

## Of Trolls, Orphans, and Abandoned Marks: What's Wrong With Not Using Intellectual Property?

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### ABSTRACT

*The question whether intellectual property (“IP”) rights should require use is a pressing one today. Neither patent nor copyright law formally requires that the IP owner actually use the patented invention or copyrighted work. Yet use would seem necessary for a work to reap the social benefits that justify granting exclusive rights. Trademark law does require use, but it sometimes protects marks even when mark owners have ceased using them.*

*This messy state of affairs has come under considerable pressure in recent years. Critics condemn patent assertion entities, commonly known as patent trolls, for asserting patents that they do not commercialize or use themselves, and some of these critics advocate a general use requirement to handle the problem. In copyright, the problem of orphan works has become particularly salient with the rise of digital technology and user-generated content, and the optimal solution involves tricky questions bearing on use. Trademark law also exhibits confusion about use and nonuse in the area of trademark abandonment. In particular, courts have been unable to develop a coherent approach to abandonment by nonuse when the abandoned mark retains substantial residual goodwill.*

*This Article breaks new ground by focusing on use from the perspective of the utilitarian and nonutilitarian theories that justify IP rights and by using this perspective to develop a general framework for analyzing questions of use and nonuse across patent, copyright, and trademark law. When the issues are examined at the normative level, it becomes clear that a general rule conditioning IP rights on use across-the-board is not desirable. Any use requirement should be tailored to the nature of the specific problems that nonuse creates. In keeping with this insight, the Article examines the patent troll, orphan work, and residual goodwill problems and proposes sensible solutions tailored to each.*

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## INTRODUCTION

Many types of intellectual property rights in the United States do not require use. The author of an original work of authorship, for example, has federal copyright rights in her work even if she chooses not to publish, license, or otherwise use it.<sup>1</sup> While there was a time when patent owners had to work their patents,<sup>2</sup> the owner of a patented invention today can sue for patent infringement even if she does not commercialize, license, or otherwise use her invention productively.<sup>3</sup> And trademark law, while it requires an owner to use the mark in trade, sometimes protects marks after owners cease to use them.<sup>4</sup>

On one view, none of this is terribly surprising. If intellectual property (“IP”) is property, one might argue, the owner of IP has a right to do with it as she pleases, including doing nothing at all.<sup>5</sup> This simple view of IP as property, however, begs the question of what rights IP law *should* confer. It assumes that labeling something “property” necessarily means that the owner has an absolute right to do whatever she wants with it. But property rights are not absolute. IP rights, in particular, promote certain values and purposes, and those values and purposes place limits on their scope. The question is whether use should be one of those limits.

Once one gets past the absolutist view of intellectual property, it is not obvious why the law should protect IP that is not used. The standard normative account of patent, copyright, and trademark in the United States is utilitarian, and utilitarian theory values IP rights for the social benefits they confer.<sup>6</sup> It is difficult to see how society can benefit unless IP is used, perhaps even used publicly. For example, the utilitarian theory of patent and copyright focuses on encouraging creativity: the law gives creators exclusive rights in their creations in order to incentivize inventions

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1. See *Fox Film Corp. v. Doyal*, 286 U.S. 123, 127 (1932) (noting in a case involving state taxation of copyright royalties that “[t]he owner of the copyright, if he pleases, may refrain from vending or licensing and content himself with simply exercising the right to exclude others from using his property”); see also 17 U.S.C. § 102(a) (2012) (requiring only originality and fixation).

2. For the history of working requirements in different countries, see Marketa Trimble, *Patent Working Requirements: Historical and Comparative Perspectives*, 6 U.C. IRVINE L. REV. 483, 487–96 (2016).

3. *Special Equip. Co. v. Coe*, 324 U.S. 370, 378–79 (1945); *Cont’l Paper Bag Co. v. Eastern Paper Bag Co.*, 210 U.S. 405, 429 (1908).

4. See *infra* Part III (discussing abandonment and residual goodwill). There are other examples, too. For instance, the federal Defend Trade Secrets Act (DTSA) follows the Uniform Trade Secrets Act (UTSA) in formally protecting trade secrets without any explicit use requirement. Defend Trade Secrets Act, 18 U.S.C. § 1839(3) (2016) (defining “trade secret” without regard to use); Uniform Trade Secrets Act, § 1(4) (UNIF. LAW COMM’N 1985) (same). Compare RESTATEMENT (FIRST) OF TORTS § 757 cmt. b (AM. LAW INST. 1939) (requiring that the secret information be “used in one’s business,” with RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 39 (AM. LAW INST. 1995) (omitting this requirement).

5. This view seems to underlie the pivotal Supreme Court decision rejecting a use requirement for patent rights. See *Cont’l Paper Bag Co.*, 210 U.S. at 424 (stating that when the inventor discovers something of value, “it is his absolute property”).

6. See ROBERT P. MERGES, PETER S. MENELL, & MARK A. LEMLEY, *INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE* 11 (Wolters Kluwer eds., 6th ed. 2016) (“Utilitarian theory and the economic framework built upon it have long provided the dominant paradigm for analyzing and justifying the various forms of intellectual property protection.”).

and works of authorship for society's benefit.<sup>7</sup> But how can society benefit when an author or inventor refuses to share or use her IP?<sup>8</sup> Trademark law is not about incentives to create, but it is about protecting source-identifying symbols,<sup>9</sup> and a symbol must be used in trade before it can become a source identifier.<sup>10</sup>

As we shall see, the utilitarian analysis of nonuse is more complicated than this quick review suggests. Moreover, utilitarianism is not the only normative theory relevant to IP law.<sup>11</sup> In Part II, I review the most important normative theories underlying IP law in the United States and their implications for nonuse: an incentive-based utilitarian theory for patent law, a mix of utilitarian, Lockean, and personhood theories for copyright, and an efficiency-based theory for trademark. As for patent, a careful analysis of the benefits and costs of requiring use shows that an across-the-board use requirement is undesirable, although a more limited use requirement makes sense.<sup>12</sup> As for copyright, the utilitarian rationale supports a limited use requirement just as it does for patent. But nonutilitarian theories have greater force in the copyright field and they might seem opposed to requiring use. Yet on closer examination they too can support meaningful limits on copyright rights when a work is not used.<sup>13</sup> Finally, while the normative arguments for a use requirement are strongest in trademark law, there are reasons for extending limited trademark protection to some cases of nonuse.<sup>14</sup>

Considering use and nonuse in light of IP law's underlying normative theories is important for resolving a number of concrete problems today. Some critics complain, for example, about firms—so-called “patent assertion entities” (PAEs), or more derisively, “patent trolls”—that purchase patents not to use them, but to assert them against others who make productive use.<sup>15</sup> These critics point to the fact that PAEs benefit greatly from the rule that patentees can enforce their patents without

7. See *United States v. Paramount Pictures*, 334 U.S. 131, 158 (1948) (noting that copyright and patent rights are not granted primarily to reward the creator but rather to secure “the general benefits derived by the public from the labors of authors.”); *Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151, 156 (1975) (noting that “the ultimate aim [of copyright law] is, by this incentive [i.e., reward to the creator], to stimulate artistic creativity for the general public good”).

8. See, e.g., Alireza Chavosh, *Patent Nonuse: Are Patent Pools a Possible Solution?* 3 (Univ. Cal., Berkeley – Coleman Fung Inst. for Eng'g Leadership, Working Paper, July 7, 2017), <https://perma.cc/MC92-DVPW> (“if patents are not used they support the [patent] monopoly without providing any social and economic benefits since the innovations based on those patents are not eventually exploited”).

9. See, e.g., *Qualitex Co. v. Jacobson Prods. Co., Inc.*, 514 U.S. 159, 164 (1995); 1 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 6:3 (5th ed. 2017) [hereinafter MCCARTHY ON TRADEMARKS].

10. 2 MCCARTHY ON TRADEMARKS, *supra* note 9, § 16:18.

11. See MERGES ET AL., *supra* note 6, at III-17, IV-11.

12. See *infra* Section II.A.

13. See *infra* Section II.B.

14. See *infra* Section II.C.

15. PAEs are a subset of a larger category known as non-practicing entities (NPEs). NPEs also include universities and research institutions that license rather than practice their patents on their own. See generally Mark A. Lemley & A. Douglas Melamed, *Missing the Forest for the Trolls*, 113 COLUM. L. REV. 2117, 2126 (2013) [hereinafter Lemley & Melamed, *Trolls*].

using them.<sup>16</sup> So too, the orphan work problem often pits a copyright owner who has ceased using the work—and might even have forgotten all about it—against someone who wants to make a productive use but who cannot secure permission because she cannot identify the owner. And courts struggle with cases where consumers still rely on a mark to identify the trademark owner's products even after the owner has stopped using the mark. The normative status of nonuse figures prominently in all three areas.

This Article explores the complicated relationship between nonuse and IP rights.<sup>17</sup> Although it is not the first to analyze nonuse,<sup>18</sup> it is the first to construct a general approach to issues of use and nonuse across all three major IP fields (patent, copyright, and trademark) based on a systematic analysis of the range of utilitarian and nonutilitarian theories justifying IP rights. It also applies this general framework to PAEs, orphan works, and abandoned marks with residual goodwill. The need for this type of analysis is particularly pressing in today's world of digital technology. PAE suits, for example, typically involve information technology and software patents, and the most serious problems with orphan works stem from new uses made possible by digitization.<sup>19</sup>

The main body of this Article is divided into three parts. Part I lays the groundwork for later discussion by clarifying what is meant by “use” and “nonuse” and outlining a typology of the most salient forms of IP nonuse. Part II explores the normative status of nonuse in IP law. Section II.A focuses on patent law; Section II.B on copyright law, and Section II.C on trademark law. This discussion shows that nonuse is problematic for different reasons depending on the type of IP and the policies driving the particular IP theory. In particular, it challenges those who advocate an across-the-board use requirement for patent rights, as well as those who argue that use should not be required at all. Similarly, it shows that imposing a limited use requirement on copyright enforcement is compatible with copyright law not only as a means to incentivize creativity, but also as a way to protect Lockean and personhood rights. And it explains why, notwithstanding the primacy of use in trademark law, the normative basis for trademark rights sometimes favors protecting marks without use.

Part III then explores the implications of Part II's analysis for the concrete problems of PAEs, copyright-protected orphan works, and trademark abandonment.

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16. See Oskar Liivak & Eduardo M. Penalver, *The Right Not to Use in Property and Patent Law*, 98 CORNELL L. REV. 1437, 1439-40, 1442, 1451 (2013).

17. The analysis is normative and does not take account of international treaty obligations. It is worth noting that the legal implications of nonuse are also complicated for tangible property. Ordinarily we do not condemn a landowner for holding land for speculation, but these attitudes can change in times of scarcity or rapid growth when land becomes an important input to the generation of social wealth. See, e.g., *id.* at 1464-65 (noting that this was the case in some areas of the American west during the nineteenth century). They can also change when vacant land attracts blight to an urban area. *Id.* (describing cities' use of eminent domain and the imposition of higher taxes to encourage development of vacant land).

18. Professors Liivak and Penalver evaluate the legal significance of nonuse in the patent field. See *id.* I draw on their work to some extent, but also criticize and modify their analysis in important ways, expand on it, and address nonuse issues in copyright and trademark law as well.

19. See *infra* Part III.

It argues for a qualified use requirement as part of the solution to PAEs. It explains why the conventional approaches to the orphan works problem, which focus on providing compensation to copyright owners, are misguided and why orphan-work copyright owners should not be allowed to enforce their copyrights against third party users. And it offers an approach to abandoned marks with residual goodwill that better implements the core policies underlying trademark law.

## I. PRELIMINARIES

It is important to be clear about terminology at the outset. The following discussion first defines more precisely what I mean by “intellectual property.” It then clarifies the concept of “use” and distinguishes use from mere assertion of IP rights. The discussion closes by identifying four important types of IP nonuse. Throughout the discussion, I endeavor to keep the definitions as free of normative content as possible, so the concepts can be applied to all the theories explored in Part II.

### A. “INTELLECTUAL PROPERTY”

Courts and commentators often employ the terms “intellectual property” and “IP” loosely, sometimes to refer to a particular invention, work, or mark, and sometimes to refer to the legal rights that attach to the invention, work, or mark. In this Article, I employ these terms in the first sense—to denote an actual invention, work, or mark. I refer to the legal rights that attach to creations as “IP rights,” or more specifically, as “patent rights,” “copyright rights,” and “trademark rights.” As we shall see, this usage best fits the way courts and commentators frame the nonuse problem today.<sup>20</sup>

### B. “USE”

In general, a person uses IP when that person does something to realize at least some of the IP’s value. The value of IP can be economic or noneconomic. The noneconomic value of an invention, for example, lies in its ability to accomplish a useful result and this noneconomic value also gives it economic value. It follows that a firm “uses” an invention whenever it makes and sells products that incorporate the invention, takes steps to improve on the invention, applies the invention to research, or engages in other value-generating activities involving the invention. On the artistic side, a painting with a potential market has economic value, and the same painting has noneconomic value as a form of aesthetic expression for the artist and a source of pleasure and meaning. Thus, a painter “uses” her painting when she hangs it on the wall and enjoys contemplating it, displays it publicly, sells prints, and so on. As for trademarks, a firm “uses” a mark when it sells goods or services bearing the mark.

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20. When critics worry about IP nonuse, they envision an owner of IP rights asserting those rights against others without making, selling, developing, or otherwise using the underlying invention, work, or mark. See *infra* Part III.

To understand current debates over IP nonuse, it is important to distinguish between using IP and using IP *rights*. In particular, the act of asserting IP rights, whether by threatening or filing suit, does not alone constitute IP “use,” as I employ the term here. For example, a patent troll uses its patent rights by asserting them against others, but it does not use the specific invention protected by those rights. So too, the owner of the copyright in an orphan work asserts her copyright rights against others even after ceasing all use of the work. And a firm can stop using a mark but still be able to assert trademark rights when the mark has residual goodwill.

It is also important to distinguish between use by the IP owner and use by others. The question addressed in this Article is whether an IP *owner* should be able to assert its rights against others when it doesn’t use the IP itself. The fact that others use the IP does not necessarily mean that the IP owner also uses it.

This point raises a question of considerable importance to the analysis of nonuse: When does licensing qualify as use on the part of the IP owner-licensor? The answer depends on whether the owner actively seeks a licensee to develop and exploit the IP. To illustrate, suppose a university research department comes up with an invention and obtains a patent on it. The university cannot commercialize the invention on its own so it takes affirmative steps to find a company willing to license the patent and pay royalties to the university. One might argue that the university is not an IP user as the term is defined here if the university merely relies on its patent rights to negotiate a license. However, the university does more than that. Unable to commercialize the invention itself, the university *actively* seeks a firm to do the job on the university’s behalf and partly for its benefit.<sup>21</sup>

The university is a user because the university, for all practical purposes, acts with the company that licenses the patent for the purpose of commercializing the invention. More generally, an IP owner-licensor is a “user” when its relationship with the licensee justifies attributing the licensee’s use in significant part to it. It follows that purely passive licensing is not use. For example, a copyright owner is not a user just because another party obtains a compulsory license to use the work and pays royalties to the owner.<sup>22</sup> In that case, the copyright owner does nothing to engage the licensee and might not even want the license at all.

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21. Sometimes universities sit on their patents rather than try to license them and sue others when they use the invention unaware of the university’s prior patent rights. In that case, the university engages in what I later call “strategic nonuse” and acts as a patent troll. See Mark A. Lemley, *Are Universities Patent Trolls*, 18 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 611 (2008). But that is not our hypothetical.

22. The Copyright Act includes a number of compulsory licensing schemes in which someone who wishes to copy and use a copyrighted work can do so without the copyright owner’s permission as long as she complies with the statutory requirements and pays the prescribed licensing fee. See, e.g., 17 U.S.C. § 115 (Westlaw through Pub. L. No. 115-231) (creating a compulsory licensing regime for nondramatic musical works).

### C. A TYPOLOGY OF “NONUSE”

It will be useful to distinguish among four general types of IP nonuse: complete nonuse, temporary nonuse, strategic nonuse, and functional nonuse. These four types cover most of the cases of IP nonuse today.<sup>23</sup>

“Complete nonuse” refers to a situation in which the IP owner sets the IP aside and does nothing at all with it. The IP might not be valuable enough to interest anyone in using it, or the IP owner might have idiosyncratic reasons for ignoring it. For example, an inventor might store her unmarketable invention in the garage and never look at it again, or a poet might file her poem in her computer’s hard drive or place it on a shelf to collect dust and never read it to others, attempt to publish it, or otherwise use it.

“Temporary nonuse” covers situations in which the IP owner is not currently using the IP but has definite plans to use it in the future. The reason for nonuse is to prepare the IP for future use, such as by laying the groundwork for publication, creating the infrastructure for commercialization, or setting the stage for licensing. It is critical that the IP owner who is engaged in temporary nonuse actually have plans for use in the *reasonably foreseeable future* and that the period of nonuse is reasonably related to implementation of those plans.<sup>24</sup> For example, a novelist who sits on her novel indefinitely in the hope that conditions become more favorable for publication sometime in the future is a complete nonuser, not a temporary nonuser. However, she can become a temporary nonuser if conditions change and she takes steps to publish the work.

“Strategic nonuse” includes scenarios, like those involving PAEs or patent trolls, in which the IP owner has no bona fide intent to develop the IP herself or to license it as part of a plan to commercialize or develop it in the definite future.<sup>25</sup> The IP owner instead seeks to profit from strategically deploying its IP rights. For example, one of the main reasons a patent troll chooses nonuse is to facilitate the element of surprise essential to its holdup strategy.<sup>26</sup> It sits on its patent until another firm makes

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23. See generally Chavosh, *supra* note 8, at 3, 5–6 (noting that the literature distinguishes between sleeping and strategic patents, where “sleeping patents” are patents that are “left completely unused” and “strategic patents” are patents that are unused for strategic purposes).

24. See Liivak & Penalver, *supra* note 16, at 1473 (distinguishing “purposeful and self-consciously temporary nonuse as part of a longer-term marketing strategy” from “permanent or indefinite nonuse”).

25. This is different than using a patent to suppress an invention, say, in order to maximize profits from an existing market. See, e.g., *Cont’l Paper Bag Co. v. Eastern Paper Bag Co.*, 210 U.S. 405 (1908); 6A CHISUM ON PATENTS §19.04[3][1](2017); Kurt M. Saunders, *Patent Nonuse and the Role of Public Interest as a Deterrent to Technology Suppression*, 15 HARV. J.L. & TECH. 389, 391–400, 402–17 (2002) (collecting examples of suppression). In contrast to a strategic nonuser, an IP owner engaged in suppression has no interest in licensing and does not care about damages unless the prospect of paying damages discourages other firms from using the patented invention.

26. Another reason is to avoid the cost of developing and marketing the patented invention. “Holdup” refers to a strategy in which an owner of patent rights in a component of a multi-component device waits until the manufacturer makes irreversible investments and then asserts its patent to block the device from being manufactured and sold. The seller of the device has an incentive to pay the patentee much more than the amount the patented technology adds to the value of the device if the alternative is an injunction against marketing the device at all. When there are thousands of components covered by



irreversible investments in a product that has an arguably infringing component, and then springs the patent on the surprised user, threatens suit, and demands payment in excess of the patent's value.<sup>27</sup>

In contrast to a complete nonuser, the strategic nonuser seeks to exploit its IP and refrains from use because nonuse is essential to its strategy. In contrast to a temporary nonuser, the strategic nonuser has no definite plans to use its IP in the reasonably foreseeable future; it merely lays in wait until someone else uses it. In fact, a strategic nonuser never becomes a user even if its litigation threats succeed in securing a license. This is because the strategic nonuser does nothing to seek out a licensee.

Finally, "functional nonuse" refers to situations where an IP owner uses a patent or copyright for a purpose that does not fit how the relevant body of IP law contemplates use. The best examples come from patent law. In these cases, the patentee does not sell, license, or otherwise commercially exploit or develop the invention, as the theory behind patent law assumes (so the inventor can recoup its fixed invention costs).<sup>28</sup> Instead, the patentee uses the patent for other purposes that arguably do not fit patent law, such as signaling information to the public about the firm and its research and development program.<sup>29</sup>

Technically, this is not "use" of the invention itself according to my definition. At the same time, it is something different than simply asserting IP rights. The invention in fact is used, but not directly. It is used to obtain a patent and then the patent, along with the description of the invention in the patent, is used to convey information about the firm. This activity is hard to classify because it employs the patent, and indirectly the invention, to serve a purpose beyond what the patent law contemplates. For this reason, we might be justified in simply ignoring it as irrelevant to the issue of use and enforcement. However, I prefer to consider it as a type of nonuse. I use the label "functional nonuse" because the use ends up—as a normative matter—being treated as nonuse for functional reasons.

To take a silly example, no one would count the display of patent documents on a living room wall as a use for purposes of determining whether the patent owner is an IP user and can enforce its patent rights. More realistically, firms sometimes obtain lots of patents in order to send a signal to investors that the firm has substantial knowledge capital, a particularly productive research and development department, or a willingness to invest heavily in inventive activity, or they use the description of the invention in the patent application to convey information about a particularly

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patents owned by different patentees, all of whom insist on royalties—a situation known as "royalty stacking"—the total burden on X can be huge. See Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991 (2007).

27. Lemley & Melamed, *Trolls*, *supra* note 15, at 2148–49, 2174–75; Tun-Jen Chiang, *Trolls and Orphans*, 96 B.U. L. REV. 691, 694–96 (2016).

28. See *infra* notes 52–57 (explaining patent law policies).

29. See Clarisa Long, *Patent Signals*, 69 U. CHI. L. REV. 625 (2002). In fact, much of the time, the patent has too small a market value to justify commercialization. *Id.* at 627–28 (arguing that firms collect lots of patents, many of them low value, to credibly signal information to the capital markets).

promising research agenda.<sup>30</sup> In these cases, the patentee uses the patent and the invention described in it for private benefit—to attract investment from the capital markets—but not in a way that fits the standard model of patent law, which assumes that patentees obtain profits from commercially exploiting their patented inventions and that those profits reward and thus incentivize inventive effort.<sup>31</sup> Perhaps the standard model should be expanded to include these signaling uses, but if not, there is a mismatch between the use and the functions of patent law. My general point here is that not all kinds of use should count. The uses that matter ought to fit what the IP rights are trying to do.

## II. NORMATIVE ANALYSIS OF IP NONUSE

The following discussion focuses on whether, in theory, nonuse should affect the existence and enforceability of IP rights. The answer, as we shall see, depends on the normative theory justifying the grant of rights. IP law in the United States draws on a number of different normative theories. The dominant theory is utilitarian; it focuses on maximizing aggregate social welfare understood in economic terms.<sup>32</sup> But the precise content of the utilitarian theory is different for different areas of IP law.<sup>33</sup> In addition, nonutilitarian theories focused on individual rights and fairness to creators (rather than aggregate welfare) compete for attention, more so in some IP areas than in others.<sup>34</sup>

Section A below focuses on patent law; Section B on copyright law, and Section C on trademark law. This discussion sets the stage for Part III's analysis of PAEs, orphan works, and trademark abandonment.

### A. PATENT

#### 1. Background

Empirical studies confirm that many, perhaps most, patents are unused. One study estimated that “approximately forty to ninety percent of issued patents are not used or licensed by the patentees.”<sup>35</sup> Patentees have many reasons for choosing not to use

30. *Id.* at 647–48, 651–52, 672–74. In the late 1990s and early 2000s, for example, start-ups did a lot of patenting because venture capitalists treated the number of patents a start-up applied for and obtained as a signal that the start-up was well managed and that the entrepreneurs behind it had enough confidence in their venture to invest in obtaining patents. *Id.* at 653.

31. *Id.* at 636–43 (contrasting the signaling model with the standard model of patent law).

32. See MERGES ET AL., *supra* note 6, at I-11; Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 TEX. L. REV. 989, 993 (1997) [hereinafter, Lemley, *Economics of Improvement*].

33. Compare *infra* sections II.A.2 and B.2 (patent and copyright) with II.C.2 (trademark).

34. See ROBERT P. MERGES, JUSTIFYING INTELLECTUAL PROPERTY 9-22 (Harv. Univ. Press, 2011) [hereinafter, R. MERGES, JUSTIFYING]; MERGES ET AL., *supra* note 6, at III-17, IV-11.

35. Saunders, *supra* note 25, at 391. See also Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1503–04 (2001) (presenting data showing that many patents are left unused after they are issued); Chavosh, *supra* note 8, at 3–4 (reporting a study in Europe showing that

their patents. An invention might not have enough commercial or private value to make it worth using, or the patent might be part of a larger portfolio of patents that serves to fence off a core technology<sup>36</sup> or signal firm strength.<sup>37</sup> The patent might be stored away to use in a future litigation settlement or, as in the case of strategic nonuse, to assert against a third-party user.<sup>38</sup>

The United States has never imposed a use requirement on domestic patent holders, although a few lower federal courts toyed with the idea in the late nineteenth century.<sup>39</sup> The patent statute imposed a use (“working”) requirement on foreigners for a brief period in the first half of the nineteenth century.<sup>40</sup> But this requirement was repealed in 1836, and the Patent Act has never had a formal use requirement since.<sup>41</sup>

The Patent Act today does require patentees to pay periodic maintenance fees to keep their patents active.<sup>42</sup> This requirement screens out patents that have too little value to the patent owner to justify paying even the relatively small fee, and it seems reasonable to suppose that most, if not all, of these patents are unused.<sup>43</sup> However, maintenance fees are not the equivalent of a use requirement. Indeed, nonusers who place a significant value on their unused patents, such as strategic nonusers and functional nonusers, have good reason to pay the required fees.<sup>44</sup>

Today, many countries outside the U.S. require that patent owners use their patents.<sup>45</sup> These working requirements take a number of forms and serve a number of different purposes, including teaching the art to the local population, disclosing the invention in the patent-granting country, promoting the local economy, and

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about 50% of all patents in the patent portfolios of some large companies, such as IBM, are not used internally, licensed, or sold to third parties).

36. Gideon Parchomovsky & R. Polk Wagner, *Patent Portfolios*, 154 U. PA. L. REV. 1 (2005).

37. Long, *supra* note 29.

38. Chavosh, *supra* note 8, at 3 (listing reasons).

39. See *Hoe v. Knap*, 27 F. 204, 212 (N.D. Ill. 1886); Saunders, *supra* note 25, at 398–99 (explaining that a few lower federal courts denied liability for infringement in some cases where the patentee did not work the patent). The Supreme Court put an end to the practice in *Cont'l Paper Bag Co. v. Eastern Paper Bag Co.*, 210 U.S. 405, 429 (1908), where it held that the patentee has an absolute property right to refrain from using its patent.

40. From 1832 to 1836, any foreigner who obtained a U.S. patent had to use—“work”—the patent in the United States or forfeit its U.S. patent rights. See Trimble, *supra* note 2, at 488.

41. 6A CHISUM ON PATENTS, *supra* note 25, §19.04[3][1]. Indeed, Section 271(d), adopted in 1988, provides that: “No patent owner otherwise entitled to relief for infringement or contributory infringement shall be denied relief . . . by reason of having . . . refused to license or use any rights to the patent.” 35 U.S.C. § 271(d)(4).

42. 35 U.S.C. § 41(b) (requiring payment of fees three-and-a-half, seven-and-a-half, and eleven-and-a-half years after grant); see Lemley, *supra* note 35, at 1503.

43. Lemley, *supra* note 35, at 1503 (noting the large number of issued patents that lapse for failure to pay maintenance fees).

44. Presumably increasing the amount of the fee would screen more unused patents, but there is a limit to how high the fee can be set without adversely affecting users as well.

45. For an overview and a history, see Trimble, *supra* note 2, at 487–97. There is uncertainty about whether the TRIPS agreement bars working requirements. See *id.* at 496 (noting that some commentators believe that, while TRIPS does not do so expressly, it does so implicitly).

protecting local industry.<sup>46</sup> As we shall see in Part III, use requirements have found a new purpose with the advent of PAEs—deterring patent trolls.

## 2. Normative Analysis

Whether some kind of use requirement is desirable today depends on the goals of patent law. Perhaps more strongly than any other body of IP law in the United States, patent law rests on a utilitarian foundation.<sup>47</sup> There are two competing utilitarian theories: the prospect theory and the incentive theory.

The prospect theory focuses on efficient commercialization.<sup>48</sup> The idea is to give a property right to the inventor so the inventor can internalize all the benefits and costs of commercialization and coordinate an efficient scheme of use and licensing.<sup>49</sup> At first glance, it might seem obvious that prospect theory would support a use requirement. After all, the theory justifies granting patent rights to promote efficient use.<sup>50</sup> However, the idea behind prospect theory is to grant patents *before* plans to commercialize have crystallized. Therefore, while prospect theory requires use at some point, it does not require use as a condition to obtaining a patent or as a requirement for enforcing the patent during the preparatory period.<sup>51</sup>

Prospect theory need not detain us further because it is not the core policy justification for patent rights. That honor belongs to the incentive theory. Two incentives matter: the incentive to invent and the incentive to disclose.<sup>52</sup> Without IP rights, a prospective inventor cannot be confident that she can recoup the fixed costs she incurs during the invention process. The reason has to do with the fact that information is a public good.<sup>53</sup> In particular, information has the feature of

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46. See *id.* at 497–501. United States patent law addresses the teaching and disclosure goals by requiring disclosure in the patent application. *Id.*

47. See, e.g., MERGES AT AL., *supra* note 6, at III-17; David S. Olson, *Taking the Utilitarian Basis for Patent Law Seriously: The Case for Restricting Patentable Subject Matter*, 82 TEMP. L. REV. 181, 182 (2009); see also Peter S. Menell, *Intellectual Property: General Theories*, in 2 ENCYCLOPEDIA OF LAW AND ECONOMICS 129, 130 (Boudewijn Bouckaert & Gerrit De Geest eds., 2000). It is worth mentioning, however, that some commentators have proposed nonutilitarian theories. See, e.g., R. MERGES, *JUSTIFYING*, *supra* note 34, at 2–4. Still, it is fair to say that utilitarianism, and in particular the economic strand of utilitarianism, dominates the patent law field.

48. Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265 (1977).

49. *Id.* at 276–79.

50. *Id.* at 266.

51. Although it might make sense within prospect theory to require a bona fide intent to use as a condition to obtaining a patent. A useful analogy here is to the ITU registration scheme of the Lanham Trademark Act, in which a trademark owner can apply for registration before actually using the mark in commerce but must attest to a bona fide intent to use. See 3 MCCARTHY ON TRADEMARKS, *supra* note 9, § 19:13.

52. See, e.g., *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 480–81 (1974); Rebecca S. Eisenberg, *Patents and the Progress of Science: Exclusive Rights and Experimental Use*, 56 U. CHI. L. REV. 1017, 1024–30 (1989) (noting that the courts have relied mainly on these two incentives).

53. ROBERT COOTER & THOMAS ULEN, *LAW AND ECONOMICS* 114 (6th ed. 2016); Lemley, *Economics of Improvement*, *supra* note 32, at 994–95; Kenneth W. Dam, *The Economic Underpinnings of Patent Law*, 23 J. LEG. STUD. 247 (1994).

nonexcludability.<sup>54</sup> Suppose that in order to realize a revenue stream, our inventor must publicly disclose the invention by marketing it or otherwise using it in a public way. When the inventor does so, others will copy the invention freely without having to invest in discovering it and thus be able to sell the same invention at a price lower than the inventor must charge to recoup its fixed invention costs. This leaves the inventor suffering a net loss. Anticipating this outcome, our prospective inventor, who is assumed to be rational and commercially motivated, will not bother to invent in the first place.

Patent law solves this problem—and incentivizes invention—by giving the inventor a legal right to exclude the copier. Armed with patent rights, the inventor can demand a license on threat of suit or simply enjoin the copier from using the invention. Patent law also incentivizes public disclosure by requiring patent applicants to disclose their inventions. Public disclosure stimulates further invention and helps to realize the value of inventions for the broader society.

On the other side of the ledger, patent rights generate costs. Because the patent owner has a monopoly over the invention, it can charge prices above the competitive level and this produces deadweight loss.<sup>55</sup> Also, a patentee can prevent others from building on the patented invention to innovate further, which can chill follow-on creativity and impede downstream innovation when licensing fails.<sup>56</sup> Finally, a patent system creates administrative, enforcement, and transaction costs, including the costs of managing the patent registry, litigating patent suits, and licensing patent rights.<sup>57</sup>

From a utilitarian perspective, an optimal patent system balances the incentive and disclosure benefits of patent rights against the social costs. The question for us is how, if at all, use and nonuse fit into this utilitarian balance. At first glance, it might seem that use should always be a condition to enforcing a patent, and some commentators have suggested as much. The utilitarian account, after all, focuses on social welfare, and use is essential to realizing the full social value of an invention. If a patent owner is not using the invention and a third party starts using it, the utilitarian rationale would seem to favor the third-party user.

However, the status of nonuse in utilitarian theory is more complicated. It depends on the particular type of nonuse. The following analysis considers complete

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54. COOTER & ULEN, *supra* note 53, at 114.

55. See Oren Bracha & Talha Syed, *Beyond Efficiency: Consequence-Sensitive Theories of Copyright*, 29 BERKELEY TECH. L.J. 229, 238–39 (2014); Lemley, *Economics of Improvement*, *supra* note 32, at 996.

56. Suzanne Scotchmer, *Standing on the Shoulders of Giants: Cumulative Research and the Patent Law*, 5 J. ECON. PERSP. 29 (1991); Brett M. Frischmann & Mark A. Lemley, *Spillovers*, 107 COLUM. L. REV. 257 (2007).

57. WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW*, 18–19 (Harv. Univ. Press, 2003). These are not the only costs of the patent system. For example, patent races produce duplicative research and can even dissipate the social benefits of the patent monopoly, and the prospect of a patent monopoly can draw investment away from lines of socially useful research that are not likely to generate patentable inventions.

nonuse, temporary nonuse, and functional nonuse. I discuss strategic nonuse in connection with the analysis of PAEs in Part III.<sup>58</sup>

*a. Complete Nonuse*

Suppose *X* invents a new gadget, obtains a patent on it, and then shelves it, convinced that it is not worth commercializing or otherwise using. Or suppose *X* sells the invention and then puts it aside before the end of the patent term, after demand for it declines or a new technology supersedes it. When *X* completely ceases using the invention, a third party, *Y*, discovers a new use for it. The question is whether *X*, a complete nonuser, should be able to enforce its patent rights against *Y*, a productive user.

The utilitarian answer may seem obvious: *Y* should be allowed to use the invention freely.<sup>59</sup> *Y* adds social value by its use, and *X* loses nothing because *X* is doing nothing with the invention. However, it is also important to consider how a rule of no enforcement might affect *X*'s incentives at earlier stages of the process. Two stages are salient: the invention stage and the commercialization stage.

Any negative effects at the invention stage are likely to be trivial.<sup>60</sup> To be sure, *X* might invest less in invention *ex ante* when it knows it will not be able to capture all the additional benefits if it stops using the invention before the end of the patent term and a third party, like *Y*, discovers a new and valuable use for it. However, this factor is not likely to affect *X*'s investment incentives in a substantial way. Although it is an empirical question how often patentees completely cease using inventions during the patent term only to have a third party discover a new use with substantial value, it would be surprising if this were a common occurrence. Indeed, *X* has good reason to believe that most uses by third parties under these circumstances will not be all that valuable. After all, a rational and economically motivated *X* will have considered all potentially lucrative uses before it stops using the invention, including uses that others might find valuable and that *X* can license.<sup>61</sup> To be sure, new technological developments might open up new possibilities for the invention after *X* has put the invention aside. But a firm deciding *ex ante* how much to invest in a research project will have great difficulty foreseeing the existence of new technologies in advance, so its incentives will not be affected much by the prospect.<sup>62</sup>

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58. See *infra* section III.A.3.

59. In fact, as a practical matter, patentees in *X*'s position, convinced that the invention has little value, are not likely to pay the maintenance fees necessary to keep the patent from lapsing. See *supra* notes 42-44 and accompanying text.

60. The incentive analysis presented here is very similar to the incentive analysis for orphan works in Section III.B., and there I develop it in somewhat greater detail. See *infra* notes 213-226 and accompanying text.

61. Indeed, any use by a third party must hew quite close to the actual invention in order to infringe, which makes it even more likely that a patentee will think of the use. More precisely, for a use to infringe a patent, it must include all the elements of at least one claim, literally or by equivalents. 5A CHISUM ON PATENTS, *supra* note 25, §§ 18.03[4][a], 18.04.

62. See LANDES & POSNER, ECONOMIC STRUCTURE, *supra* note 57, at 213 (explaining that incentives cannot be significantly affected by the prospect of future technological developments that are

We must also consider the effects of a no-enforcement rule at the commercialization stage. One might worry that a potential licensee would just refuse to license and wait until *X* puts the invention aside and completely ceases using it, at which point *X* would be a complete nonuser and the potential licensee could use the invention freely under a no enforcement rule. For this strategy to be successful, however, all potential licensees must be willing to wait. But the advantages of defecting and taking a license are just too great.<sup>63</sup> A potential licensee who defects can start making profits as soon as it executes a license. This is likely to be a substantial benefit, especially when the patentee has the ability to prolong the waiting period by continuing to seek out a licensee. Also, if the license is exclusive, the firm that first takes a license will enjoy the market power that an exclusive license confers.

Given the social benefits of incentivizing third parties, like *Y*, to develop socially valuable new uses and the minimal impact on patentee incentives, the utilitarian rationale strongly weighs in favor of allowing third parties to use a patented invention after the patentee abandons it. One might consider conditioning third-party use on the user paying compensation to the patentee. But even this much is hard to justify on utilitarian grounds. Imposing a compensation requirement adds social costs—the costs of administering and enforcing the payment scheme and the costs of chilling innovation by third parties who cannot pay.<sup>64</sup> And it is not likely to add much to invention incentives for the reasons discussed above.

One special case of complete nonuse deserves separate mention.<sup>65</sup> Firms sometimes collect numerous peripheral patents into large patent portfolios and use them to fence off a core patented technology.<sup>66</sup> The idea is to make it difficult for others to come even close to the core technology and thus to enlarge the penumbra of protection for it.<sup>67</sup> In these cases, the firm makes no actual use of the peripheral patents except as litigation threats or settlement bargaining chips, neither of which qualifies as use under my definition.<sup>68</sup> Allowing enforcement of all the patents in such a portfolio, including unused peripheral patents, can enhance incentives to

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not reasonably foreseeable at the time the invention is made). And *X* will discount any future revenue stream to present value, which will reduce the incentive impact even further. *Id.* at 213.

63. This scenario is a Prisoners' Dilemma and the incentives to defect in Prisoners' Dilemma games are well known. ERIC RASMUSSEN, *GAMES AND INFORMATION: AN INTRODUCTION TO GAME THEORY*, 19–21 (4th ed. 2007).

64. See William M. Landes & Posner, *An Economic Analysis of Copyright Law*, 18 J. LEG. STUD. 325, 358 (1989) (noting that compulsory licensing schemes are "likely to entail substantial costs").

65. Another special case of complete nonuse involves technology suppression. See *supra* note 25. This often occurs when a patentee finds it more profitable to continue selling products that embody an old technology rather than switch to the new technology. It uses its patent to prevent competitors from competing with the new technology. See Saunders, *supra* note 25, at 392–96. This is an easy case for barring protection. The purpose of the strategy is anti-competitive and its effects are clearly welfare-reducing.

66. Parchomovsky & Wagner, *supra* note 36, at 31–41.

67. *Id.* at 32–33.

68. *Id.* at 36. Litigation threats and settlement bargaining chips do not constitute use because they only involve the assertion of patent rights.

invent by helping firms manage risk and avoid costly litigation.<sup>69</sup> But it can also increase social costs by creating a kind of “super-patent” that expands the patent owner’s monopoly well beyond what is socially desirable and beyond what the patent law contemplates.<sup>70</sup> Many commentators believe that the risks and costs of an expanded monopoly exceed any incentive benefits.<sup>71</sup> If so, allowing enforcement of unused peripheral patents in these cases makes no sense.<sup>72</sup>

*b. Temporary Nonuse*

It is easy to see that patentees should be allowed to enforce their patents during periods of temporary nonuse. Suppose our firm *X* believes that its new invention has commercial value but lacks the resources to commercialize it. *X* seeks a licensee. Under these circumstances, *X* should be allowed to enforce its patent while it searches, even though *X* is not using the invention during the search period. If *X* could not stop third parties, potential licensees would have no incentive to enter into licensing agreements. They would just use the invention, confident that *X*, as a temporary nonuser, could not enforce its patent rights against them.

This scenario is different than the one discussed above for complete nonuse, since here potential licensees could use the invention immediately without waiting for the patentee to become a complete nonuser.<sup>73</sup> And if prospective inventors anticipate this possibility, they will be less inclined to invent when they cannot commercialize inventions themselves.<sup>74</sup> As a result, one would expect inventive activity to become more concentrated in larger firms that can commercialize inventions on their own,

69. *Id.* at 32–34 (explaining how patent portfolios confer scale and diversity advantages).

70. *Id.* at 38. In these cases, the firm usually has a patent on the core technology (which would be enforceable because the technology is in use) and relies on the unused peripheral patents to deter others from getting anywhere near that technology. Clark D. Asay, *Patenting Elasticities*, 91 S. CAL. L. REV. 1, 11 (2017). Since the patent on the core technology is supposed to balance incentive benefits and monopoly costs optimally, it follows that allowing enforcement of the unused peripheral patents can only distort the balance by expanding the monopoly and increasing monopoly costs.

71. Parchomovsky & Wagner, *supra* note 36, at 66–67 (discussing the monopoly costs); Asay, *supra* note 70, at 11–12 (counting firms’ patenting of peripheral technologies to protect a central patent as among the patent system’s costs). Not all of the peripheral patents are necessarily unused, as I define nonuse, and those in use would qualify for enforcement.

72. A more complete analysis of this topic would have to define peripheral and nonperipheral patents for different types of patent families and also consider the status of unused claims within a single patent.

73. Even if we allowed the patent owner to enforce its patent rights *after* it negotiated a license—so third parties would use the invention at the risk of being enjoined later—potential licensees might still refuse to license since they know they can benefit immediately from use.

74. See Henry E. Smith, *Intellectual Property as Property: Delineating Entitlements in Information*, 116 YALE L.J. 1742, 1783–86 (2007); Liivak & Penalver, *supra* note 16, at 1480–81. Alternatively, they might try to keep the invention secret and rely on trade secret law while they look for a licensee, but this strategy has serious problems. For one thing, keeping information secret is not easy to do. Moreover, a secrecy strategy undermines the public disclosure goals of patent law. And secrecy makes licensing difficult. See Robert G. Bone, *A New Look at Trade Secret Law: Doctrine in Search of Justification*, 86 CALIF. L. REV. 241, 264–81 (1998) (arguing that the social costs of trade secret law might outweigh the benefits).



which could depress the overall rate of innovation if, as some claim, small inventors are responsible for a lot of inventive activity.<sup>75</sup>

Moreover, in a world where inventors cannot enforce their patents during periods of temporary nonuse, even a large firm would face risks that a competitor might beat it to the market and make substantial sales while the firm works on commercializing its invention. Anticipating this, large firms will be inclined to invest less in research or shorten the period of preparation for commercialization, thereby depriving the public of a better commercial product or a more efficient marketing scheme.

*c. Functional Nonuse*

So far, we have seen that a patent owner should be barred from enforcing its patent in cases of complete nonuse but not in cases of temporary nonuse. Functional nonuse is more difficult to assess. Recall that in cases of functional nonuse, the patentee uses the patent, but not in a way that fits the standard patent model.<sup>76</sup> For example, *X* might obtain lots of patents to assemble them into a patent portfolio that signals the capital markets that the firm is strong and has a strong research program. Suppose another firm, *Y*, discovers a way to use one of the patented inventions productively.<sup>77</sup> Should *X* be allowed to enforce its patent rights against *Y*?<sup>78</sup>

One can argue for a negative answer on the ground that signaling does not fit patent law and that creating signaling benefits is not what patent law is supposed to do.<sup>79</sup> However, the social benefits from *X*'s signaling strategy might exceed the social costs even if those benefits do not fit the standard account of patent law.<sup>80</sup> Still, it is not clear what patent enforcement has to do with a signaling strategy. After all, the signal stems from the patent grant itself, not from the assertion of patent rights. But if enforcement does promote signaling in some way and if the benefits of signaling exceed the costs, then perhaps the standard account of patent law should be expanded to include signaling benefits (thereby turning signaling from a functional nonuse into a qualifying use).

My point is only that, assuming patent enforcement is important to functional nonuse, the costs and benefits of denying enforcement for this type of nonuse are

75. See David S. Abrams & R. Polk Wagner, *Poisoning the Next Apple? The America Invents Act and Individual Inventors*, 65 STAN. L. REV. 517, 518–19, 562 (2013) (noting the difficulty of determining how important small inventors are to the pace of innovation).

76. See *supra* notes 28–31 and accompanying text.

77. *Y*'s use would have to include all the elements or equivalents for at least one of *X*'s patent claims. 5A CHISUM ON PATENTS, *supra* note 25, §§ 18.03[4][a], 18.04.

78. It is possible that *X* would not care enough to bother enforcing its rights. Maybe it can obtain all the signaling benefits it wants even with *Y* using the invention. However, *X* might worry that *Y*'s use will improve *Y*'s market position relative to *X*, or that its use will introduce noise into *X*'s patent signal. Or *X* might just want the extra revenue from licensing *Y*.

79. This argument can rely, for example, on an assumption of institutional specialization, that different bodies of law serve different purposes and that there are likely to be long-term costs from forcing patent law to do things it was not meant to do.

80. Those benefits include lower information and search costs and maybe even enhanced invention incentives from cheaper access to capital markets.

likely to vary significantly across different cases.<sup>81</sup> This sensitivity to factual context makes it difficult to adopt a general rule of no enforcement like the one applied to complete nonuse cases, or a general rule of universal enforcement like the one applied to temporary nonuse cases. Allowing enforcement with functional nonuse might be a good idea in some cases but not in others.

## B. COPYRIGHT

### 1. Background

The total number of unused copyrighted works is almost certainly very large, especially when one counts works with unregistered as well as registered copyrights. Indeed, historical copyright renewal data compiled for the period when U.S. copyright owners had to renew their copyrights suggest that even registered works might have a high incidence of nonuse.<sup>82</sup> One study has found that “fewer than 11 percent of the copyrights registered between 1883 and 1964 were renewed at the end of their twenty-eight year term.”<sup>83</sup> This very low renewal rate suggests a low use rate, at least on the assumption that copyright owners would renew if they were still using their works.<sup>84</sup>

Another source of evidence for widespread nonuse in general can be found in the prevalence of orphan works.<sup>85</sup> Orphan works are works for which the current copyright owner cannot be identified with reasonable effort, such as out-of-print books, old photographs still under copyright, unpublished papers, letters, and the like.<sup>86</sup> Although it is possible for an orphan work to still be in use, it is much more likely that orphan works are unused, maybe even forgotten.<sup>87</sup> Given this, the number of orphan works is some indication of the number of unused works. And the number

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81. See Long, *supra* note 29, at 675–78 (detailing a complex set of potential costs and benefits that vary with context).

82. Before the 1976 Copyright Act, copyright owners had to renew their copyrights after the first twenty-eight years. Melville B. Nimmer & David Nimmer, 3 NIMMER ON COPYRIGHT §9.01 (2018).

83. William M. Landes & Richard A. Posner, *Indefinitely Renewable Copyright*, 70 U. CHI. L. REV. 471, 473 (2003). See also *id.* at 498-513.

84. One must be careful, however, about drawing inferences of use from renewal rates. A copyright owner who uses her work might have been unaware of the renewal requirement. Also, a copyright owner who does not bother to renew may still value her work for private use. However, an owner who cares about her work enough to use it privately would probably be inclined to renew in order to control use by others—again, assuming she is aware of the renewal requirement.

85. I discuss orphan works in some detail in Part III below. Here I use them only for information about the extent of copyright nonuse.

86. See *infra* note 194 and accompanying text.

87. See, e.g., Jennifer M. Urban, *How Fair Use Can Help Solve the Orphan Works Problem*, 27 BERKELEY TECH. L.J. 1379, 1396–98 (2012) (describing orphan works as “economically abandoned” and “left . . . to languish” by their owners). For a work to qualify as an orphan, it must be impossible to find the copyright owner with reasonable effort. This is less likely to be true for works still in use. When a work is being used, it should be possible much of the time to locate the copyright owner simply by identifying the current user (maybe with a web search) and then, if the current user is not the copyright owner, tracing ownership back to the copyright owner.

of orphan works is very large. Empirical studies of library collections “estimate that anywhere from 17% to 25% of the works in the core, published collection of books, and up to 70% in more specialized collections, could be considered orphan works,” and the proportions are even higher for unpublished works, such as letters, diaries, and the like.<sup>88</sup>

Despite the prevalence of unused copyrights, United States copyright law has never required use as a condition for enforcing rights. It grants the same rights to unused works as to works that are used. In fact, copyright law even extends the favorable treatment accorded unpublished works to those that are unused. Before the 1976 revision of the Copyright Act—when publication was required for federal rights—unpublished works, including those not used, were protected by state common law copyright, and common law copyright in some respects afforded broader protection than federal law.<sup>89</sup> Today, unpublished works fall under federal copyright, but they still receive favorable treatment in a number of ways.<sup>90</sup> Thus, to the extent unused works are also unpublished—and the overlap between the two categories is probably large—unused works receive favorable treatment, too.

## 2. Normative Analysis

The case for protecting unused IP is stronger in copyright than it is in patent, and the reason has to do with differences at the policy level. Patent law, as we saw, is based primarily on a utilitarian theory that focuses on incentives to create and disclose. Although incentive-based utilitarian theory is a major driver of copyright law, nonutilitarian theories are also quite influential. For example, the Supreme Court relied on both utilitarian and nonutilitarian theories to justify a narrower fair use privilege for unpublished works.<sup>91</sup> The following discussion considers nonuse

88. David R. Hansen et al., *Solving the Orphan Works Problem for the United States*, 37 COLUM. J.L. & ARTS 1, 8–9 (2013) [hereinafter Hansen et al., *Orphan Works*].

89. 2 NIMMER ON COPYRIGHT, *supra* note 82, § 8C.02 (“Although rights under common law copyright have counterparts under statutory copyright, it may be that the common law rights themselves are in some ways broader than their federal analogues.”). For example, common law copyright lasted indefinitely while federal copyright lasted for only a limited term. *Id.* vol. 3 at § 9.09.

90. For example, the scope of the fair use defense is narrower for unpublished works. *Harper & Row, Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 554, 564 (1985); 4 NIMMER ON COPYRIGHT, *supra* note 82, § 13.05[2][b](iii) (noting that the unpublished nature of a work still weighs against fair use even after the amendment to § 107, although how much is unclear). It is also worth noting that the mandatory deposit requirement does not apply to unpublished works, 17 U.S.C. § 407, and a failure to affix notice does not limit damages, as it does for published works, 17 U.S.C. § 405(b).

91. In particular, the Court reasoned that weakening fair use and thus strengthening the right of first publication allowed the author to maximize economic return and also to protect her noneconomic interest in creative control and privacy. *See Harper & Row*, 471 U.S. at 555 (“The author’s control of first public distribution implicates not only his personal interest in creative control but his property interest in exploitation of prepublication rights, which are valuable in themselves and serve as a valuable adjunct to publicity and marketing.”). *But see Garcia v. Google, Inc.*, 786 F.3d 733, 745 (9th Cir. 2015) (noting that “the protection of privacy is not a function of the copyright law” and that “copyright law offers a limited monopoly to encourage ultimate *public access* to the creative work of the author”) (internal citations omitted) (emphasis in the original).

in copyright, first under a utilitarian theory, and then under the two main nonutilitarian theories: Lockean labor-desert and personhood.

*a. Utilitarian Theory*

Although the utilitarian analysis developed for patent law applies to copyright as well, there are some differences. For one, the chilling effect of copyright on downstream creativity is less severe because copyright protects only against copying while patent also prevents independent replication.<sup>92</sup> Furthermore, copyright prizes works in part for their intrinsic value as embodying the creator's personal expressive vision.<sup>93</sup> This intrinsic value benefits the creator at the same time as it enhances social welfare. One might say the same thing for inventions: the satisfaction experienced by an inventor in successfully inventing adds an increment to social welfare. However, the instrumental value of inventions is paramount in patent law; useful inventions are valuable because of the knowledge they provide or the practical work they do.<sup>94</sup>

Still, it is clear that a blanket use requirement is not a good idea on utilitarian grounds for the same reasons it was not a good idea in patent law. Namely, it impedes effective licensing and depresses incentives to create.<sup>95</sup> Moreover, the implications for the different types of nonuse are roughly the same. I explore complete nonuse more carefully in my discussion of orphan works in Part III, but the conclusion on utilitarian grounds is the same as for patent: a utilitarian analysis supports barring enforcement of copyright rights for completely unused works.<sup>96</sup> Enforcement should not be barred for temporary nonuse; otherwise, licensing markets would be impaired, just as for patent.<sup>97</sup> As for functional nonuse, real world examples are much harder to find in copyright than in patent because copyright credits a much wider range of uses, including private as well as public uses, uses with intrinsic value, and uses with instrumental value. However, for cases of functional nonuse, the conclusion is likely to be the same as it was for patent: the implications of functional nonuse for enforcement are likely to vary with the type of case.

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92. See Lemley, *Economics of Improvement*, *supra* note 32, at 1014.

93. See *Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239, 250 (1903) (“Personality always contains something unique. It expresses its singularity even in handwriting, and a very modest grade of art has in it something irreducible, which is one man's alone. That something he may copyright unless there is a restriction in the words of the act.”).

94. See, e.g., Justin Hughes, *The Philosophy of Intellectual Property*, 77 GEO. L.J. 287, 341–42 (1988).

95. It should not matter that copyright requires actual copying for infringement, whereas patent protects even against independent replication. From a utilitarian perspective, the focus is on incentives to create and it is the prospect of realizing value associated with use that normally motivates creation in the first place.

96. See *infra* notes 214–227 and accompanying text.

97. See *supra* notes 73–75 and accompanying text.

Strategic nonuse is possible, but it takes a somewhat different form than in patent.<sup>98</sup> Part of what makes the holdup strategy so effective in patent law is the element of surprise, and surprise is facilitated by the rule that independent inventors, not just copiers, are liable for infringement.<sup>99</sup> Surprise is much more difficult for a copyright owner to achieve because copyright law requires copying and copiers usually know what they are copying.<sup>100</sup> To be surprised in these cases, a user must mistakenly believe that the work is out of copyright or that the owner will not sue.

*b. Lockean Theory*

There is, however, more at stake for copyright than utilitarian incentives, and the nonutilitarian theories push more strongly toward protecting unused works. I discuss Lockean natural rights theory in this section and personhood theory in the next.

The standard account of Lockean theory supposes, roughly speaking, that individuals obtain property rights by mixing their labor with the things of the world.<sup>101</sup> For example, an apple picker uses her labor to pick apples and thereby mixes her labor with the apples she picks. As a result, she secures a natural right to those apples as her property. So too, IP theorists argue, a creator or inventor applies intellectual labor when she creates something new and as a result has a natural property right to her creation and can exclude others from it.<sup>102</sup>

At first glance, it might seem obvious that IP rights based on Lockean theory would not require use. The creator's natural right, after all, depends only on the act of mixing labor, and not on what the creator does or does not do with what she creates. However, the analysis is not quite so simple. Locke recognized limits to the

98. See Shyamkrishna Balganesh, *The Uneasy Case Against Copyright Trolls*, 86 S. CAL. L. REV. 723, 732 (2013). Professor Balganesh argues that the copyright troll problem has less to do with holdup and more to do with excessive enforcement that disrupts an under-enforcement equilibrium critical to copyright law. *Id.* at 746–47. He describes copyright trolls that obtain narrowly tailored interests in copyrights for the sole purpose of suing and monitor aggressively for specific instances of infringement. *Id.* at 732, 738–39. Balganesh's main example is a troll that files numerous lawsuits against small-scale infringers, often involving web postings, and exploits the threat of statutory damages to obtain small settlements. *Id.* at 739–41. Although this business model does not depend on holdup, it does involve strategic nonuse, and the nonuse aspect creates problems because it allows these trolls to focus more efficiently and aggressively on the task of enforcing copyright rights.

99. See Lemley, *Economics of Improvement*, *supra* note 32, at 1014 (noting that a user can be liable for patent infringement without copying the invention and without even knowing the patented invention exists). Almost all of the patent suits in the software industry, where PAEs dominate, are against independent inventors, not copiers. Lemley & Melamed, *supra* note 15, at 2148–49 (reporting that more than 97% are filed against independent inventors).

100. 4 NIMMER ON COPYRIGHT, *supra* note 82, § 13.01[B].

101. See JOHN LOCKE, *TWO TREATISES OF GOVERNMENT* 133–35 (Thomas I. Cook ed., Hafner Publishing Co. 1947)(1690). There is some dispute about the best interpretation of Locke's theory, which is why I refer to the "standard account."

102. See, e.g., R. MERGES, *JUSTIFYING*, *supra* note 34; Wendy J. Gordon, *A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property*, 102 YALE L.J. 1533 (1993) [hereinafter Gordon, *Property Right*].

natural rights he proposed, some of which take account of harm to others.<sup>103</sup> When an IP owner chooses not to use her IP, her choice can harm others by chilling their creativity and denying them access for their own creative purposes.

To see this point more clearly, consider the following hypothetical. Suppose that John composes a piece of jazz music and shelves it, choosing not to publish or otherwise use it. Mary is also a jazz composer and creates a similar piece of music. As long as Mary works independently without copying John, she will not infringe John's copyright and can even obtain a copyright of her own.<sup>104</sup> However, Mary still faces risks. For one thing, if the two compositions are similar enough, John might assume that Mary somehow copied his work and file an infringement suit. This is not a far-fetched scenario in the world of music where, because of the limited number of musical forms, independent creation can produce similar compositions.<sup>105</sup> If John sues Mary, she will have to pay litigation costs to defend the suit,<sup>106</sup> and given the inevitable risk of error, she will also face a chance of being held liable.<sup>107</sup> The fact that John chooses not to use his work increases these risks for Mary. John's nonuse keeps Mary in the dark about the content of John's composition, and thus makes it difficult for her to predict whether John will sue and whether it makes sense to seek a license.<sup>108</sup> These costs and risks can chill Mary from creating in the first place.

Locke did not focus specifically on IP, of course, but he did worry about the harms that might result from recognizing natural rights too broadly. His concerns led him to impose two conditions on the natural right: that the right holder not waste his property (the spoilage proviso), and perhaps most famously that there be "enough and as good left in common for others" (the so-called sufficiency proviso).<sup>109</sup> Much

103. See Gordon, *Property Right*, *supra* note 102, at 1544–45, 1558–59, 1561, 1564 (arguing that Locke's theory is based on a no-harm principle, which demands that natural right holders not unjustifiably harm others).

104. This is perfectly consistent with Lockean theory. By working independently, Mary does not take anything from John, and by mixing her own labor with the things of the world, she obtains a natural right to her creation.

105. See *Selle v. Gibb*, 741 F.2d 896, 903–04 (7th Cir. 1984) (explaining the need for courts analyzing "striking similarity" to consider the likelihood that the similar work was produced coincidentally or independently).

106. In the United States, parties usually pay their own attorneys, win or lose. The Copyright Act creates an exception that allows the winning party to collect fees from the loser, but the exception is discretionary with the judge. 17 U.S.C. § 505 (Westlaw through Pub. L. No. 115-223).

107. To be sure, John would probably have to prove that Mary had access to his work, which is likely be very difficult if he keeps the work to himself. Still, if the two works are similar enough, a jury might mistakenly infer copying from the similarity. See generally 4 NIMMER ON COPYRIGHT, *supra* note 82, §§ 13.02-13.03 (explaining the relationship among access, similarity, and infringement).

108. In general, use helps give notice. For example, it signals others that the user claims the property and delineates its boundaries. See Liivak & Penalver, *supra* note 16, at 1477, 1480–81 (discussing notice and informational benefits of use in the patent context). This is certainly true for public use. If Mary observes that John uses his composition actively, she knows to get a license or avoid copying the expression. Even if John uses only privately, Mary can infer from knowledge that John is engaged in use that John cares about the music, and this gives her at least an opportunity to determine whether further inquiry is worthwhile.

109. LOCKE, TWO TREATISES, *supra* note 101, bk. II, § 27 (stating the "enough and as good" proviso), §§ 37–38 (stating the no waste obligation). Locke also imposed a charity obligation that requires

has been written about whether these two provisos fit a deontological theory, or whether they—and especially the sufficiency proviso—inject consequentialist elements and ultimately a utilitarian strand.<sup>110</sup> We need not dwell on this debate. Either way, one thing is clear: there must be limits to the Lockean natural rights that attach to creations so that the intellectual commons can be nurtured and others can have comparable opportunities to create.<sup>111</sup> The question is whether some kind of use requirement should be one of those limits.

The answer to that question is yes. Use is relevant to the spoilage proviso and also, in a more limited way, to the sufficiency proviso. Consider the spoilage proviso. Locke believed that allowing one's property to spoil offended natural law and therefore a laborer “had *no Right, farther than his Use.*”<sup>112</sup> The problem with applying this proviso to IP is that IP is not obviously prone to spoilage in the same way as the fruit and acorns that Locke wrote about. A novel, musical composition, or invention remains intact over time. Nevertheless, as several commentators have pointed out, it is possible to construe spoilage more broadly in the IP field to encompass negative effects on an IP asset's value.<sup>113</sup> Understood in this way, the spoilage proviso would apply to deny a natural right to the IP owner when its nonuse dissipates the value of the IP.

This understanding of spoilage would seem to rule out Lockean rights for complete nonuse, which involves shelving IP and not using it at all.<sup>114</sup> This kind of nonuse dissipates the IP's value by completely ignoring opportunities to realize and develop it. Still, tricky problems can arise when an owner stops using IP only *after* it has lost its value. I address these problems in connection with my discussion of orphan works in Part III. There, I argue that the nonuse of orphan works implicates the spoilage proviso when the copyright owner ignores the possibility of new technological uses and thus wastes the potential of adding new value to the work.<sup>115</sup>

Now consider the sufficiency proviso. Nonuse can trigger Locke's sufficiency proviso when it denies access in a way that makes other creators worse off. The problem is that it is difficult to see how other creators can be worse off when they have access to the same body of creative material as the original author.<sup>116</sup> Professor Gordon has responded to this problem by arguing that some creations, when made public, change the cultural landscape so profoundly that withdrawing them from

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a property owner under some circumstances to share his property with those in extreme need. See LOCKE, *TWO TREATISES*, *supra* note 101, bk. I, § 42.

110. See, e.g., Gordon, *Property Right*, *supra* note 102, at 1544–45. There are also debates about the relationship between the two provisos.

111. Gordon, *Property Right*, *supra* note 102, at 1556–57.

112. LOCKE, *supra* note 101, bk. II, § 37.

113. See R. MERGES, *JUSTIFYING*, *supra* note 34, at 56–61 (discussing applications of the spoilage proviso to IP).

114. *Id.* at 58 (noting that “[f]or Lockean waste to occur, the concept, idea, or other original creation that is embodied in these copies would have to spoil completely. Its creator would have to elect to put it—the idea itself—on the shelf forever and make no use of it whatsoever.”).

115. See *infra* notes 231–232 and accompanying text.

116. See Gordon, *Property Right*, *supra* note 102, at 1566–67.

public access after a period of use leaves other creators worse off than they were before the creation came into existence, and thus does not leave “enough and as good” for others.<sup>117</sup> Whatever one may think of this argument, one thing is clear: it has limited implications for nonuse because it focuses only on those works that have a profound impact on culture, and few copyrighted works have this kind of cultural impact.<sup>118</sup>

There are, however, other ways to justify limits on rights.<sup>119</sup> One involves locating limits in the conditions that make a mutually advantageous social practice possible. The general idea is that all those who participate in and benefit from an ongoing practice have reason to accept the limits that make the practice work well for everyone. One way to implement this idea is through contractarian theory.<sup>120</sup> The contractarian argument imagines a hypothetical bargaining situation in which participants choose principles and rules behind a “veil of ignorance,” knowing that whatever they choose will govern their interactions in the real world when the veil is lifted.<sup>121</sup> For a proponent of contractarianism, the rules and principles unanimously chosen behind the veil have moral force binding participants in the real world.

117. *Id.* at 1565–72. J.D. Salinger’s letters might be an example. Between 1939 and 1961, Salinger wrote letters to a number of individuals, and some of the recipients donated the letters to various libraries where they were available for viewing but not for copying. *See* *Salinger v. Random House, Inc.*, 811 F.2d 90, 92–93 (2d Cir. 1987). When Ian Hamilton paraphrased the letters in an unauthorized biography, Salinger, who wanted his letters to remain private and unused, brought a copyright infringement suit to enjoin Hamilton’s use. *Id.* Allowing Salinger to prevent use of these letters in a biography, as the Second Circuit did, might offend the sufficiency proviso, given that Salinger is a public figure, his published writings have altered the cultural landscape, and the letters are important to a literary biography. *See* Gordon, *Property Right*, *supra* note 102, at 1592–95.

118. Professor Merges accepts Gordon’s insight but argues that it is limited to “only a handful of works,” those that have profound effects on popular culture. R. MERGES, *JUSTIFYING*, *supra* note 34, at 52–55.

119. Professors Liivak and Penalver argue that a property theory based on individual autonomy and liberty, like Locke’s, requires a *deliberate* decision not to use property before nonuse can be protected by a Lockean right. *See* Liivak & Penalver, *supra* note 16, at 1466. On this view, casual nonuse that does not involve rational deliberation is not an exercise of autonomy and therefore deserves no protection from Lockean rights. However, it is not clear to me that this limitation follows from Lockean theory, which, after all, focuses on the act of appropriation.

120. Another possible way is through the idea of reciprocity-based fairness. Reciprocity-based fairness dispenses with the idealized bargaining process. Roughly, this view holds that it is fair to impose obligations on someone who voluntarily takes part in an institution or practice when that person benefits from others assuming the same obligations toward her and the institution or practice works better as a whole with the system of mutual obligation. *See generally* Allan Gibbard, *Constructing Justice*, 20 PHIL. & PUB. AFF. 264, 266–73 (Summer 1991) (describing Justice as Fair Reciprocity and contrasting it with Justice as Mutual Advantage and Justice as Impartiality).

121. Many people are familiar with these ideas, and especially with the “original position,” and the “veil of ignorance,” through John Rawls’s monumental work, *A Theory of Justice*. JOHN RAWLS, *A THEORY OF JUSTICE* (1971). Contractarian arguments are relatively common in legal scholarship, and some legal scholars have used them to justify legal rules and principles in the IP field. *See, e.g.*, KIM LANE SCHEPPELE, *LEGAL SECRETS: EQUALITY AND EFFICIENCY IN THE COMMON LAW* (1988) (using contractarianism to justify trade secrecy rules). One must be careful, however, to distinguish ideal from egoistic contractarian arguments; only the former have moral force. *See* Robert G. Bone, *Agreeing to Fair Process: The Problem with Contractarian Theories of Procedural Fairness*, 83 B.U. L. REV. 485, 518–19 (2003).



This is not the place to delve into contractarian theory in depth. What is important to see is that this theory generates *moral* principles that can supply grounds for shaping moral rights.<sup>122</sup> The key to applying the theory to IP is to recognize that creation is a socially contextualized activity. Authors build on previous works when they create their own, and this process of mutual borrowing is essential to the efficacy of the creative enterprise as a whole.<sup>123</sup> It would be difficult to sustain a vibrant practice of creative authorship under a system of broad Lockean rights without building in limitations that allow some reciprocal copying.

This insight provides the basis for constructing a contractarian justification for limits that allow copying. It does not take a rigorous formulation of the idealized bargaining situation to see that agents behind the veil, who are aware they are choosing norms to govern authorship within a property rights system, would choose limits that allow some amount of free copying.<sup>124</sup> To be sure, by agreeing to allow copying, they put themselves at risk of having their own works copied without compensation, but in return they gain the ability to freely copy the works of others.<sup>125</sup>

The question is whether contractarianism has anything to say about nonuse. I believe the answer is yes. Suppose *A* is a complete nonuser who ignores her work. If *B* is allowed to freely use *A*'s work, *A* suffers no economic harm (relative to how she would fare without the use) and *B* benefits by being able to use *A*'s work in creating his own. Without developing the details of the original position and hypothetical bargaining, it seems evident that agents bargaining behind the veil, who know they could be either *A* or *B* in this scenario, would readily agree to a principle that allows free use. Each bargaining agent knows that if she turns out to be an owner (*A*), she will not be able to prevent the use or be compensated for it. But as an owner who is also a complete nonuser, she will be unlikely to care much about use. On the other hand, she knows that if she turns out to be a prospective user (*B*), she will presumably care a lot about her desired use, and a principle that allows free use will serve her creative interests well.

The principle of free use that emerges from hypothetical bargaining is likely to have some exceptions that allow owners to enjoin uses that seriously impair the owner's creative interests. For example, agents behind the veil, aware they are bargaining for principles to govern the practice of creative authorship, might well

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122. Although there are different views about why contractarian principles have moral force, many commentators trace the source of moral authority to the way the ideal bargaining situation combines values of autonomy, consent, rationality, equality, impartiality, and mutual benefit. See Bone, *supra* note 121, at 531-33.

123. Gordon, *Property Right*, *supra* note 102, at 1556-58.

124. Here I assume that property rights are given and agents bargain over limits. One might instead allow for bargaining over the whole domain of possible rules and principles governing IP.

125. This reciprocity of benefit and burden also provides the basis for an argument from reciprocity-based fairness. See *supra* note 120. Since some amount of reciprocal copying is necessary to support a vibrant practice of authorship, the argument goes, it is fair to impose an obligation on an author to allow some copying when other authors share the same obligation and the reciprocity of benefit and burden makes the practice of authorship work well for all.

recognize exceptions for uses that do violence to the integrity of the work or otherwise seriously affect the personhood interests of authors.<sup>126</sup>

In sum, bargaining agents behind the veil are likely to adopt a principle of free use applicable to instances of complete nonuse, with possible exceptions for uses that seriously harm the original author's creative interests. Of course, an owner is perfectly free to choose not to use her work. However, under the principle of free use, she cannot stop other authors from using her work when she is a complete nonuser, unless the use fits within an exception. In Part III below, I explore the implications of this principle for orphan works and argue that it justifies limiting Lockean rights.

I should be clear that I am not arguing that contractarianism is necessarily implicit in Lockean theory—although it is worth noting that Locke invoked the idea of tacit consent based on a social practice when he relied on the introduction of money to justify social inequality.<sup>127</sup> My point is that principles derived from social practice through contractarianism have the kind of moral force capable of justifying limits to moral rights.<sup>128</sup>

In sum, the Lockean argument, despite its focus on natural rights, can accommodate limits on IP rights when IP is not used. These limits derive from a proper understanding of the spoilage proviso and, to a more limited extent, from the sufficiency proviso broadly construed. Moreover, it is also possible to justify limits on contractarian grounds. Finally, although in theory social costs are not supposed to limit natural rights directly because natural rights constrain utilitarian goals, in practice social costs must impose limits when those costs are substantial enough. In Part III, I argue that limits based on high social costs might be important for some uses of orphan works.<sup>129</sup>

### *c. Personhood Theory*

Roughly speaking, a personhood theory focuses on protecting the highly personal connection between creator and creation.<sup>130</sup> Typically, this theory begins with assumptions about a person's need to exercise her will in the world, and then assumes that the expression of will forges a kind of constitutive connection between person and object. A painting, for example, is the projection of the painter's creative

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126. For a discussion of personhood theory, *see infra* notes 130–142 and accompanying text.

127. LOCKE, *supra* note 101, bk. II, § 50. Briefly, Locke argued that people tacitly consented to the institution of money by using it as a medium of exchange and that the use of money made it possible for some to acquire much more than others without violating the spoilage and sufficiency provisos. *See* A. JOHN SIMMONS, *THE LOCKEAN THEORY OF RIGHTS* 290, 298–306 (1992).

128. A contractarian approach, with its reliance on values of autonomy, individual rationality, and consent, might fit Lockean rights closely enough to justify limits *within* Lockean theory, but even if not, it has the moral force to justify limits independently.

129. *See infra* note 240 and accompanying text.

130. Personhood theory comes in somewhat different, though overlapping, forms depending on whether it is grounded in Kant or in Hegel. *See* R. MERGES, *JUSTIFYING*, *supra* note 34, at 68–101 (drawing on Kant); Margaret Jane Radin, *Property and Personhood*, 34 *STAN. L. REV.* 957 (1982) (drawing on Hegel).

persona—her will—into the world and as such becomes intimately tied up with the creator's personhood. The theory posits that a creation tightly bound up with personhood should be protected against acts that would injure or break the highly personal bond.<sup>131</sup>

Personhood theory has more built-in limits than Lockean theory. The personhood bond exists only in certain settings and only for certain kinds of property.<sup>132</sup> For example, it is easy to see personhood at work in a painting, but much more difficult to see it forged by the process of invention in a commercial setting.<sup>133</sup> Moreover, the core rights that personhood theory recognizes are different than Lockean rights. These rights protect the special bond between creator and creation and thus target only actions that threaten that bond.

Personhood theory is much more influential in other countries than it is in the United States. Many European nations, for example, recognize so-called "moral rights" that are justified on personhood (or personality) grounds.<sup>134</sup> Moral rights include the right of attribution (a right to have authorship credited), the right of integrity (a right to stop others from mutilating one's work), the right of disclosure (a right to control first publication), and the right to withdraw or retract a work if the work no longer fits the creator's artistic vision.<sup>135</sup> In the United States, however, moral rights have received only limited recognition. Section 106A of the Copyright Act gives rights of attribution and integrity, but only for works of visual art in limited edition.<sup>136</sup> Several states grant somewhat broader rights but not nearly as broad as European moral rights.<sup>137</sup>

Still, personhood theory influences copyright rights in a number of more subtle ways, and scholars debate the extent of this influence.<sup>138</sup> For example, restrictions on fair use for unpublished works are justified in part by an author's interest in

131. Or put slightly differently, ensuring the stability of the personal connection between creator and object is essential to the projection of will, which in turn is essential to the realization of self. See R. MERGES, *JUSTIFYING*, *supra* note 34, at 76–77; Radin, *supra* note 130, at 972–75.

132. See Radin, *supra* note 130, at 986–91 (distinguishing personhood property from fungible property).

133. But see R. MERGES, *JUSTIFYING*, *supra* note 34, at 17–18 (arguing that Kant's theory might have broader scope).

134. See Henry Hansmann & Maria Santilli, *Authors' and Artists' Moral Rights: A Comparative Legal and Economic Analysis*, 26 J. LEG. STUD. 95 (1997).

135. See *id.* at 95–96.

136. 17 U.S.C. § 101 (2010) (Westlaw through Pub. L. No. 115-231) (defining works of visual art); 17 U.S.C. § 106A (1990) (Westlaw through Pub. L. No. 115-231) (defining the rights).

137. See Hansmann & Santilli, *supra* note 134, at 97 (noting "[a]t least 11 states now explicitly recognize moral rights in greater or lesser degree").

138. See, e.g., Wendy J. Gordon, *Copyright Owners' Putative Interests in Privacy, Reputation, and Control: A Reply to Goold*, 103 VA. L. REV. ONLINE (2017) (reviewing the debate). One scholar has even tried to assimilate personhood theory to utilitarianism by arguing that concern for the personality interests of creators helps to stimulate the creation of IP. Jeanne C. Fromer, *Expressive Incentives in Intellectual Property*, 98 VA. L. REV. 1745, 1760 (2012). The point is useful, but it does not collapse personhood into utilitarianism. Personhood theory is a moral theory. It does not have to do with how creators feel about the creative enterprise or their works, nor does it have to do with incentives to create. It focuses *ex post* on the bond between creator and her creation, and that bond exists independently of how the creator feels about it.

creative control tied to personhood values,<sup>139</sup> and some view the derivative work right as a vehicle for indirectly protecting what is in essence a moral right to integrity.<sup>140</sup>

Thus, it is reasonably clear that personhood is relevant to copyright law even if U.S. copyright law gives it only limited recognition. And a personhood bond is created whether or not a work is used. Even so, personhood-based rights are limited and infringement depends on what others do with the work. As we shall see in Part III's discussion of orphan works, very few nonuse cases involve third party uses that offend personhood values.<sup>141</sup>

One additional point deserves mention here. Professors Liivak and Penalver argue that personhood theory requires the creator to attend in a deliberate way to the creative object.<sup>142</sup> Attention need not be continuous or even substantial, in their view, but it must be genuinely present. They conclude that personhood is unlikely to support rights in a creation that is simply cast aside. If this is correct, personhood theory would seem to point toward denying enforcement when the creator is a complete nonuser.

However, the issue is more complicated. Liivak's and Penalver's conclusion is in some tension with a moral right to withdraw or retract a work.<sup>143</sup> Withdrawal and retraction are associated with rejection and thus complete nonuse. Moreover, while it might be necessary to attend in a deliberate, even active, way to forge an initial personhood bond, it is not clear that continued attention is necessary to maintain that bond.<sup>144</sup> Personhood has more to do with the nature of the work and its relationship to the author than with what the author does or does not do with the work after the relationship is forged.

To illustrate with a concrete example, consider a personal diary that is stored in an attic and never shown to others or read. Suppose someone happens to come across the diary while visiting the author and decides to publish its contents. Because of the highly personal nature of a diary, it seems reasonable to suppose that publication without consent might do violence to the personal connection between author and diary even though the author does not use the diary at all. Still, this depends very

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139. See *supra* notes 90–91 and accompanying text.

140. See *MERGES ET AL.*, *supra* note 6, at IV-185 (“The law of derivative works is one way in which a personality or “moral rights” aspect creeps into U.S. copyright law.”). But see *Lee v. A.R.T. Co.*, 125 F.3d 580, 582–83 (7th Cir. 1997) (arguing against using the derivative work right in section 106(2) to enforce moral rights).

141. See *infra* notes 241–246 and accompanying text. Moreover, the same contractarian (and reciprocity-based fairness) arguments used to justify limits on Lockean rights might also justify limits on personhood rights. See *supra* notes 119–126 and accompanying text.

142. Liivak & Penalver, *supra* note 16, at 1471–72 (arguing that this requirement follows from the fact that person-object connections result from the rational exercise of will).

143. In response, one might argue that personhood values support a right to withdraw only initially, when the bond with the work is still meaningful.

144. I am indebted to my colleague Oren Bracha for alerting me to this point.

much on the nature of the work. One might feel differently, for instance, about a novel stored in the attic.<sup>145</sup>

Thus, personhood theory has different implications for nonuse in different settings. In Part III below, I explore its implications for complete nonuse in the setting of orphan works.

### C. TRADEMARK

#### 1. Background

In contrast to patent and copyright, trademark law in the United States requires use. To secure rights in a mark, the owner must actually use the mark to sell goods or services in the ordinary course of trade.<sup>146</sup> While the Lanham Act lets a firm reserve a mark for a limited period of time prior to use by applying for an intent-to-use registration, it still requires use before the mark can be registered.<sup>147</sup>

#### 2. Normative Analysis

Trademark law prioritizes use because trademark serves different purposes than patent and copyright. The main purpose of patent and copyright is to incentivize the creation of inventions and works of authorship. Trademark law does not care about incentivizing the creation of marks. Its primary purpose is to facilitate the transmission of information to consumers in the marketplace and protect seller goodwill.<sup>148</sup> Like patent, trademark law rests primarily (though not exclusively) on a utilitarian foundation, but the utilitarian benefits differ. From a utilitarian perspective, trademark aims to reduce consumer search costs and maintain high product quality.<sup>149</sup>

To illustrate, consider the mark CREST for toothpaste, which is sold by Procter & Gamble. By preventing other firms from using CREST for their toothpaste, trademark law assures that every tube with the mark CREST comes from the same source (i.e., Procter & Gamble) as every other tube bearing the same mark. Knowing this, and assuming the seller will maintain uniform quality, consumers can rely on

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145. However, consider Franz Kafka's instruction in his will that all his unpublished manuscripts should be destroyed, an instruction that Max Brod, his close friend and executor, thankfully ignored. See Lior Jacob Strahilevitz, *The Right To Destroy*, 114 YALE L.J. 781, 830–31 (2005). While most people applaud Brod's decision, they also understand the moral dilemma Brod faced. That dilemma has partly to do with Brod's role responsibilities as executor of Kafka's estate, but it also has to do with a sense that Kafka's request has moral force given the personal nature of unpublished manuscripts.

146. 2 MCCARTHY ON TRADEMARKS, *supra* note 9 § 16:18.

147. 15 U.S.C. § 1051(b) (Westlaw through Pub. L. No. 115-223) (authorizing an intent-to-use application for registration requiring a bona fide intent to use the marks in commerce within a six-month period but requiring actual use for registration); 3 MCCARTHY ON TRADEMARKS, *supra* note 9, § 19:13.

148. See Robert G. Bone, *Enforcement Costs and Trademark Puzzles*, 90 VA. L. REV. 2099, 2118, 2120 (2004).

149. See, e.g., 1 MCCARTHY ON TRADEMARKS, *supra* note 9, § 2:2; *Qualitex Co. v. Jacobson Prods. Co., Inc.*, 514 U.S. 159, 164 (1995).

the mark CREST to easily retrieve information about the toothpaste that they learn from advertising, experience, and word-of-mouth. In this way, trademark law reduces consumer search costs.

Moreover, Procter & Gamble can use the mark in its advertising to communicate to consumers that its toothpaste is high quality; for example, that it has superior cavity fighting properties. This allows it to reap the benefits of selling a high-quality product, which, in turn, gives it an incentive to maintain high quality. If Procter & Gamble's competitors were free to use CREST for their toothpaste, they would have an incentive to sell lower quality CREST toothpaste that is cheaper to manufacture, knowing that consumers will not be able to tell the difference. Anticipating this, Procter & Gamble will lower the quality of its toothpaste to meet the lower price and retain its customer base.<sup>150</sup>

The success of trademark law in promoting these two goals depends on the fact that consumers rely on the CREST mark to indicate a single brand of toothpaste. For that to happen, Procter & Gamble must actually use CREST as a mark to sell toothpaste. Without use of the mark in trade, consumers would have no way to adopt the mark as a source-identifier. And source-identification is essential to the mark's ability to convey information to consumers.

Although this utilitarian justification is central to trademark law, natural rights theories like Locke's have also exerted some influence.<sup>151</sup> The Lockean idea depends on the notion that marks carry goodwill and that a mark's goodwill, as a valuable asset, is the property of the trademark owner who invested in creating it.<sup>152</sup> Any other firm that uses the same mark to sell its own products appropriates the trademark owner's goodwill and infringes the owner's natural right.

Nevertheless, the influence of Lockean theory on trademark law is quite limited, and even this limited influence is hard to justify.<sup>153</sup> Trademark law has never extended as far as Lockean theory would support. A Lockean-based trademark law would impose liability whenever goodwill is appropriated regardless of whether consumers are confused or the mark itself is harmed. But trademark law has never protected a seller's goodwill from appropriation alone.<sup>154</sup> For our purposes, it is enough to note that the Lockean natural right depends on the existence of goodwill,

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150. Thus, trademark law prevents a lemons problem. See generally George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 Q.J. ECON. 488 (1970).

151. See, e.g., Mark A. Lemley & Mark P. McKenna, *Owning Mark(et)s*, 109 MICH. L. REV. 137, 181–84 (2010) (noting and criticizing natural rights theories of trademark law).

152. Robert G. Bone, *Hunting Goodwill: A History of the Concept of Goodwill in Trademark Law*, 86 B.U. L. REV. 547, 567–75, 592–615 (2006) [hereinafter Bone, *Hunting Goodwill*].

153. For a critique, see Lemley & McKenna, *supra* note 151, at 181–84; Robert G. Bone, *Taking the Confusion Out of "Likelihood of Confusion": Toward a More Sensible Approach to Trademark Infringement*, 106 NW. U. L. REV. 1307, 1355–57 (2012) [hereinafter Bone, *Taking the Confusion Out*].

154. Even anti-dilution protection is not triggered merely by appropriation of goodwill; it requires an injury to goodwill, either an impairment of the distinctiveness of the mark or a use that tarnishes it. See 15 U.S.C. § 1125(c) (Westlaw through Pub. L. No. 115-223).

and goodwill can be created only through public use of a mark. Thus, use is central to rights in Lockean theory as well.<sup>155</sup>

Sometimes courts refer to trademark law in ways that suggest a personhood theory.<sup>156</sup> The best way to understand this is to imagine a firm's brand as embodying the firm's identity in much the same way as an individual's name embodies the individual's personal identity. On this view, using the brand is tantamount to corporate identity theft and breaks the personhood bond between the corporation and its brand identity.<sup>157</sup> There are many reasons to reject this theory as a justification for trademark rights, including that corporations, as artificial entities, cannot form personhood bonds or possess a moral right to personal identity.<sup>158</sup> But the important point here is that even if personhood had a role in trademark law, it would require public use, since use is necessary to forge identity in a mark.

Given the centrality of use to all three normative theories, one might expect that a trademark owner would lose its right to protect its mark whenever it ceased using the mark with no intent to resume use. Trademark law does have an abandonment doctrine that applies in these circumstances, and when it applies, it results in the trademark owner forfeiting its rights.<sup>159</sup> However—and herein lies the nonuse puzzle for trademark law—courts sometimes refuse to find abandonment even when the owner has stopped using the mark and has no definite plans to resume use. In other words, trademark law sometimes protects owners even in circumstances of nonuse. Part III explains why.

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155. One might argue that merely selecting a mark involves mixing labor with the things of the world. But with the exception of a brief period in the mid-nineteenth century, American trademark law has rightly rejected the notion that there can be property in the mark itself and focused instead on property in the mark's goodwill. Bone, *Hunting Goodwill*, *supra* note 152, at 561–72.

156. See *Yale Elec. Corp. v. Robertson*, 26 F.2d 972, 974 (2d Cir. 1928); see also *Bond Stores, Inc. v. Bond Stores, Inc.*, 104 F.2d 124, 125 (3d Cir. 1939) (“The annoyance felt by those who do business under a corporate name when the same name is used by others, is very much akin to that of the patronymically proud, when a newly admitted citizen assumes their family name.”); *Premier-Pabst Corp. v. Elm City Brewing Co.*, 9 F. Supp. 754, 758 (D. Conn. 1935) (rejecting the notion that the right to a name or mark is part of goodwill that should be protected exclusively, and instead basing the right on the “common-law right of a man to have such an identity in the public eye as he can win by his conduct and personality”).

157. This is analogous to a publicity rights violation, where publicity rights are based on personhood values. See, e.g., J. Thomas McCarthy, *Public Personas and Private Property: The Commercialization of Human Identity*, 79 TRADEMARK REP. 681, 689 (1989) (“In an effort to expand the scope of rights in corporate symbols and trademarks, some plaintiff's attorneys have tried to stuff these kinds of corporate and business symbols into the category of the right of publicity.”); Ellen P. Winner, *Right of Identity: Right of Publicity and Protection for a Trademark's "Persona"*, 71 TRADEMARK REP. 193 (1981) (arguing for broad trademark rights by analogy to publicity rights).

158. See Bone, *Taking the Confusion Out*, *supra* note 153, at 1357–61 (criticizing the personhood theory on these and other grounds).

159. 3 MCCARTHY ON TRADEMARKS, *supra* note 9, § 17:1. If the owner refrains from using the mark for three years, the Lanham Act creates a presumption that the mark has been abandoned. 15 U.S.C. § 1127 (subpart (1) of the definition of “abandon”). The owner then can rebut the presumption, but only with evidence showing an intent during the three-year period to resume use in the reasonably foreseeable future. 3 MCCARTHY ON TRADEMARKS, *supra* note 9, § 17:11.

### III. CONCRETE IMPLICATIONS FOR SOME IP PROBLEM AREAS

Part II outlined a general normative framework for analyzing use requirements in different IP fields. Whether use should be required for IP rights depends on the relevant body of IP law and the nature of the problems that nonuse creates. The following discussion examines three problems, one for each body of IP law. These problems include PAEs, orphan works, and abandoned marks with residual goodwill. The discussion applies the normative analysis developed in Part II to address these problems and evaluate possible solutions.

#### A. PATENT PAES (TROLLS)

##### 1. The Problem

How to deal with PAEs (or patent trolls) is one of the most controversial and pressing issues in patent law today.<sup>160</sup> PAEs are pervasive.<sup>161</sup> Indeed, empirical evidence shows that they are responsible for more than half of the patent suits filed in the United States.<sup>162</sup>

According to some commentators, PAEs confer social benefits by acting as intermediaries for small inventors who cannot afford to exploit patents themselves and by making it easier for large firms to monetize their patents, thereby fueling incentives to create.<sup>163</sup> Also, some PAEs, by aggregating many patents, realize economies of scale that reduce the costs of licensing.<sup>164</sup> Other commentators, who are less favorably disposed to PAEs, focus on PAE costs. They question how much inventors actually receive from PAEs<sup>165</sup> and argue that patent aggregation generates costs as well as benefits.<sup>166</sup> Most importantly, they stress the fact that PAEs engage in holdup and frequently use poor quality patents to do so.<sup>167</sup> As a result of this

160. See Paul R. Gugliuzza, *Quick Decisions in Patent Cases*, 106 GEO. L.J. 619, 634 (2018) (noting the “intense debate” over the social welfare consequences of patent troll litigation); Chiang, *supra* note 27, at 692 & n.1 (“In patent law, commentators spend much time debating what constitutes a “patent troll,” whether these “trolls” are a problem, and, if so, why”).

161. Lemley & Melamed, *Trolls*, *supra* note 15, at 2123.

162. *Id.*

163. See, e.g., David L. Schwartz & Jay P. Kesan, *Analyzing the Role of Non-Practicing Entities in the Patent System*, 99 CORNELL L. REV. 425, 427 (2014); David L. Schwartz, *On Mass Patent Aggregators*, 114 COLUM. L. REV. SIDEBAR 51, 66–68 (2014) [hereinafter Schwartz, *Mass Aggregators*]; James F. McDonough III, Comment, *The Myth of the Patent Troll: An Alternative View of the Function of Patent Dealers in an Idea Economy*, 56 EMORY L.J. 189, 223 (2006).

164. See generally Lemley & Melamed, *Trolls*, *supra* note 15, at 2126–27 (describing three different patent troll business models, including the aggregator model); Schwartz, *Mass Aggregators*, *supra* note 163, at 56–61 (further refining the category of mass aggregators).

165. Lemley & Melamed, *Trolls*, *supra* note 15, at 2125. The answer probably varies with the type of PAE. See Schwartz, *Mass Aggregators*, *supra* note 163, at 63.

166. Lemley & Melamed, *Trolls*, *supra* note 15, at 2153–61.

167. On the pervasiveness of holdup, see Chiang, *supra* note 27, at 694. On weak patents, see Robert P. Merges, *The Trouble with Trolls: Innovation, Rent-Seeking, and Patent Law Reform*, 24 BERKELEY TECH. L.J. 1583, 1603–04 (2009) (discussing some of the factors that contribute to excessively broad and weak patents).



holdup strategy, technology users end up paying more than the value of the patents asserted against them and are forced to incur the costs of defending unjustified suits—all of which chills innovation.<sup>168</sup>

This is not the place to resolve this debate. Assuming that there is a PAE problem, and most people believe there is, the question for our purposes is whether and how nonuse—here, strategic nonuse—contributes to the problem, and whether some kind of use requirement should be part of the solution.<sup>169</sup> This question must be answered even if some PAEs are beneficial on balance.<sup>170</sup> If sorting between good and bad PAEs is efficient, then the following analysis applies only to the bad PAEs. If sorting is inefficient, then it applies to all PAEs.<sup>171</sup>

## 2. The Role of Nonuse

The fact that PAEs engage in strategic nonuse is important to the utilitarian analysis in several ways.<sup>172</sup> For one thing, nonuse affects the benefit side of the balance. Even if PAEs add some social benefits, they do not add nearly as much benefit as practicing entities that innovate and commercialize their patents.<sup>173</sup> Moreover, although PAEs might assist small inventors, it is unclear how much small inventors actually receive from PAEs.<sup>174</sup> It is also unclear whether small inventors need PAEs to commercialize their patents. They can assign those patents to firms that will work them, or hire brokers to license third-parties *before* the third party has irreversibly invested in use.

168. See, e.g., James Bessen, Jennifer Ford & Michael J. Meurer, *The Private and Social Costs of Patent Trolls*, 34 REGULATION 26 (2011). I believe there are two distinct problems that concern critics of PAEs, but are not always clearly distinguished. One problem is that users pay more than the patent's value because of holdup exacerbated by royalty stacking, high litigation costs, and the like. The second problem is that PAEs enforce patents too efficiently and aggressively and thus disrupt the under-enforcement equilibrium that is essential to the vitality of the patent system. See Schwartz, *Mass Aggregators*, *supra* note 163, at 66–69.

169. The problem of unused patents in the hands of practicing entities is also worth attention, but those issues are beyond the scope of this Article.

170. See Schwartz, *Mass Aggregators*, *supra* note 163, at 66–69; Bessen et al., *supra* note 168, at 28.

171. If some PAEs are good and some bad, an approach that targets only the bad PAEs requires some way to distinguish bad from good. Doing so is bound to be costly, and if those costs are high enough, it might be better to treat all PAEs in the same way.

172. One might argue that PAEs should be condemned on moral grounds regardless of how they fare in a utilitarian analysis. If holdup is morally blameworthy—which seems quite sensible given its close affinity with extortion—it should matter for moral evaluation that a PAE builds its entire business model around holdup. See *Eon-Net LP v. Flagstar Bancorp*, 653 F.3d 1314, 1326–27 (Fed. Cir. 2011) (noting that the district court found “indicia of extortion” in what was in effect a holdup strategy).

173. See Lemley & Melamed, *Trolls*, *supra* note 15, at 2167 (“Trolls may do less good for society, so even when their patents and practices are not worse than those of practicing entities, we are less willing to put up with those practices when they are undertaken by trolls.”); Richard A. Posner, *Patent Trolls*, BECKNER-POSNER BLOG (July 21, 2013), <http://perma.cc/386K-5PUC> (“It is extremely difficult to discern any possible social benefit from trolls, and extremely easy to discern substantial social costs.”).

174. See *supra* note 165 and accompanying text.

On the cost side of the balance, the nonuse factor exacerbates PAE problems and increases the costs PAEs generate. As mentioned previously, nonuse facilitates holdup by making it difficult for others to learn about the patent in time to work around it or license it prior to an irreversible investment.<sup>175</sup> To be sure, all patents are registered, so theoretically they are available to the public. However, most PAEs operate in the IT and software industries, where technological innovation is so fast-paced that it is common for firms to market devices with components covered by not-yet-published patent applications.<sup>176</sup> Even if all the relevant patents have issued, it can be extremely difficult to search the registry and catch them all, especially when a single device can have hundreds of thousands of components under patent.<sup>177</sup> This problem is even more severe because uncertainty about patent scope is common in the software and IT industries.<sup>178</sup>

Nonuse contributes in other ways as well. Because PAEs do not actually use the patents they acquire, they have stronger incentives to collect weak patents than do practicing entities.<sup>179</sup> A PAE might enforce its patents more aggressively because it has no other source of revenue, does not have to worry about its reputation in the industry, and can impose discovery costs asymmetrically.<sup>180</sup>

### 3. A Proposed Solution

Some commentators argue that the best way to address the PAE problem is to require use as a condition for enforcement of patent rights. One proposal would apply the use requirement to all patent cases.<sup>181</sup> As we saw in Part II, however, conditioning enforcement on use for all cases can depress incentives to create and increase enforcement costs.<sup>182</sup>

175. See Chiang, *supra* note 27, at 695 (“Holdup situations generally arise only when there is an element of surprise”).

176. Lemley & Melamed, *Trolls*, *supra* note 15, at 2148.

177. For example, smartphones can incorporate hundreds of thousands of separate components covered by software patents belonging to others. *Id.* at 2147–48 (noting an estimate that “a smartphone uses technologies claimed by 250,000 patents” and suggesting that even more patents might be involved today).

178. It is also worth mentioning that patent notice or marking requirements apply only to practicing entities. Chiang, *supra* note 27, at 700.

179. See Lemley & Melamed, *Trolls*, *supra* note 15, at 2126, 2147 (describing “bottom feeder” PAEs and noting that trolls are not constrained in the types of patents they acquire).

180. *Id.* at 2161–63.

181. See, e.g., Posner, *supra* note 173 (proposing a solution that would bar enforcement of a patent not reduced to practice within a reasonable time after the patent grant). See generally Chiang, *supra* note 27, at 710 (“a theory that regards non-practicing patent holders as *the* problem leads logically to a policy prescription that patent law should require patentees to practice”) (emphasis in the original).

182. See *supra* notes 73–75 and accompanying text. A more moderate version would apply the use requirement only to suits against independent inventors. See, e.g., Liivak & Penalver, *supra* note 16, at 1479–82. This more limited requirement reduces the negative impact on licensing, since independent inventors, by definition, are unaware of the patented invention and thus not in a position to seek a license. But it requires judicial determinations of whether a defendant independently invented, which is bound to be difficult and likely to add substantially to enforcement costs. After all, every defendant would have an incentive to claim that it independently invented.

Some commentators prefer solutions that do not depend on use at all.<sup>183</sup> Professors Lemley and Melamed, for example, favor targeting the underlying features of the patent system that make strategic opportunism profitable, including the PTO's practice of granting a multiplicity of broad patents on small improvements, patent law's excessively generous remedial rules, and the high costs of patent litigation.<sup>184</sup> If these features are essential to the environment that nurtures socially perverse PAE practices, then eliminating them should go a long way to choking off those practices.

Needless to say, we should try to correct flaws in the patent system whenever it makes sense to do so. But there is no assurance that the PAE problem can be adequately addressed in this way. Even if one could reduce the number of software patents, perhaps by tightening the nonobviousness requirement, claim interpretation rules would still create uncertainty about scope.<sup>185</sup> Adjusting patent damages rules would be helpful, but measuring damages under more limited rules can be difficult. And as the history of procedural reform in recent decades demonstrates, it is very hard to reduce litigation costs by changing procedural rules without also increasing error costs or creating other problems.<sup>186</sup>

An intermediate solution is preferable. We should correct flaws in the patent system to the extent we can, but we should also employ a tailored use requirement.<sup>187</sup> The idea is to allow patent enforcement by users, temporary nonusers, and perhaps functional nonusers when it makes sense in the particular case—but not by strategic nonusers or complete nonusers.<sup>188</sup>

We saw in Part II that patentees should be allowed to enforce patent rights in cases of temporary nonuse but not in cases of complete nonuse. The strategic nonuse that characterizes PAEs should be treated the same as complete nonuse: enforcement should be barred in those cases as well. To be sure, an inventor deciding how much to invest in invention will expect less economic return when assignment to a PAE is off the table. But, as already noted, it is not clear that original inventors receive much today when they assign their patents to PAEs.<sup>189</sup> In any event, the negative incentive

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183. Lemley & Melamed, *Trolls*, *supra* note 15, at 2172.

184. *See id.* at 2172–78. *See also* Schwartz & Kesan, *supra* note 163, at 427–28 (“We submit that the debate [about NPE litigation] should focus on the merits of the lawsuits or the *actions* of the parties in the litigation, or both, and not on the parties’ identities,” in particular whether or not they are NPEs).

185. Bessen et al., *supra* note 168, at 28, 34 (arguing that a critical feature of the PAE business model involves taking advantage of the “fuzzy boundaries” of software patents).

186. For example, increasing sanctions for meritless filings or imposing a more onerous pleading burden to screen meritless suits also deters meritorious suits and risks generating higher litigation costs. *See* ROBERT G. BONE, *CIVIL PROCEDURE: THE ECONOMICS OF CIVIL PROCEDURE* 125–57 (2003) (analyzing pleading rules).

187. Any use condition should apply only to patent enforcement and not to the grant of a patent in the first place. One of the important goals of patent law is to incentivize early disclosure that cuts off the patent race and enables downstream innovation. Delaying a patent application undermines this disclosure goal. *See supra* note 52 and accompanying text.

188. Recall that functional nonuse should be handled on a case-by-case basis. *See supra* notes 76–81 and accompanying text.

189. *See supra* note 165 and accompanying text.

effects are not likely to be large in the aggregate, given all the other options for exploiting an invention.<sup>190</sup>

It is true that courts will have to sort cases of strategic nonuse from cases of temporary and functional nonuse (but not from cases of complete nonuse because enforcement is barred there as well). However, this should not be much of a problem. Distinguishing strategic nonuse from temporary nonuse should be fairly straightforward in most cases. By definition, a PAE does not have current plans to license its patents (except by asserting them against productive users should any appear). Therefore, the PAE will have no evidence to support a claim to temporary nonuse. Sorting between strategic nonuse and functional nonuse should also be fairly easy. A PAE might argue that it keeps unused patents in order to signal information to external observers about firm attributes; however, in the case of PAEs, it should be obvious that this claim is just a ploy. The typical PAE has no research department and thus no R&D information to signal. Owning many patents might mean that the PAE is strong, but not because of any unobserved attributes that the patent portfolio signals. Lots of patents make a PAE strong because the PAE is in the business of asserting patents.

A PAE might respond to a rule barring enforcement by creating a small research department, adding a licensing component to its business, or even commercializing some of its patents—and then pretending that it is actually doing innovative research or that its unused patent is part of this licensing or commercialization scheme. However, the PAE would still have to establish that its research is genuine and not just a ploy to avoid being classified as a PAE and that a bona fide connection exists between any unused patents and the commercial part of its business. This should be hard to do for a PAE with a business model focused on strategic nonuse and holdup. Furthermore, any adjustment that involves research, bona fide licensing, or commercialization on a scale that could conceal a patent assertion strategy will make it costlier for PAEs to operate and thus should reduce the number of PAEs.

One advantage of this proposal is that it does not require a court to identify holdup on a case-by-case basis.<sup>191</sup> For a patentee to enforce patent rights, it must be a user, a temporary nonuser, or possibly a functional nonuser. Thus, a court need only check that the patentee's nonuse does not qualify as temporary or functional. As explained above, that should not be difficult to do.

This proposal is not offered as a complete solution to the PAE problem.<sup>192</sup> But a tailored use requirement that includes a bar to enforcement in cases of strategic

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190. Also, the adverse impact, if any, on incentives is already taken into account in our assumption that strategic nonuse is socially undesirable. If strategic nonuse is undesirable on utilitarian grounds, it must be because the marginal social costs of the practice exceed the marginal benefits, and those marginal benefits include whatever positive effects the presence of PAEs have on incentives to invent.

191. See Chiang, *supra* note 27, at 711 (explaining that identifying a holdup strategy would be extremely difficult).

192. Professors Liivak and Penalver, for example, propose conditioning an award of reasonable royalties on efforts to commercialize the invention. Liivak & Penalver, *supra* note 16, at 1490. This proposal mitigates a PAE's ability to threaten high damages, but it does nothing to reduce the PAE's ability to threaten high litigation costs. Other commentators have proposed compulsory licenses that allow

nonuse has enough promise on utilitarian grounds to be considered part of any solution.<sup>193</sup>

## B. COPYRIGHT-PROTECTED ORPHAN WORKS

### 1. The Problem

An orphan work is a work for which the current copyright owner cannot be identified with reasonable effort.<sup>194</sup> These are usually works with copyrights that have passed through multiple owners, so any copyright notice no longer indicates who actually owns the copyright and the long ownership chain makes tracing impractical. To illustrate, suppose that the original author and copyright owner of a novel dies, leaving the copyright to her heirs. The heirs then assign the copyright (or their shares of the copyright) to others, who die and pass the copyright on to their heirs, who assign it again, and so on. Now suppose someone who wishes to include portions of the novel in her own work seeks permission to do so. She checks the copyright notice on the book, which lists the original author's name as copyright owner. But she quickly discovers that the author is dead.<sup>195</sup> She then checks with the Copyright Office to see if there is any record of what happened to the copyright and discovers that transfers of ownership need not be recorded and, as is usually the case, were not recorded for this novel.<sup>196</sup> Our potential user does some additional checking but quickly hits a wall. Unable to trace the ownership chain, she either

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others to use the patented technology as long as they pay a compulsory license fee to the PAE. Trimble, *supra* note 2; cf. Saunders, *supra* note 25, at 434–36 (proposing a compulsory licensing scheme for handling anti-competitive suppression). However, compulsory licensing regimes are costly to administer. The additional costs compared to an outright bar might be worth incurring if the compulsory licensing fees paid to PAEs added sufficiently to invention incentives, but it is far from clear that they will.

193. If nonutilitarian justifications based on Lockean natural rights or personhood were also important to patent, the analysis would be different, although the conclusion might be the same, as the discussion of orphan works in Section III.B. indicates.

194. See, e.g., REGISTER OF COPYRIGHTS, ORPHAN WORKS AND MASS DIGITIZATION 9 (June 2015) (hereinafter 2015 REPORT ON ORPHAN WORKS) (noting that the first Copyright Office Report on Orphan Works in 2006 defined them as “any original work of authorship for which a good faith prospective user cannot readily identify and/or locate the copyright owner(s) in a situation where permission from the copyright owner(s) is necessary as a matter of law”); Hansen et al., *Orphan Works*, *supra* note 88, at 3 (defining orphan works as “copyrighted works whose owners cannot be located by a reasonably diligent search”). This is the standard definition and it is the one that best fits our problem of nonuse. Nevertheless, it is worth noting that some commentators have expanded the definition to include works which have identifiable owners but which cannot be licensed because of high transaction costs. See David R. Hansen, *Orphan Works: Definitional Issues*, at 1 (Berkeley Digital Library Copyright Project White Paper No. 1), <https://perma.cc/X22K-D5P7>; Stef van Gompel, *The Orphan Works Chimera and How to Defeat It: A View From Across the Atlantic*, 27 BERKELEY TECH. L.J. 1347, 1349–50 (2012) (drawing distinctions along these lines).

195. To make matters even worse, since the United States joined the Berne Convention in 1988, there has been no copyright notice requirement. Berne Convention Implementation Act of 1988, Pub. L. No. 100-568, § 7 (1988).

196. See 17 U.S.C. § 205(a) (2010) (Westlaw through Pub. L. No. 115-231).

refrains from using the work or uses it without permission, thereby risking a later suit by the current copyright owner.<sup>197</sup>

The orphan work problem is pervasive.<sup>198</sup> Empirical studies show that orphan works comprise a large portion of library and archive collections and encompass most types of copyrightable subject matter, including books, articles, letters, photographs, diaries, newspaper and magazine clippings, and home movies.<sup>199</sup>

The orphan work problem also generates high social costs. Third parties who wish to use orphan works in histories, documentary films, movies, and even various forms of web-based, user-generated content might choose not to do so for fear of later suit.<sup>200</sup> The result is a potentially serious chilling effect on downstream creativity and a significant impediment to socially beneficial uses.<sup>201</sup>

Indeed, the risk of suit is particularly daunting for third party users because of the prospect of high litigation costs, possible injunctions, and liability for statutory damages (assuming the copyright has been registered).<sup>202</sup> The Copyright Act gives a copyright owner the option of receiving statutory damages up to \$150,000 for each work infringed if the owner chooses not to prove actual damages.<sup>203</sup> So even when the copyright owner suffers little or no harm from the use (as is likely for orphan works that are completely unused) and the user receives very little economic benefit (as is true for much user-generated content), the copyright owner can still threaten the user with the prospect of having to pay substantial statutory damages.<sup>204</sup>

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197. See Hansen et al., *Orphan Works*, *supra* note 88, at 12-14 (describing a number of factors that produce orphan works).

198. *Id.* at 4-11; 2015 REPORT ON ORPHAN WORKS, *supra* note 194, at 2 (“the orphan works problem is widespread and significant”).

199. Hansen et al., *Orphan Works*, *supra* note 88, at 3, 5-14. It is true that Section 108 gives libraries and archives certain rights to reproduce and distribute—and in the case of Section 108(h), which applies to works within the last twenty years of their copyright term, also display and perform—but these rights are subject to conditions and strict limitations. 17 U.S.C. § 108 (2005) (Westlaw through Pub. L. No. 115-231). More importantly, they apply only to libraries and archives and not to third party users.

200. In addition, although many libraries have digitized their collections through participation in the Google Book Project, they still face copyright problems making the digital documents, including orphan works, available to the public in effective ways.

201. See, e.g., *id.* at 14-23.

202. Hansen et al., *Orphan Works*, *supra* note 88, at 3, 11, 30.

203. 17 U.S.C. § 504(c) (2010) (Westlaw through Pub. L. No. 115-231). In ordinary infringement suits, the statutory damages range from \$750 to \$30,000 per work infringed but that amount can increase to as much as \$150,000 in cases of willful infringement.

204. It is important to note, however, that educational institutions, libraries and archives are protected from paying statutory damages if they have reasonable grounds to believe that their use is a fair use under Section 107. See 17 U.S.C. § 504(c)(2) (2010) (Westlaw through Pub. L. No. 115-231). Also, courts are allowed to reduce statutory damages all the way down to \$200 per work if they find that the defendant was not aware and had no reason to believe that it was infringing. *Id.* Still, these exemptions and limitations depend on uncertain factual findings, so the prospect of being saddled with substantial statutory damages remains a serious risk, especially for risk-averse individuals and institutions. See Hansen et al., *Orphan Works*, *supra* note 88, at 11 n.49.

## 2. The Role of Nonuse

Although nonuse is not part of the definition, it is a common characteristic of orphan works.<sup>205</sup> In a typical scenario, the copyright passes to new owners who lack interest in the work or simply ignore it because they believe it has no value. While ultimately an empirical question, it seems reasonable to suppose that most orphan works involve complete nonuse. Indeed, complete nonuse increases the likelihood that a work will become an orphan, since complete nonuse leaves few, if any, clues to the owner's identity.<sup>206</sup>

It is important to remember that what matters for the analysis is whether the *copyright owner* uses the work.<sup>207</sup> A library or archive where the work is deposited might allow public access and maybe even display or perform the work. This is use under my definition, but it is use by the library or archive, not use *by the copyright owner*.

Complete nonuse matters normatively to whether a copyright owner should be able to assert its rights against third-party users, regardless of whether the normative theory is utilitarian, Lockean, or personhood-based. As I explain below, all these theories point to barring complete nonusers from enforcement in the typical orphan work situation and allowing third parties to use the work without compensation. This is significant because it runs directly counter to current proposals for handling orphan works, which focus on assuring that copyright owners have an opportunity to receive compensation for the use.<sup>208</sup>

In 2015, for example, the Copyright Office proposed that copyright owners of orphan works be limited to “reasonable compensation” (which assumes they should receive some compensation).<sup>209</sup> Proposed legislation followed a similar approach.<sup>210</sup> Scholars have floated proposals based on eliminating statutory damages (but allowing ordinary damages), imposing limited remedies, and creating compulsory

205. See, e.g., Urban, *supra* note 87, at 1396–98 (describing orphan works as “economically abandoned” and as works “whose authors have left them to languish”); Chiang, *supra* note 27, at 695, 700, 707 (arguing that orphan works involve holdup, which is based on surprise).

206. The other possibility is strategic nonuse. See Chiang, *supra* note 27, at 695, 700, 707 (arguing that orphan works involve holdup). However, strategic nonuse does not fit orphan works all that well. To be sure, the orphan work copyright owner threatens suit after a use is made and demands statutory damages in excess of any actual harm it suffers or any profit the user makes. But it is hard to imagine that an orphan work copyright owner acquires orphan copyrights just to lay in wait and spring them on users, as PAEs do for patents. Still, it does not really matter as far as the result is concerned whether the nonuse is complete nonuse or strategic nonuse since the optimal response is the same: bar enforcement of the copyright.

207. See *supra* Section I.B.

208. Chiang, *supra* note 27, at 706; Urban, *supra* note 87, at 1389.

209. 2015 REPORT ON ORPHAN WORKS, *supra* note 194, at 11. Moreover, the proposal conditioned the reasonableness limit on the user conducting a reasonably diligent search for the owner. *Id.* “Reasonable compensation” would be measured in terms of the market value of the work immediately before the defendant’s infringing use began. *Id.* at 63–64.

210. See *id.* at 11–13.

licensing schemes, all conditioned on reasonable efforts by the user to identify the copyright owner.<sup>211</sup>

All of these proposals assume that the optimal goal is to locate the copyright owner and reunite her with her work so that the third-party user can negotiate a license, or if that is not feasible, to replicate what would have happened if the owner and user had been able to negotiate in advance.<sup>212</sup> My proposal—an outright bar to enforcement—rests on a different assumption; namely, that a copyright owner has no legitimate reason to enforce her rights or demand compensation when she completely ceases using the work and has no continuing interest in it.

### 3. A Proposed Solution

The following analysis justifies barring enforcement and denying compensation by showing that the case for enforcement is weak on utilitarian, Lockean, and personhood grounds.

#### *a. Utilitarian Analysis*

As discussed above, the social costs of protecting orphan works, including the chilling effect on socially beneficial activities and downstream creation, are substantial.<sup>213</sup> This means that protecting orphan works must generate substantial incentive benefits to outweigh these costs. This is highly improbable.<sup>214</sup> Roughly speaking, a prospective creator deciding how much to invest in creation is not likely to pay much attention to possible economic return in the distant future when her work becomes an unused orphan. She will focus instead on the potential economic gain from licensing and selling her work while the work still has market value and potential buyers can still identify the copyright owner and enter into deals.

To illustrate, imagine a prospective creator, *X*, contemplating whether to create a work.<sup>215</sup> The incentive argument for copyright assumes that *X* takes account of the expected future revenue stream from her work and will invest more when the expected revenue is greater.<sup>216</sup> With copyright protection, *X* can be confident that she will be able to profit from selling and licensing her work while she owns the copyright. The question is how much additional revenue she is likely to expect from knowing that copyright protection will also be available after she no longer owns the copyright and her work becomes an unused orphan. The answer is very little.

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211. Chiang, *supra* note 27, at 706; Urban, *supra* note 87, at 1389.

212. Chiang, *supra* note 27, at 703–04.

213. See *supra* notes 200–201 and accompanying text.

214. See Randal C. Picker, *Private Digital Libraries and Orphan Works*, 27 BERKELEY TECH. L.J. 1259, 1283 (2012) (drawing a similar conclusion).

215. To assess incentive effects, one must focus on the world at the time an author decides whether and how much to invest in a creative project.

216. It also assumes that the prospective creator is economically motivated and that economic benefits are subject to declining marginal utility. It is also worth noting that authors of some orphan works, such as personal letters and diaries, are not likely to care much at all about copyright protection if and when their work becomes an orphan. In these cases, the incentive-based utilitarian rationale clearly supports free access to the work.



There are several reasons for this. First,  $X$  knows that whatever work she creates will not become an orphan while she owns the copyright (since her identity will be readily ascertainable) and that during this period she can benefit from active sales and licensing if the work turns out to have sufficient value. Even if she assigns the copyright to someone else, she knows that the price of the assignment will reflect the market value of the work while it is still being used. This is the period of greatest economic gain to her and therefore the period she will focus on when estimating the expected benefit from creating the work.

Second, whatever work  $X$  creates will have lost most of its market value by the time it becomes a completely unused orphan, so  $X$  will expect very little additional economic benefit from copyright protection at that stage.<sup>217</sup> This follows from the fact that works of value tend to be used by their owners. Moreover, the owner of a valuable work has strong incentives to make her identity readily known (through posting to the web and other means), so orphan status is unlikely for valuable works.<sup>218</sup> To be sure, in many orphan work cases, changing technology has opened up new uses for the work and new sources of value. But future technological advances and new uses are not likely to be reasonably foreseeable to  $X$  at the much earlier time when  $X$  creates the work.<sup>219</sup> There might be exceptions, of course, but predictions are based on the ordinary, not the exceptional, case.<sup>220</sup>

If  $X$  expects her work to yield very little, if any, revenue after it becomes a completely unused orphan,  $X$  will not care much about whether her work is protected by copyright at that stage. As a result, her incentives to create the work in the first place will not be materially affected by the prospect of copyright protection for the

217. See Picker, *supra* note 214, at 1282–83. By the time the work becomes an orphan, ownership of the copyright will likely have passed through many hands, so the original creator will not benefit directly. But the creator can benefit indirectly by, for example, charging more for an assignment of copyright to reflect the fact that the work can be protected if it becomes an orphan. Still, the additional amount she receives will be very small for the reasons stated above and because of the uncertainties associated with the chain of ownership.

218. See *id.* at 1283.

219. See LANDES & POSNER, *ECONOMIC STRUCTURE*, *supra* note 57, at 213. This is, after all, why the work loses value; no one thinks of the new use until the defendant does. Even if  $X$  can foresee future technological advance that might affect the work, she will have to put a very small probability on it happening and this probability will discount whatever value the work might have.

220. This is, of course, the standard economic approach to analyzing rational choice under conditions of uncertainty by using expected values. See generally COOTER & ULEN, *supra* note 53, at 43–46 (discussing expected value and rational choice). To be more precise,  $X$  will consider all possible future states of the world. For each such state,  $X$  will estimate the probability that it will happen, call that  $p_i$  (where the subscript  $i$  indexes all the possible states), and also estimate the economic value of her work in that state, call that  $v_i$ . The total expected value to her at the time she decides whether to create is:  $p_1 \times v_1 + p_2 \times v_2 + \dots + p_n \times v_n$ , discounted to present value (where  $n$  is the number of states). One of these states is the possible world where the work has become a completely unused orphan; let's say that's the  $n^{\text{th}}$  state in this formulation. My point is that for the reasons discussed in the text, a rational  $X$  will estimate a very small  $v_n$ , so that  $p_n \times v_n$  will also be very small (since  $p_n < 1$ ) and dominated by the other terms—and that is true even before any discounting to present value.

unused orphan.<sup>221</sup> This tiny private benefit for creators will yield only a tiny social benefit in terms of any marginal increase in ex ante incentives.<sup>222</sup>

A utilitarian analysis balances this small marginal benefit against the social costs of allowing enforcement or delivering compensation to the copyright owner in other ways. These costs are likely to be substantial. If compensation is delivered through a compulsory licensing scheme, as some commentators have proposed,<sup>223</sup> substantial administrative costs will be required to create and oversee the scheme.<sup>224</sup> If compensation is delivered through litigation, there will be litigation costs. If monetary relief is limited to “reasonable compensation,” there will be costly judicial inquiries into historical market values and costly adversarial battles over what is reasonable.<sup>225</sup>

This analysis makes empirical assumptions, as all proposals do. However, the empirical assumptions are quite reasonable. To be sure, people are not perfectly rational, but introducing bounded rationality constraints likely only strengthens the conclusions. Since people tend to be overly optimistic about their own success, creators will be inclined to underestimate the likelihood that their creations will become so valueless that they are ignored.<sup>226</sup> In any event, this analysis presents a strong case on utilitarian grounds for handling the orphan work problem by barring enforcement of copyright rights in all situations of complete nonuse.<sup>227</sup>

Unlike current proposals, this outright bar does not require that the defendant first search for the copyright owner; all it requires is orphan status and complete nonuse.

221. See Picker, *supra* note 214, at 1281–83.

222. Moreover, the small future revenue stream will have to be discounted to present value and this will reduce the expected revenue even further. See LANDES & POSNER, *ECONOMIC STRUCTURE*, *supra* note 57, at 213 (“because of discounting to present value, incentives to create intellectual property are not materially affected by cutting off intellectual property rights after many years”). This is especially so if, as seems reasonable, *X* will assume that whatever she creates will not become a completely-unused orphan work for a long time.

223. See *supra* note 211 and accompanying text.

224. See Landes & Posner, *supra* note 64, at 358 (noting that compulsory licensing schemes “would be likely to entail substantial costs”). For example, a compulsory licensing scheme must include a process for clearing potential licensees and periodically setting royalty rates. Moreover, it needs some way to enforce the license should a compulsory licensee stop paying royalties. For an overview of copyright compulsory licensing schemes and a critical take on compulsory licensing, see Robert P. Merges, *Of Property Rules, Coase, and Intellectual Property*, 94 COLUM. L. REV. 2655, 2668–69 (1994).

225. A useful comparison is to the reasonable royalty measure of relief in patent infringement cases. The courts often frame this inquiry in terms of a hypothetical bargain between a willing seller and a willing buyer, and they use a fifteen-factor test, known as the *Georgia-Pacific* factors, to determine the reasonable royalty. 1 CHISUM ON PATENTS, *supra* note 25, § 20.07. This test is heavily criticized for generating high costs and considerable uncertainty. See Lemley & Melamed, *Trolls*, *supra* note 15, at 2143–44.

226. If people tend to be excessively optimistic about future events that affect their self-interest, as the bounded rationality literature teaches, a creator will be overly optimistic about the success of its creation. Picker, *supra*, note 214, at 1283.

227. It is true that the fair use doctrine is available to allow use and bar enforcement in some cases. See *Authors Guild v. Google, Inc.*, 804 F.3d 202 (2d Cir. 2015); *Authors Guild, Inc. v. HathiTrust*, 755 F.3d 87 (2d Cir. 2014); Urban, *supra* note 87, at 1383–84. But fair use applies only to uses by defendants that satisfy the multi-factor fair use test, 17 U.S.C. § 107 (2012), and that test itself invites costly litigation and produces uncertain outcomes which can chill creativity. My proposal, which bars copyright for all unused orphan works, avoids costly fair use inquiries.

A prospective user might conduct a search anyway to confirm that the work is an orphan, but orphan status should be pretty clear in most situations. Also, if ordinary efforts by the user to identify the copyright owner are unsuccessful and the copyright owner has taken no steps to help others trace ownership (such as by posting easily accessible identification information to the web), it makes sense to create a legal presumption that the work is an orphan.<sup>228</sup> The important point is that search is not a requirement in my proposal.<sup>229</sup> Current proposals require search because they aim to deliver compensation to the copyright owner. An outright bar rejects this goal. Compensating owners of completely unused orphan works makes no sense on utilitarian grounds when *ex ante* incentives are key.

*b. Lockean Analysis*

At first blush, it might seem that Lockean natural rights would justify giving copyright owners broad control over orphan works.<sup>230</sup> However, as we saw in Part II, there are limits to Lockean rights: the spoilage and sufficiency provisos justify limits and contractarian theory does so as well.

First, consider the spoilage proviso. As we have seen, the spoilage proviso can be interpreted to cover IP even though IP does not spoil in the same way physical goods do.<sup>231</sup> The idea is to find waste when nonuse threatens to dissipate all of the value of the IP. This fits a scenario where the IP owner ignores the work and does nothing to develop or exploit it.

Still, for many orphan works, the current copyright owner refrains from using the work only after it has lost its value. This, however, can also count as waste. Often, third party uses reflect the fact that the work has acquired a new value because of technological change, such as the advent of digital technology. Without the user creating the new use, the copyright owner would likely continue ignoring the work and overlook whatever novel creative opportunities the new technology presents. Ignoring the opportunity for novel uses is no different than ignoring the opportunity to develop or exploit the work in the first place. In both cases, the copyright owner's actions dissipate the value of the work by failing to even consider potential uses for

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228. It should be possible to specify the different sources that a user must check in order to meet the condition of ordinary effort, and doing so will provide clear notice in advance and minimize chilling effects. Under the outright bar approach, however, a user does not have to check if she is otherwise confident that the work is an orphan.

229. Some commentators would impose a duty on the copyright owner to take reasonable steps to make itself locatable in order to minimize search costs. *See, e.g.,* Ariel Katz, *The Orphans, the Market, and the Copyright Dogma: A Modest Solution for a Grand Problem*, 27 BERKELEY TECH. L.J. 1285, 1306–08 (2012). Such a duty might help third parties confirm orphan status, but its function is different when search is not required.

230. Professor Chiang mentions that the orphan work literature seems dominated by a “deeply entrenched” idea that the copyright owner has “an inherent right to control and get paid for its work.” Chiang, *supra* note 27, at 698. This idea is most compatible with a Lockean theory, even though supporters of copyright protection for orphan works do not make the connection explicitly.

231. *See supra* notes 109–113 and accompanying text.

it. Thus, it is reasonable to charge a copyright owner with waste if the owner completely ignores any chance that the work might acquire new value over time.<sup>232</sup>

The sufficiency proviso does little to limit protection for orphan works when third-party users have access to lots of other creative material. However, the principle of free use, which we derived in Part II by applying a contractarian approach, can do more work.<sup>233</sup> According to this principle, when A is a complete nonuser and ignores her work, she has an obligation to allow B's creative use, except when B's use seriously interferes with A's own creative interests as an author. The reason is that A would have agreed to such a principle if she were bargaining behind a veil of ignorance knowing that she could be either an owner or a user after the veil is lifted. This principle fits the typical orphan work scenario involving complete nonuse quite well. In this scenario, the copyright owner ignores the work and does nothing to be locatable (such as by entering identification information on the web).<sup>234</sup> When someone then uses the work without permission, the owner threatens to sue or actually files suit for statutory damages and injunctive relief, and does so in the usual case despite the fact that the use causes no harm to the author's creative interests.<sup>235</sup> Under these circumstances, the copyright owner violates the principle of free use by threatening suit and pursuing litigation, thereby impeding creative use by others.<sup>236</sup>

This analysis assumes that bargaining agents would agree to a principle that authorizes free use of orphan works. One might argue that bargaining agents would instead agree to allow use only when the user is willing to pay an amount not in excess of the private benefit that the user receives from using the work.<sup>237</sup> Assuming prospective users are willing to engage in a use whenever their benefit equals or exceeds the cost of compensating copyright owners, this alternative principle rewards the owner without impeding the use. The problem, however, lies in the assumption that use will not be chilled.

To see this point clearly, imagine a third party interested in using an orphan work but unable to locate the copyright owner and negotiate a license in advance. The potential user knows that if she uses the work without permission, the copyright owner might appear and insist on compensation after the fact. In an ideal world, the amount of compensation paid would not exceed the user's benefit. However, in the real world, the copyright owner can leverage the high costs and risks of litigation to

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232. This ground for denying enforcement of copyright rights might depend on the copyright owner's state of mind. While it is very likely that most owners of completely-unused orphan works pay no attention to potential uses, it is conceivable that some might, in which case all would have incentives to pretend that they did. However, fakers will have difficulty marshaling objective evidence to support their claims.

233. See *supra* notes 120–128 and accompanying text.

234. See Katz, *supra* note 229.

235. In the typical case, the user's creation does no violence to the integrity of the work or adversely affect any other creative personhood interest of the copyright owner or the original author. See *infra* notes 241–246 and accompanying text.

236. This point warrants more development than space permits, but I hope this brief discussion is enough to indicate the argument's force.

237. I am grateful to Professor Wendy Gordon for suggesting this compensation option.

insist on payment in excess of reasonable compensation.<sup>238</sup> Faced with this risk, our potential user might avoid using the work altogether, especially if she is risk-averse. Thus, harm to the user is a real possibility even with a modest compensation requirement.<sup>239</sup> And bargaining agents behind the veil know enough about the real world to be aware of these risks.

The principle of free use, however, applies only to those who make creative use of an orphan work, such as using it in films, books, or user-generated content. Some uses of orphan works might not involve creative contributions, such as a use that improves public access to the work. However, if the social costs of chilling these uses are high enough, Lockean rights might have to give way. Although natural rights like Locke's are, in theory at least, supposed to resist utilitarian arguments for imposing limits, as a practical matter they must yield to social costs when those costs are serious enough and the resulting limitation is not too burdensome for the right holder.<sup>240</sup>

### c. *Personhood Analysis*

As we saw in Part II, personhood theory supports different, and in some ways more limited, rights than Lockean theory.<sup>241</sup> The moral rights usually associated with personhood include the right of attribution, right of integrity, right of disclosure, and right to withdraw the work. The right of attribution is not at issue when a third party uses an orphan work; the user can easily credit the copyright owner if the owner has a right to be credited. Nor is the right of disclosure implicated, since the work has had enough public disclosure for the third party to have access to it. And the copyright owner in the typical orphan work case has no interest in withdrawing the work; instead, she wishes to be compensated for its use.<sup>242</sup>

238. In particular, a prospective user knows that there is a risk of error in valuing the private benefit—a court might value it more than the actual value—and also that she will have to pay litigation costs if the copyright owner sues.

239. One might argue that this result can be avoided by creating a compulsory license and setting the royalty amount equal to the average benefit from using the work. However, a compulsory license will not eliminate chilling effects for those prospective users who value the use less than the average amount. Moreover, such schemes are costly to create and administer, and it is difficult to see how the benefits generated by furnishing what is likely to be a small amount of compensation in most cases could be worth these additional costs. *See supra* note 224 and accompanying text.

240. When a work is a completely-unused orphan, the latter condition is easily met. In fact, if high social costs impair other rights of comparable moral worth, such as First Amendment rights to free expression, even Lockean theory must recognize limits to accommodate the rights-conflict.

241. *See supra* notes 130–141 and accompanying text.

242. There might be some exceptions. But few of the exceptions are likely to involve orphan works. For example, suppose that *A* sends a personal letter or email to *B* with the expectation that *B* will keep it confidential. When *A* becomes famous, *B* gives the letter or email to a library or archive without *A*'s knowledge, and *C* copies from it to create a work of her own. *See, e.g.,* *Salinger v. Random House, Inc.*, 811 F.2d 90 (2d Cir. 1987). One might argue that *A* has a personhood-based privacy interest that justifies allowing *A* to withdraw the email or letter from public view and maybe stop *C* from using it. However, even if this conclusion is correct on personhood grounds, the hypothetical does not involve an orphan work. *C* can easily ascertain *A*'s identity by reading the letter or email, in which case *C* can try to get *A*'s permission if *C* wishes to do so. More generally, the orphan work problem involves obstacles to

This leaves the right of integrity.<sup>243</sup> In most orphan work scenarios, the third-party user does nothing to trigger this right. She simply uses the work, or portions of it, in a new way that does no violence to the work's integrity. However, the integrity right is relevant to situations where a third party uses the work in a way that conflicts sharply with the original author's artistic vision. Yet even in these cases, the right has little force.<sup>244</sup> The personhood connection that matters normatively is the connection of the original author with her work, and because orphan work copyrights usually have passed through many hands, the party asserting rights in an orphan work will typically not be the original author.<sup>245</sup> Indeed, even countries that recognize broad moral rights on personhood grounds stop short of allowing purchasers to enforce a right of integrity.<sup>246</sup>

In sum, nonutilitarian theories of copyright yield conclusions very similar to those derived from a utilitarian analysis. Everyone should be free to use a completely unused orphan work, perhaps with the additional conditions that the copyright owner not have taken any steps to be locatable and that the use does no violence to the integrity of the work. These additional conditions are very likely to hold for most orphan works and for most uses of those works.

### C. TRADEMARK ABANDONMENT

As Part II explained, a firm must use a mark in trade before that mark can become a source identifier capable of communicating product information to consumers and symbolizing seller goodwill.<sup>247</sup> When a trademark owner stops using a mark without any plans to resume use in the reasonably foreseeable future, it abandons the mark and forfeits trademark rights to it. The mark then becomes available for anyone to use.<sup>248</sup>

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identifying the current copyright owner when that owner is not the original author, but a personhood-based right to withdraw a work belongs to the original author.

243. Hansmann & Santilli, *supra* note 134, at 95.

244. The text explores the normative force of personhood theory in general, but it is worth noting that IP law in the United States strongly disfavors a right of integrity grounded in personhood values. *Id.* at 96. Such a right fits U.S. law very poorly and, by impeding expression, raises serious First Amendment concerns. See MERGES ET AL., *supra* note 6, at IV-228–29; Amy M. Adler, *Against Moral Rights*, 97 CALIF. L. REV. 263, 272–83 (2009).

245. Of course, the original author might still be alive and wish to assert her integrity rights even though she has parted with ownership of the copyright. However, the problem with orphan works has nothing to do with original authors enforcing rights; it has to do with current copyright owners asserting their copyright in an effort to obtain payment from users.

246. Hansmann & Santilli, *supra* note 134, at 121. Indeed, the most well-known example of a right against mutilation in U.S. law—the rights of authors of limited edition works granted by § 106A of the Copyright Act, 17 U.S.C. § 106A—is nontransferable. It is worth mentioning, however, that European law allows the right of integrity to pass to an author's heirs upon the author's death. Hansmann & Santilli, *supra* note 134, at 122–23. It is possible that some orphan works are owned by heirs who have maintained ownership rather than sold the copyright to others.

247. See *supra* notes 148–150 and accompanying text.

248. See *supra* note 159 and accompanying text. Trademark law is unusual among IP theories in having a doctrine of abandonment by nonuse. Copyright recognizes an abandonment defense, but it requires proof of an intent to abandon and mere nonuse is insufficient. 4 NIMMER ON COPYRIGHT, *supra*

This seems reasonably tidy. But there's a problem with the trademark abandonment doctrine. To illustrate, suppose that after many years selling shampoo under the mark AFARION, *X* decides to discontinue its AFARION line and stops using the mark completely. Suppose, however, that a substantial segment of the consuming public continues to associate AFARION with *X*. If *X* is deemed to have abandoned the mark because of nonuse, other firms are free to adopt it. If firm *Y* adopts AFARION and applies it to shampoo that is inferior in quality, consumers might buy *Y*'s inferior shampoo thinking that it is *X*'s superior product and end up harmed by their confusion.

This is the problem of residual goodwill.<sup>249</sup> Residual goodwill is the goodwill that remains after use, and it exists because consumers still use the mark as a source identifier for *X* even after *X* ceases using it. On the one hand, nonuse pushes in favor of abandonment. On the other, residual goodwill pushes in favor of continued protection. Courts in the United States have grappled with this tension, but for the most part unsuccessfully.<sup>250</sup> Facing significant residual goodwill, many courts search for some kind of use—even peripheral or incidental use—to avoid an abandonment finding.<sup>251</sup> This creates the puzzling result that a trademark owner retains trademark rights even though it has ceased using the mark in the ordinary way and has no intent to resume use.

This doctrinal puzzle reflects confusion at the policy level.<sup>252</sup> It stems from mistakenly thinking of trademarks as property and trademark law as conferring property rights.<sup>253</sup> Abandonment in property law turns on the property owner's intent

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note 82, § 13.06. Patent law's abandonment doctrine affects only initial patentability. This doctrinal difference is probably due to differences at the policy level. When a mark is unused, it can lose its source-identifying meaning, and when that happens, trademark policies no longer justify protecting it. By contrast, when a patent is unused, the patent does not necessarily lose the value that matters for patent law. The same is true for copyright, arguably even more so because of the influence of nonutilitarian theories.

249. See 3 MCCARTHY ON TRADEMARKS, *supra* note 9, § 17:15.

250. See *id.* (noting circuit conflict over the issue). See generally Jake Linford, *Valuing Residual Goodwill After Trademark Forfeiture*, 93 NOTRE DAME L. REV. 811 (2017).

251. See, e.g., *Ferrari S.p.A. Esercizio Fabbriche Automobili e Corse v. McBurnie*, No. 86-1812-B(IEG), 1989 WL 298658, at \*7-8, \*12-13 (S.D. Cal. June 1, 1989) (finding that the sale of repair parts for the discontinued Daytona Spyder was enough to avoid abandonment of trade dress rights in the face of substantial residual goodwill); *First Nationwide Bank v. Nationwide Sav. & Loan Ass'n.*, 682 F. Supp. 965, 979 (E.D. Ark. 1988) (finding that continued use of old mark on checkbooks after the company changed it maintained sufficient goodwill to "preclude[] abandonment"). Cf. *Emergency One, Inc. v. American FireEagle, Ltd.*, 228 F.3d 531, 541 (4th Cir. 2000) (relying in part on the existence of residual goodwill to justify a jury finding of an intent to resume use when the trademark owner ceased to use the mark). *But see Exxon Corp. v. Humble Exploration Co.*, 695 F.2d 96, 100-01 (5th Cir. 1983) (holding that even strong residual goodwill cannot save a mark from abandonment).

252. As we saw in Part II, personhood theory should have no place in trademark law. See *supra* notes 156-158 and accompanying text. But assuming it had a place, maybe on a theory that brands embody firm personality, its force should be much diminished when a firm stops using its brand with no intent to resume use, just as it is for a person who changes her birth name.

253. This is probably a holdover from the property theory that supported the tort of technical trademark infringement in the late nineteenth century. See Bone, *Hunting Goodwill*, *supra* note 152, at

to relinquish her rights.<sup>254</sup> Faced with a risk of consumer confusion due to residual goodwill but confined to the property model and its focus on intent, courts downplay obvious signs of abandonment in order to continue protecting the mark.

Trademarks, however, are not property in the ordinary sense and trademark law is not a property theory.<sup>255</sup> There is no question that trademark law, whatever else it might do, serves the utilitarian goal of conveying accurate information to consumers and ensuring a well-functioning competitive market.<sup>256</sup> This utilitarian rationale focuses not on protecting the mark as property of the trademark owner, but on protecting the mark as a device for communicating information to the market.<sup>257</sup>

If enough consumers still treat the mark as a source identifier capable of communicating information even after the trademark owner has ceased using it, the utilitarian rationale supports protecting the mark from uses by others that are likely to cause harmful confusion—unless, of course, the costs of affording protection are too high. For example, when *Y* uses the mark AFARION on an inferior quality shampoo, consumers who still believe the mark signifies *X* will assume, wrongly, that *Y*'s products are higher quality than they actually are. As a result, consumers are harmed and *X*'s reputation is put at risk. These are classic concerns of trademark law.

Once we get rid of the idea that trademark protection should turn on the trademark owner's intent, we no longer need to pretend that the owner is still using the mark when it really is not. It is much more straightforward to recognize that a mark can sometimes still receive protection when the owner has stopped using it. Although the owner no longer has a trademark interest, others cannot use the mark when doing so would confuse a substantial number of consumers.

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560–72 (describing this early property conception, its eventual demise with the rise of legal realism, and its lingering effects today).

254. JOHN G. SPRANKLING, *UNDERSTANDING PROPERTY LAW* § 4.03[B][1] (2000) (stating that the abandonment of a chattel requires that “the owner intentionally and voluntarily relinquishes all right, title, and interest in it”); Donald J. Kochan, *Keepings*, 23 N.Y.U. ENVTL L.J. 355, 373–74 (2015). For a useful discussion of abandonment for personal property and water rights, see Liivak & Penalver, *supra* note 16, at 1455–58 (noting that intent to abandon is required but that intent can be inferred from a history of nonuse combined with other objective factors).

255. See Lemley & McKenna, *supra* note 151, at 181–84. Unlike ordinary property owners, trademark owners do not have even prima facie rights to exclude all others from using their marks or even from appropriating the mark's goodwill if they do not mislead. Rather, trademark owners have rights against those who use the mark in ways that cause consumer confusion (or, in some cases, that injure the mark through dilution).

256. It is worth noting that if a Lockean theory actually fit trademark law, it might well tie abandonment to the property owner's intent, since Lockean theory focuses on securing the property owner's natural right and on consent as the primary basis for transferring or otherwise altering the right. See generally Laura S. Underkuffler, *On Property: An Essay*, 100 YALE L.J. 127, 138 (1990) (noting “Locke defined property as that which without a man's own consent . . . cannot be taken from him”) (internal citations omitted). However, as we saw in Part II, Lockean theory does not fit trademark law very well at all. See *supra* note 153–154 and accompanying text. Nor does personhood theory. See *supra* notes 156–158 and accompanying text. Still, even if one or both of these theories played a role and supported forfeiture of rights with nonuse, the utilitarian theory would still call for protection to avoid consumer harms.

257. See *supra* notes 148–152 and accompanying text.



This situation—where trademark law continues to protect a mark even though the trademark owner has lost its rights—also arises with generic marks,<sup>258</sup> and in that setting courts have figured out a much more sensible response. To illustrate, suppose a firm has a patent on a product and enjoys a monopoly for the duration of the patent. At the beginning of the patent term, consumers use the firm's trademark as a source identifier for the product and the mark receives trademark protection in the ordinary way. Suppose, however, that after a period of time, consumers find it convenient to refer to the product itself by the mark. For example, THERMOS was once a trademark for a vacuum-insulated bottle sold by King-Seeley, but over time consumers gradually appropriated the word THERMOS as the name for the general type of product and used it to refer to any vacuum-insulated bottle regardless of the seller.<sup>259</sup> The same thing happened to CELLOPHANE, ASPIRIN, MURPHY BED and many other marks.<sup>260</sup> They all began as protectable marks that designated a single source of the product, but over time they became generic terms that consumers used to refer to the general type of product no matter who sold it.

When a majority of consumers switch from using the mark as a source identifier to using it to refer to the general product type, the mark is deemed to be legally generic and the owner loses its trademark rights.<sup>261</sup> But—and here is the important point—because the transition from source identifier to generic takes time, it often happens that a substantial, though ever-diminishing, minority of consumers still use the mark as a source identifier even after it has become generic.<sup>262</sup> Although it is not referred to as residual goodwill, this situation in effect presents a residual goodwill problem very similar to the problem that arises in the abandonment setting. The trademark owner loses its trademark rights because the mark has become legally generic—just as the trademark owner loses its trademark rights when the mark is abandoned—but there is still residual goodwill because a substantial minority of consumers continue to treat the mark as a source-identifier.

The law of genericity handles this problem in a sensible way. Other firms can use the mark if they wish, but when they do, they must take reasonable steps to reduce the risk of confusion, such as by adding a conspicuous disclaimer or prefacing the mark with their own firm name or another trademark.<sup>263</sup> For example, in the *King-*

258. See 2 MCCARTHY ON TRADEMARKS, *supra* note 9, § 12:51.

259. *King-Seeley Thermos Co. v. Aladdin Indus., Inc.*, 321 F.2d 577, 579 (2d Cir. 1963).

260. For these examples, see *Murphy Door Bed Co. v. Interior Sleep Sys., Inc.*, 874 F.2d 95, 100–01 (2d Cir. 1989).

261. See 2 MCCARTHY ON TRADEMARKS, *supra* note 9, § 12:6.

262. See *Harley-Davidson, Inc. v. Grottanelli*, 164 F.3d 806, 812 (2d Cir. 1999); 2 MCCARTHY ON TRADEMARKS, *supra* note 9, § 12:51.

263. See 2 MCCARTHY ON TRADEMARKS, *supra* note 9, § 12:51; RESTATEMENT (THIRD) OF UNFAIR COMPETITION, *supra* note 4, § 15 cmt. d. This apparent paradox—the trademark owner has no rights but still can sue a competitor if there is a risk of consumer confusion—is papered over by using a different label, “unfair competition” or “passing off,” to refer to the cause of action and the limited remedy. See, e.g., *Blinded Veterans Ass'n v. Blinded Am. Veterans Found.*, 872 F.2d 1035, 1036 (D.C. Cir. 1989). A court might say, for example, that the former owner has no trademark rights because the mark has become generic, but can still obtain relief by bringing a passing off or unfair competition claim. In fact, however,

*Seeley* case, the Second Circuit held that THERMOS had become generic and the defendant Aladdin Industries could use the term, but it also ordered Aladdin to preface its use of THERMOS with its own trademark ALADDIN and never use the terms “original” or “genuine”—all in order to reduce the risk of confusion for the substantial minority of consumers who still used THERMOS as a source-identifier for King-Seeley’s vacuum-insulated bottles.<sup>264</sup> Later, when the process of genericide was almost complete and very few consumers still used the mark as a source identifier, the Second Circuit held that the district court could modify the injunction so that Aladdin might use THERMOS without any restrictions.<sup>265</sup>

This same approach should be applied to abandonment.<sup>266</sup> More specifically, if residual goodwill in an abandoned mark is strong enough, the benefits of avoiding consumer harm and reputational injury are likely to exceed the costs of continuing to protect the mark.<sup>267</sup> In that case, the mark should receive full protection, just as if the owner were still using it. As the residual goodwill weakens, the social benefits of protecting the mark decline, until the cost-benefit balance no longer supports full protection. The optimal form of protection then should depend on the strength of residual goodwill. Marks with moderately strong goodwill should receive the same kind of protection that generic marks receive in those cases where a substantial minority of consumers still use the mark as a source identifier. Other firms would be free to use the mark, but only if they take reasonable steps to mitigate confusion risks, such as by adding something to the mark itself or attaching a conspicuous disclaimer.

In sum, a utilitarian analysis points to a three-pronged approach. For very weak residual goodwill, the mark should receive no protection at all and others should have unhindered access to it. From a utilitarian perspective, the benefits of protecting the very few consumers who still use the mark as a source identifier do not justify the costs of requiring firms to use precautionary measures. For moderate residual goodwill, others should be free to use the mark, but only if they take reasonable steps to reduce the risk of confusion. For very strong residual goodwill, the mark should receive full trademark protection, and others should be barred from using it.<sup>268</sup>

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these are just formal labels without functional significance. The important point is that the owner can still protect the mark against uses that risk confusion.

264. *King-Seeley Thermos Co.*, 321 F.2d at 581.

265. *King-Seeley Thermos Co. v. Aladdin Indus., Inc.*, 418 F.2d 31, 35–36 (2d Cir. 1969).

266. See RESTATEMENT (THIRD) OF UNFAIR COMPETITION, *supra* note 4, § 30 cmt. a (suggesting a similar approach to mitigate consumer confusion after abandonment); Jerome Gilson & Anne Gilson LaLonde, *The Zombie Trademark: A Windfall and A Pitfall*, 98 TRADEMARK REP. 1280, 1301-03 (2008) (recommending a similar approach for abandoned “zombie” marks and noting the analogy to genericity).

267. After all, the benefits must have exceeded the costs when the mark was used or trademark protection would not have been justified. If the strength of goodwill declines continuously, there should be a range where benefits still exceed costs even after the firm has stopped use.

268. In other words, the mark, while technically abandoned because of nonuse, would still be protectable in order to safeguard consumers, and the most sensible party to enlist in this effort is the former trademark owner.

This proposal requires further development.<sup>269</sup> But the important point for our purposes is that a sensible approach to nonuse is possible only by taking account of the policies that justify extending legal protection to IP. This was true for patent and copyright, and it is true for trademark as well.

#### IV. CONCLUSION

This Article began with a question: Why not require use as a condition for enforcement of IP rights? The question is tricky because use seems necessary to reap the social value that IP rights are supposed to produce. A careful examination of this question revealed that use should be required sometimes, but not always. As we saw, IP use and nonuse take different forms, and each form has different implications for IP rights depending on the IP legal theory (patent, copyright, or trademark), the type of IP that is protected (inventions, works of authorship, or source-identifying marks), and the normative justification for granting rights (utilitarian, Lockean, or personhood). It makes sense to tolerate some types of nonuse under some circumstances, and for this reason use requirements should be tailored to the particular problems that nonuse creates.

This insight was applied to three specific problem areas: PAEs, orphan works, and residual goodwill. Nonuse matters to the PAE problem, and a limited use requirement should play a role in its solution. More specifically, patent enforcement should be allowed only in cases of use, temporary nonuse, and maybe functional nonuse in some instances, and enforcement should be barred in all cases of strategic nonuse and complete nonuse. As for orphan works, there is no compelling reason to extend copyright protection to unused orphan works in the typical case or to deliver compensation to the copyright owner, especially when the owner takes no steps to make itself locatable. The residual goodwill problem in trademark law focuses on the status of nonuse in circumstances where use is the baseline. By analyzing the problem at the policy level, we were able to formulate a sensible solution that varied with the strength of residual goodwill.

The general lesson is clear. A sound approach to IP use is possible only by taking account of the policies that justify extending legal protection to IP. This approach offers the best hope of formulating legal rules that optimally accommodate the important interests at stake.

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269. For example, if it is too costly to measure the magnitude of residual goodwill and sort it into the three categories, it might make sense to collapse the second and third categories and use only two: cases where the mark can be used freely, and cases where the mark can be used but only by taking reasonable confusion-reducing measures.