”? (2) Is there a welfare gain to be had by increasing output for those units where the demand curve is above the marginal cost curve? After all, we teach that these missing units (the unproduced units where the willingness to pay is greater than the marginal cost) are responsible for deadweight losses in the case of monopoly. So doesn’t that hold for all firms with a downward sloping demand?

The answer to both questions is that “it depends,” and what it depends on is the definition of efficiency.

Let’s examine a simple example. Let’s take a purely monopolistic producer, the only firm in an industry. Let’s assume a very special result, that the profit maximizing output allows the monopoly firm to just break even. Figure 1 represents this case.

Figure 1



Producing at the profit maximizing output Q , the monopolist could barely survive, just covering all costs, including opportunity cost, and thus earning a zero economic (normal accounting) return on investment.³⁵ Since consumers earn a surplus on the Q units that are produced by the monopolist, social welfare is improved because this product is produced, even at the monopolistic level. This situation is known as natural monopoly. The textbooks will tell us that this is a product that can be successfully produced by a monopoly, but not by a competitive industry.³⁶

That is because the standard competitive output³⁷ is Q^* , where demand (D) intersects supply (where the MC of the monopolist is the same as the sum of the marginal costs of many individual competitive firms, otherwise known as supply).³⁸ If this industry were competitive, profits would be negative and this product would not be produced.

The welfare characteristics of this monopoly solution are somewhat difficult to classify. The output from Q to Q^* has a marginal cost of production which is below the demand for those units. Society would be better off if we could get those additional units produced. But at this point in the analysis we encounter Demsetz's Nirvana fallacy.³⁹ If the only actual choices are monopoly (Q) or no production, then Q is the best society can do, making it the efficient solution. It doesn't matter whether we could imagine a better solution, if that better solution is not feasible.⁴⁰ The Nirvana fallacy lazily assumes that the better (ideal) solution can be achieved (usually by the government), although a careful analysis usually indicates that it cannot be achieved. The

³⁵ At output Q , the average cost of production is equal to the price of the product, leading to zero profit, as seen by the tangency between the average cost curve (AC) and the demand curve at Q .

³⁶ See LANDSBURG, *supra* note 8, at 356.

³⁷ Assuming that the monopolist's marginal costs are the same as the supply curve of a competitive industry, as is usually assumed when comparing competition to monopoly.

³⁸ This is a horizontal summation of marginal cost curves, and the only portion of the curves which are summed are those portions which lie above the related average variable cost curve.

³⁹ Harold Demsetz, *Information and Efficiency: Another Viewpoint*, 12 J.L. & ECON. 1, 1 (1969) ("The view that now pervades much public policy economics implicitly presents the relevant choice as between an ideal norm and an existing 'imperfect' institutional arrangement. This *nirvana* approach differs considerably from a *comparative institution* approach in which the relevant choice is between alternative real institutional arrangements.").

⁴⁰ If the book publisher had the super-human capabilities of being a perfectly discriminating monopolist, then a larger number of copies of the novel (Q^*) would be produced than would be the case for the ordinary monopolistic publisher, and overall economic welfare would be increased. But a perfectly discriminating monopolist is a textbook fiction, a different type of Nirvana, and not a feasible solution, so Q^* cannot be realistically achieved that way.

ideal solution, if unachievable, should not be classified as the efficient solution.⁴¹

This understanding of the meaning of efficiency is central to understanding the efficiency of markets for copyrighted products. The vast majority of authors and other creators produce works that tend to have many close substitutes. Because of the large number of close substitutes, producers of the average titles are likely to earn zero economic profit, just as in a competitive industry. The ownership rights provided by copyright do not allow typical creators to wield any monopoly power.

There is a different “textbook” model that fits the market for creative works, a model known as “monopolistic competition.”⁴² The key implications of this model are that competition drives the profits to zero for competing producers of differentiated products and the differentiation means each producer faces a downward sloping demand curve. The diagrammatic representation of the equilibrium of this model, for the typical firm, is identical to Figure 1. As we have already seen, there are no efficiency improvements to be had from the “monopoly” output Q .

Unlike the typical model of monopolistic competition, however, which assumes all varieties are equal in some vague sense, in the real world some varieties are clearly better than others. There are some titles where the demand curve is not tangent to the average cost curve, but where it lies above the average cost curve. Profits can be earned on this small class of titles (which would have an outsized share of the total sales market, however).

Those better varieties are produced by more talented creators. Copyright allows individuals with unique (monopoly) skills to exercise their monopoly in these markets. Stephen King and Adele have monopoly talent in the markets for horror books and popular music respectively. Copyright provides King and Adele with the ability to access their innate monopoly power, and to exercise

⁴¹ Some textbooks will also tell you that result in this model (monopolistic competition) is not ideal because output Q^* would be better than output Q , and because the firm is not at the bottom of its average cost curve (AC). But as we have seen, not being ideal is not the same as being inefficient. And there were very strong debates within the economics profession about whether Q^* really was better than Q since Q was associated with zero product differentiation, and differentiation, otherwise known as variety, has its own value which is missing from an analysis of Figure 1. This deviation from the perfectly competitive ideal led to criticisms of advertising, fashions, model year changes in products (such as automobiles or clothing), and variety itself. Over time, a more complete understanding of the tradeoffs involved with variety took hold and the more doctrinaire concerns with the so-called inefficiency in Figure 1 that the apparatchiks of the Soviet Union and many economists in the 1930s and 1940s believed, was discarded. Modern economists generally believe that it is not a social waste for people to wear clothing of different styles and colors.

⁴² See, e.g., LANDSBURG, *supra* note 8, at 428 (defining monopolistic competition as: “The theory of markets in which there are many similar but differentiated products.”).

that monopoly power in their respective markets. They earn monopoly rents in the same way that basketball's LeBron James and golf's Jordan Spieth do.

It is possible to argue that feasible welfare gains could come about by weakening copyright (ownership) for this set of copyrighted works. In these instances, allowing free riders to print competing copies of the work would move the market toward Q^* , increasing welfare. Could this be the actual target of copyright critics arguing against "monopoly"? Perhaps, but in that case these critics need to be more careful than they have been. This is certainly not the same as saying the copyright provides a monopoly to all creators, as often alleged. And the focus on copyright misplaces the source of monopoly.

Note that the source of the monopoly in these cases is not the copyright. These monopolies are due, instead, to differences in innate talent. Put another way, we can say that the monopoly was "earned." This also opens up another question: monopoly "talent" is not a target of antitrust activities elsewhere in the economy, and it is unclear why such monopolies should be removed in copyright market when they are allowed in virtually all other labor markets.⁴³

After all, the same welfare enhancement could arise for every firm earning above normal rents due to some inherent monopoly talent. There are clearly markets where the leading firms have put together teams with superior talent, such as Apple.⁴⁴ Applying the same logic would imply that there would be a temporary gain in welfare by having the government force Apple to lower the price of its main product, iPhones, holding everything else constant. But there are good reasons for the government to allow creators of superior products to keep monopoly the rewards due to their creations. In particular, the government should want to induce the type of behavior exemplified by Apple's success. That logic should hold for creative works as well.

CONCLUSIONS

Although both patent and copyright grant property rights to intellectual creations, which prevent competition from those who would make copies of these creations, there is a fundamental difference in how they treat later

⁴³ See Liebowitz, *supra* note 27, at 946. It is true that if free riders were allowed to impinge on the ownership of one of the titles written by an author with inherent monopoly power, the free riders could lower the price of the book, reduce the profits generated by the monopoly talent, and increase consumer welfare. But just because this action can be more easily undertaken in this market than in most other markets where individuals exercise some monopoly power, it is unclear why copyright owners should be singled out in eliminating their monopoly profit when they did not engage in any anticompetitive behavior, the usual requirement for government actions to combat monopoly.

⁴⁴ In January 2015 Apple posted the largest quarterly profit of any firm in history. David Goldman, *Apple Just Posted the Best Quarter in Corporate History*, CNN: MONEY (Jan. 28, 2015), <http://money.cnn.com/2015/01/27/technology/apple-iphone-earnings/index.html> [<https://perma.cc/TUC8-KH9V>].

independent creation. Copyright allows independent creations that are very similar to an already copyrighted product, whereas patent does not. This distinction between the two property rights has important economic implications for the two rights.

In the case of notice costs, many copyrighted works have none. Any work that is created from “scratch,” meaning the author does not engage in direct copying of previous works, does not violate copyright. An author of such a work does not need to take notice of prior works, and owners of prior works have no grounds on which to restrict the sales of the new work and thus have no incentive to provide notice to this set of authors. There are, however, still notice costs for works that are created while intentionally copying material from prior works. Because copyrighted works are sometimes created from scratch and sometimes use portions of prior works, average notice costs are somewhere between the average of these two types of works. Tangible properties never have zero notice costs and thus it is unclear whether copyrighted works have lower or higher average notice costs than do tangible goods, although it has sometimes been claimed that copyrighted goods have higher notice costs than tangible goods.

For patented goods, notice is always an issue. Creating an innovation from scratch does not preclude having to take notice of prior works because patents restrict independent creations if they are not patented first. Patents may or may not have higher notice costs than tangible goods, but they almost surely have higher notice costs than copyright. This is one reason to not treat patents and copyrights as being the same.

In a similar vein, copyrights and patents are very different in providing potential monopolies. Copyright is a method for providing ownership, pure and simple. Any monopoly in the market for the final copyrighted product is due to the nature of the product and not the copyright. Patents, on the other hand, although they also provide ownership over the innovation, do have the potential for providing some monopoly power because independent creation is not allowed. Thus, an innovation which might have many close substitutes can be limited in the market to only the first entrant to claim a patent, and the resulting monopoly could be due to the patent more than to the uniqueness of the idea behind the original innovation.

The take-away is quite simple. Misleading conclusions are drawn when we conflate copyright and patents into the single rubric of intellectual property and neglect to treat them as separate structures, each with its own set of independent attributes.