

**Note: Revenue Streams and Safe Harbors:
How Water Law Suggests a Solution to Copyright’s Orphan Works Problem**

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- I. INTRODUCTION 1
- II. ORPHAN WORKS: A PROBLEM SEARCHING FOR A SOLUTION..... 3
 - A. Copyright law 3
 - B. Orphan works 5
- III. THEORETICAL JUSTIFICATIONS FOR INTELLECTUAL PROPERTY..... 9
 - A. Property 9
 - B. Intellectual property..... 10
 - 1. Infinity and nonrivalry..... 11
 - 2. Incentive theory 13
 - 3. Copyright theories in flux..... 15
- IV. WATER RIGHTS FROM RIPARIAN TO PRIOR APPROPRIATION..... 16
 - A. Riparian use: water as real property 17
 - B. Prior appropriation use: water as distinct property..... 18
 - 1. Prior appropriation is date-based..... 19
 - 2. Prior appropriation is use-based 19
 - 3. Prior appropriation is adopted in Western states 20
- V. WATER RIGHTS AS A LENS FOR COPYRIGHT 21
 - A. Copyrights: A scarce resource..... 22
 - B. Prior appropriation fits scarce resources better 24
 - 1. Beneficial use 26
 - 2. Date-based appropriation..... 27
- VI. MOVING TO PRIOR APPROPRIATION: SOME POLICY RECOMMENDATIONS 28

I. INTRODUCTION

“Orphan work” is “a term used to describe the situation where the owner of a copyrighted work cannot be identified and located by someone who wishes to make use of the work in a manner that requires permission of the copyright owner.”¹ By its very definition, an orphan work represents a failed opportunity: someone wants to use copyrighted material but cannot locate the copyright owner to acquire permission. As a result, the potential user must choose to

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¹ U.S. COPYRIGHT OFFICE, REPORT ON ORPHAN WORKS 1 (2006), available at <http://www.copyright.gov/orphan/orphan-report-full.pdf>.

either refrain from using the work or use the work under the shadow of copyright infringement liability.² Neither of these options is optimal; few potential users are foolish enough to risk the latter,³ and many desirable works fall into disuse and obscurity under the former.⁴

Although many commentators have suggested various ways of solving the orphan works problem in the United States,⁵ most of these proposals focus on the current development of copyright law—particularly the fair use doctrine—and argue for marginal adjustments to the statutory scheme.⁶ Such proposals are understandable, given the reality of recent legislation; Congress has proved itself more than willing to micromanage federal copyright law on a near-yearly basis.⁷ However, none of these previous proposals has systematically examined the orphan works problem in light of the challenges facing users of water rights in the American West during the latter half of the nineteenth century.⁸ This note will take a historical,

² The endeavors of Save the Music (STM), “a California 501(c)(3) non-profit organization dedicated to the preservation of Jewish cultural music through its digitization and placement on the Internet,” provides one concrete example of this phenomenon at work. Comment of Creative Commons & Save the Music at 2 (2005), available at <http://www.copyright.gov/orphan/comments/OW0643-STM-CreativeCommons.pdf>. Since most of the content that STM seeks to save is copyrighted yet orphaned, “STM often faces the unenviable choice to either spend a large sum on an attorney hoping she can find the copyright owners or to forgo obtaining rights entirely, thereby exposing itself to crushing liability if it uses the work. The complexity of the process has forced STM to effectively postpone the digitalization of a large percentage of its holdings.” *Id.* at 4.

³ Indeed, the statutory penalties for copyright infringement can reach as high as \$150,000 for every act of willful infringement. 17 U.S.C. § 504(c)(2) (2006).

⁴ Joshua O. Mausner, *Copyright Orphan Works: A Multi-Pronged Solution to Solve a Harmful Market Inefficiency*, 55 J. COPYRIGHT SOC'Y U.S.A. 517, 520-21 (2008).

⁵ See, e.g., Mausner, *supra* note 4; Olive Huang, *U.S. Copyright Office Orphan Works Inquiry: Finding Homes for the Orphans*, 21 BERKELEY TECH. L.J. 265 (2006); REPORT ON ORPHAN WORKS, *supra* note 1; William F. Patry & Richard A. Posner, *Fair Use and Statutory Reform in the Wake of Eldred*, 92 CAL. L. REV. 1639 (2004).

⁶ See, e.g., Patry & Posner, *supra* note 5.

⁷ JULIE E. COHEN ET AL., COPYRIGHT IN A GLOBAL INFORMATION ECONOMY 28 (2006) (“In the 30 years since the 1976 [Copyright] Act, it has been amended over 25 times.”). For a chronological listing of these amendments, see *id.* at 28-29.

⁸ However, at least one pair of commentators has generally noted that “[t]he lessons from the American West not only are usefully applied to history but also provide insights into how property rights are evolving and will evolve on new frontiers.” TERRY L. ANDERSON & PETER J. HILL, *THE NOT SO WILD, WILD WEST: PROPERTY RIGHTS ON THE FRONTIER* 203 (2004).

comparative approach to examining the orphan works problem. I will argue that the shifting of legal doctrines governing water rights in the American West at the end of the nineteenth century from riparian to prior appropriation provides helpful insights for tackling the orphan works problem through non-legislative copyright reform today.

The second section of this note will examine in greater detail the orphan works problem under current U.S. copyright law. The third section will review the theoretical and philosophical underpinnings of U.S. intellectual property (IP) law. The fourth section will trace the historical development of the prior appropriation water doctrine out of the riparian doctrine. The fifth section will apply insights from this development of water doctrine to the current orphan works problem in copyright law. The sixth and final section will make some specific policy recommendations.

II. ORPHAN WORKS: A PROBLEM SEARCHING FOR A SOLUTION

A. Copyright law

It is impossible to understand the orphan works problem without first comprehending the breadth of U.S. copyright protection. By federal statute, copyright covers all “original works of authorship fixed in any tangible medium of expression.”⁹ From traditional media like books to newer forms of expression like software, copyright protects a broad swath of human intellectual output embodied in expressive works.¹⁰

⁹ 17 U.S.C. § 102(a) (2006).

¹⁰ *See id.* This section explicitly lists the following as examples of copyright-protected works: “(1) literary works; (2) musical works, including any accompanying words; (3) dramatic works, including any accompanying music; (4) pantomimes and choreographic works; (5) pictorial, graphic, and sculptural works; (6) motion pictures and other audiovisual works; (7) sound recordings; and (8) architectural works.” *Id.*

Copyrights are easier to obtain than other forms of intellectual property are.¹¹ Indeed, copyrights accrue practically automatically under current law.¹² The mandatory formalities of yesteryear such as copyright registration,¹³ renewal,¹⁴ or even notice¹⁵ are no longer necessary since today's authors receive copyright protection the moment their works affix in any tangible form.¹⁶ Whether the work in question is a deliberate and expensive movie production created by an army of well-paid creative professionals or an off-the-cuff and virtually costless Internet posting written by a bored teenager, U.S. copyright law protects the vast gamut of human expression instantly and seamlessly from the moment of creation and without any required formalities.¹⁷

Copyright law also protects works for a lengthy term, currently extending seventy years past the death of the author.¹⁸ Such a term is far longer than the mere fourteen years from the date of publication allowed under the original U.S. copyright act.¹⁹ If there is an overarching

¹¹ In particular, patents have much more stringent statutory requirements. Compare 35 U.S.C. §§ 102-3 (2006) with 17 U.S.C. § 102 (2006). For a detailed discussion of the formal requirements governing the various branches of intellectual property in the U.S., see Jay Dratler, Jr. & Stephen M. McJohn, 1 *INTELLECTUAL PROPERTY LAW: COMMERCIAL CREATIVE AND INDUSTRIAL PROPERTY* § 1.05 (2008).

¹² 17 U.S.C. § 102(a) (2006). For a discussion contrasting the current, effortless nature of copyright protection with its somewhat more protracted former form, see Mausner, *supra* note 4, at 522.

¹³ *REPORT ON ORPHAN WORKS*, *supra* note 1, at 3 (affirming that “[c]opyrighted works are protected the moment they are fixed in a tangible medium of expression, and do not need to be registered with the Copyright Office”).

¹⁴ *Id.* (noting that “the requirement that a copyright owner file a renewal registration in the 28th year of the term of copyright was essentially eliminated” in the Copyright Act of 1976).

¹⁵ *Id.* at 43.

¹⁶ 17 U.S.C. § 102(a) (2006). For a historical account of Congress's reasons for making these changes via the Copyright Act of 1976, including its desire to harmonize U.S. law with international standards, see *REPORT ON ORPHAN WORKS*, *supra* note 1, at 42-43.

¹⁷ Mausner, *supra* note 4, at 518.

¹⁸ 17 U.S.C. § 302(a) (2006). In the case of anonymous works, pseudonymous works, or works made for hire, copyright protection is potentially even longer, extending 95 years from the date of publication or 120 years from the date of creation, whichever is less. 17 U.S.C. § 302(c) (2006).

¹⁹ Act of May 31, 1790, ch. 15, 1 Stat. 124, § 1 (1790).

trend within the rapidly changing field of copyright law, it is that copyright terms keep getting longer, with no end in sight.²⁰

In short, U.S. copyright protection is expansive,²¹ automatic,²² and lengthy.²³ Such protection clearly benefits copyright owners because owners have the exclusive right to reproduce, distribute, publicly perform, and create derivative works so long as a valid copyright exists.²⁴ Copyright's expansive and exclusive rights, while not unlimited,²⁵ give owners near-total power to exploit their works,²⁶ and the penalties for copyright violations can be severe.²⁷ The benefits that accrue to copyright owners from robust protection, however, come at a cost. One major component of this cost is the orphan works problem.²⁸

B. Orphan works

Despite the obvious advantages to copyright owners under current law, the law's broad, automatic, and lengthy protection of all fixed expressive works exacerbates the orphan works problem.²⁹ Indeed, orphan works are a natural outgrowth of copyright law's robust protections

²⁰ See Krystal E. Noga, *Securitizing Copyrights: An Answer to the Sonny Bono Copyright Term Extension Act*, 9 TUL. J. TECH. & INTELL. PROP. 1, 4-6 (2007) (providing a concise overview of the ever-expanding length of U.S. copyright terms).

²¹ 17 U.S.C. § 102(a) (2006).

²² *Id.*

²³ 17 U.S.C. § 302(a)-(c) (2006).

²⁴ 17 U.S.C. § 106 (2006). For a discussion of just how beneficial copyright term expansion has been to content companies, particularly the Disney corporation, see Noga, *supra* note 20, at 10-11.

²⁵ Perhaps the most important limitation on authorial rights is the fair use doctrine, which has been formally codified into copyright law. See 17 U.S.C. § 107 (2006).

²⁶ See 17 U.S.C. § 106 (2006). This current statute reflects the constitutional imperative to "secur[e] for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." U.S. CONST., art. I, § 8.

²⁷ See *supra* note 3.

²⁸ Mausner, *supra* note 4, at 518.

²⁹ *Id.*

and arise from the lack of formalities under current copyright law.³⁰ As the authors of the U.S.

Copyright Office's Report on Orphan Works state,

[T]he most common obstacles to successfully identifying and locating the copyright owner . . . [are] (1) inadequate identifying information on a copy of the work itself; (2) inadequate information about copyright ownership because of a change of ownership or a change in the circumstances of the owner; (3) limitations of existing copyright ownership information sources; and (4) difficulties researching copyright information.³¹

All four of these problems directly stem from the lack of formalities required to secure copyright.³² Since only a small percent of copyrighted works continue to have commercial value decades after their publication,³³ most copyright owners have no financial incentive to incur even modest expenses in advertising their existence and whereabouts so that third parties can easily license their copyrighted works.³⁴ In other words, owners and their works become effectively unavailable.

³⁰ REPORT ON ORPHAN WORKS, *supra* note 1, at 2.

³¹ *Id.*

³² *Id.*

³³ See *Eldred v. Ashcroft*, 537 U.S. 186, 268 (2003) (Breyer, J., dissenting) (“[O]nly about 2% of copyrights can be expected to retain commercial value at the end of 55 to 75 years. Thus, in the overwhelming majority of cases, the ultimate value of the extension to copyright holders will be zero, and the economic difference between the extended copyright and a perpetual copyright will be zero.” (citation omitted)). As one commentator has observed, “That means that 98 percent of works will largely expire long before the copyright on them does.” CORY DOCTOROW, CONTENT: SELECTED ESSAYS ON TECHNOLOGY, CREATIVITY, COPYRIGHT AND THE FUTURE OF THE FUTURE 128 (2008).

³⁴ See Mausner, *supra* note 4, at 521 (“Large numbers of copyrighted, yet no longer valuable, works go unused despite the fact that their owners would no longer object to their use.” (footnotes omitted)); DOCTOROW, *supra* note 33, at 128-29 (observing these effects on mid-twentieth century science fiction writers whose work is in real danger of vanishing “if their work continues to be ‘protected’ by copyright” for extremely long periods).

Since copyright protection is the default position for all “original works of authorship fixed in any tangible medium of expression,”³⁵ potential users must assume that virtually every copyrightable work they encounter is copyrighted in fact, even when they cannot determine who owns the rights to the particular work in question.³⁶ Since current copyright law protects a large body of content even after its owners cease commercial exploitation,³⁷ the orphan works problem worsens as statutory copyright terms continue to lengthen.³⁸ Moreover, the problem of lengthening copyright terms has accelerated in recent years,³⁹ often as the result of increasing political pressure from the professional content industries.⁴⁰

Longer loss of use can follow as copyright owners of commercially worthless content have, by definition, no financial incentive to invest any resources in overcoming the licensing problems resulting from their own unavailability. From a social wealth-maximization viewpoint, this unavailability would not be problematic if the potential licensees proceeded to use the orphaned works without permission.⁴¹ Although the copyright owners would clearly miss out on their royalty revenues under such a scenario, their loss would be offset by a license-free windfall

³⁵ 17 U.S.C. § 102(a) (2006).

³⁶ See REPORT ON ORPHAN WORKS, *supra* note 1, at 43.

³⁷ *Supra* note 34.

³⁸ See Mausner, *supra* note 4, at 522 (“A longer [copyright] term also means that searches have to be conducted for a longer time period, increasing total search costs and allowing for a greater chain of assignments, bankruptcies, and other difficulties in tracking down the owner of a work and requesting permission for use.” (footnote omitted)).

³⁹ Particularly problematic was passage of the Copyright Term Extension Act of 1998 (CTEA), which prompted some commentators to wonder whether some works will ever go off copyright. See Patry & Posner, *supra* note 5, at 1660 (“CTEA is law and if anything a precedent for future extensions that will prevent valuable copyrights, no matter how old, from falling into the public domain.”).

⁴⁰ For a particularly cynical discussion of the political dynamics that fuel this outcome, see DOCTOROW, *supra* note 33, at 127 (“[T]heoretically, copyright expires, but in actual practice, copyright gets extended every time the early Mickey Mouse cartoons are about to enter the public domain, because [The Walt] Disney [Company] swings a very big stick on the Hill [U.S. Congress].”)

⁴¹ See Patry & Posner, *supra* note 5, at 1646 (analyzing this dynamic under a fair use rubric).

to the orphaned works' users, and society as a whole would still benefit to the extent of the users' gains.⁴²

Despite this opportunity for overall social gain, however, potential users desiring to appropriate orphaned works often forgo actually using works of apparently absent copyright owners. Why? Simply put, the potential users of these low-value works cannot afford the risk of being declared infringers by using without permission.⁴³ As a result, potential users fail to exploit many opportunities to use orphaned content.

Although the exact variations are endless, the orphan works problem most often arises in several recurring contexts. The U.S. Copyright Office notes the following types of uses as tending to suffer the most from the orphan works problem:

(1) uses by subsequent creators who add some degree of their own expression to existing works to create a derivative work; (2) large-scale "access" uses where users primarily wish to bring large quantities of works to the public, usually via the Internet; (3) "enthusiast" or hobbyist uses, which usually involve specialized or niche works, and also appear frequently to involve posting works on the Internet; and (4) private uses among a limited number of people.⁴⁴

⁴² *Id.*

⁴³ The statutory penalties for copyright infringement can range up to \$150,000. 17 U.S.C. § 504(c) (2006). Under such a statutory scheme, it is not hard to see why copyright owners who have no incentive to take steps to identify themselves and to market their holdings have an incentive to sue once infringement occurs. Under these statutes, a low expected payoff (low probability that their work would ever be licensed times low dollar license fee for a relatively obscure work) is replaced with a high expected payoff (certainty by definition that the work was used times an enormous statutory payoff). "The problem of overclaiming of copyright in situations in which asymmetrical stakes discourage a legal challenge to the claim argues strongly for a safe-harbor approach" Patry & Posner, *supra* note 5, at 1658.

⁴⁴ REPORT ON ORPHAN WORKS, *supra* note 1, at 3 (footnote omitted).

The orphan works go unused, and, from an economic perspective, society as a whole suffers from this loss.⁴⁵

Far from being an insignificant inefficiency, the orphan works problem represents a major impediment to economic growth as vast stores of copyrighted works exist in legal limbo with no clear owner to contact for licensing permission.⁴⁶ Although there appears to be growing recognition that orphan works represent a real threat to the U.S. economy,⁴⁷ statutory law continues to move away from solutions that would address the underlying, institutional problems.⁴⁸

III. THEORETICAL JUSTIFICATIONS FOR INTELLECTUAL PROPERTY

A. Property

In order to understand the theoretical underpinnings of intellectual property law, it is helpful to first review the basis of property law generally. In U.S. jurisprudence, a primary justification for property rights has always been the Lockean labor theory.⁴⁹ Under this theory, everything in the world belongs to humanity at large.⁵⁰ Since every human “has a *property* in his own *person*,” it follows that “[w]hatsoever then he removes out of the state that nature hath

⁴⁵ For a general discussion of how over-protection of intellectual property harms society by choking off the cultural commons, see MICHAEL HELLER, *THE GRIDLOCK ECONOMY: HOW TOO MUCH OWNERSHIP WRECKS MARKETS, STOPS INNOVATION, AND COSTS LIVES* (2008).

⁴⁶ For discussions of the scope of the orphan works problem, see REPORT ON ORPHAN WORKS, *supra* note 1, at 21-34; Huang, *supra* note 5, at 266-68; Mausner, *supra* note 4, at 522-23.

⁴⁷ REPORT ON ORPHAN WORKS, *supra* note 1, at 2 (noting that even the U.S. Copyright Office thinks “there is good evidence that the orphan works problem is real and warrants attention, and none of the commenters made any serious argument questioning that conclusion”).

⁴⁸ See, e.g., the Copyright Term Extension Act of 1998, upheld as constitutional by *Eldred v. Ashcroft* 537 U.S. 186 (2003).

⁴⁹ Alina Ng, *Authors and Readers: Conceptualizing Authorship in Copyright Law*, 30 HASTINGS COMM. & ENT. L.J. 377, 396-97 (2008).

⁵⁰ JOHN LOCKE, *SECOND TREATISE OF CIVIL GOVERNMENT* § 26 (C.B. Macpherson ed., Hackett Publishing 1980) (1690).

provided, and left it in, he hath mixed his *labour* with, and joined to it something that is his own, and thereby makes it his *property*.”⁵¹

It is important to note that John Locke limited this theoretical grant by restricting each individual’s appropriation to only “[a]s much as any one can make use of to any advantage of life before it spoils”⁵² This concern for spoilage is closely tied to the concept of waste.⁵³ Since, by definition, waste is at odds with efficient wealth maximization, limiting appropriation as Locke suggested is of utmost importance.⁵⁴

B. Intellectual property

Of course, intellectual property is very different from physical property.⁵⁵ One major difference is IP’s nonrivalrous nature; use of intellectual property by one user does not diminish its availability to additional (or subsequent) users.⁵⁶ Nonrivalry fundamentally alters the theoretical analysis and requires a new justification for why intellectual property is worth protecting in the same way as real property or chattels.⁵⁷

⁵¹ *Id.* at § 27.

⁵² *Id.* at § 31. Locke went on to note that “whatever is beyond this, is more than his share, and belongs to others. Nothing was made by God for man to spoil or destroy.” *Id.*

⁵³ See Edwin C. Hettinger, *Justifying Intellectual Property*, 18 PHIL. & PUB. AFF. 31, 44 (1989) (“Locke does not specifically mention prohibiting waste” but “it is the concern to avoid waste which underlies his proviso prohibiting spoilage Locke’s concern here is with appropriations of property which are wasteful.”).

⁵⁴ *Id.*

⁵⁵ For a general comparison of differences in physical and intellectual property protected by copyright, see Patry & Posner, *supra* note 5, at 1643.

⁵⁶ Michael A. Carrier, *Cabining Intellectual Property Through a Property Paradigm*, 54 DUKE L.J. 1, 32 (2004) (discussing the implications that “information is nonexclusive and nonrivalrous” in contrast to physical property).

⁵⁷ As Carrier points out, “An analogous right to exclude in property law would grant landowners the right to exclude others from not only their land, but also other, similar land. Such a difference in the scope of the right to exclude makes sense: landowners’ ability to exclude others from their land allows them to appropriate the rewards of developing their land, regardless of what other landowners do with their land.” *Id.* at 33-34.

1. Infinity and nonrivalry

Unlike real property or chattels in the state of nature, intellectual property is not a pre-existing cache of finite resources available only to the first taker.⁵⁸ Rather, IP is created within the minds of human beings in a way that land and chattels are not, and consequently there is a theoretically infinite amount of IP that can be created.⁵⁹ Within the realm of expressive works protected by copyrights, this infinity has two dimensions.

First, the scope of human expression extends well beyond the physical world to encompass the entire universe of human imagination.⁶⁰ An author needs not to limit herself to the exacting realities of the physical world in the way that a Lockean appropriator in the state of nature must. Rather, the author is free to let her mind wander throughout the entire physical universe and beyond into alternate universes created by the human imagination.⁶¹

Second, the depth of human expression encompasses far greater variations than those present within the physical world.⁶² For every variation of every subject within every universe

⁵⁸ See Andrew D. Schwarz & Robert Bullis, *Rivalrous Consumption and the Boundaries of Copyright Law: Intellectual Property Lessons from Online Games*, 10 INTELL. PROP. L. BULL. 13, 23 (2005) (noting that while “[a]n infinite number of people can have a book’s content in mind . . . [o]nly one person can have a given copy of that book in hand at once, without serious contortions”).

⁵⁹ See, e.g., Jacy T. Jasmer, *ETW Corp. v. Jireh Publishing, Inc.: A Workable Standard, An Unworkable Decision*, 5 MINN. INTELL. PROP. REV. 293, 317-18 (2004) (specifically noting that in depictions of celebrities “art and its ‘elements’ can encompass an infinite type and amount of expression limited only by the imagination of the human mind”).

⁶⁰ See Jed Rubenfeld, *The Freedom of Imagination: Copyright's Constitutionality*, 112 YALE L.J. 1, 38 (2002). (“The freedom of imagination means the freedom to explore the world not present, creatively and communicatively. It means the freedom to see the world feelingly, to conceive as far as one is able how the world might be, or might have been, or could never be. It means the freedom to explore the entire universe of feeling-mediated-by-ideas. It means the freedom to explore, without state penalty, any thought, any image, any emotion, any melody, as far as the imagining mind may take it.”)

⁶¹ *Id.*

⁶² See *id.* at 37. (“Imagination comes in many forms: intellectual, visual, emotional, musical, and so on. There are probably as many forms of imagination as there are forms of apprehending the world . . . But if we want to unite the various forms of imagination under one heading, we might begin by saying that to imagine is to conceive what isn’t there. To imagine is to form an idea that goes beyond—that introduces something new to—what the mind has

(real or imagined), the author has a practically inexhaustible range of expression.⁶³ For example, although “the fundamental things apply” with respect to love “as time goes by,”⁶⁴ the history of human literature, music, and visual arts showcases a veritable cornucopia of expressive riches that reveal the many facets of human love in all of its infinite variations.⁶⁵

Even after an author reduces the infinite scope and depth of human experience to copyrightable expression, however, her creation is not thereafter necessarily limited to the exclusive use of the author in the way that a developer necessarily requires exclusive use of a tract of land.⁶⁶ Rather, unlike chattels or real property in the physical world, the copyrightable expressions of authors by their very nature allow parallel, concurrent, and/or subsequent uses by all comers.⁶⁷ Nonrivalry describes the attribute whereby one person’s use of property does not limit its use by others.⁶⁸ For many types of intellectual property, it is only through widespread use by the public in general that significant economic and social gains can be realized and that

heretofore seen, heard, thought, or otherwise sensed. Imagination is the faculty by which the mind presents to itself what isn’t actually present and what has never been actually present to it.” (footnote omitted)).

⁶³ This is not always true, of course, when the author chooses to describe real phenomena or facts in the actual world. It is well recognized that, under these circumstances, there may well be functional limitations to the expressive range that can still efficiently convey the desired idea. *See, e.g.,* *Morrissey v. Proctor & Gamble Co.*, 379 F.2d 675, 678-79 (1st Cir. 1967) (recognizing that there are only so many variations in expressing the terms of a particular type of sweepstakes).

⁶⁴ DOOLEY WILSON, *As Time Goes By*, on *CASABLANCA* (Warner Bros. 1942).

⁶⁵ *See* *Emerson v. Davies*, 8 F. Cas. 615, 619 (No. 4,436) (CCD Mass. 1845) (quoted in *Campbell v. Acuff-Rose Music Inc.*, 510 U.S. 569, 575 (1994)) (“In truth, in literature, in science and in art, there are, and can be, few, if any, things, which in an abstract sense are strictly new and original throughout. Every book in literature, science and art, borrows, and must necessarily borrow, and use much which was well known and used before.”).

⁶⁶ *See* Schwarz & Bullis, *supra* note 58, at 25 (“What is new about the digital era is not that it is computerized, but that it is often non-rivalrous. Where goods are non-rivalrous, new laws and new protections may be needed.”).

⁶⁷ *See* Carrier, *supra* note 56, at 83 n.388 (contrasting “the imposition of static losses” under traditional property law with the impossibility of imposing such losses in an IP context “because of the nonrivalrous nature of information”).

⁶⁸ *See id.* at 32 (“As a public good, information is nonexclusive and nonrivalrous. Nonexclusivity prevents owners from excluding others from the possession of information (in contrast to tangible property, for which physical restraints often are sufficient). Nonrivalrousness magnifies this danger because one person’s consumption does not diminish the amount of the good for others to consume—that is, multiple persons can use information without depleting it.”).

significant remuneration can accrue to the IP's creator.⁶⁹ Like the proverbial lamp hidden under a basket,⁷⁰ IP that is hidden from everyone except the author usually fails to reach its full economic potential or maximum return on investment.⁷¹

Given the infinite and nonrivalrous nature of copyrightable IP, why would contemporary law focus so heavily on granting exclusive rights to authors? Though such exclusivity makes sense in the context of rivalrous real property and chattels, it seems ill-fitting to limit appropriation that does not deprive authors of their use of their own intellectual property. Moreover, unnecessarily granting exclusivity creates all the problems of monopoly.⁷² Given the economic losses attendant to monopoly, why would U.S. law effectively allow IP creators to extract monopoly rents from their expressions?

2. Incentive theory

Incentive theory is the primary answer to this conundrum, simply because it is the theory that the U.S. Constitution explicitly embraces.⁷³ Incentive theory reasons that if third parties could immediately appropriate IP created by others, there would be little incentive to create IP in

⁶⁹ In other words, it is often the case that the more people that use the IP, the more valuable it is. “[T]he peculiar characteristic of intellectual property . . . is that no one possesses the less, because every other possesses the whole of it. When I allow you to duplicate my copy of Microsoft Word, I am no worse off because of it. Instead of one person enjoying the utility of the program, two are now able to access it. In fact, because of network effects, I am actually better off now that more people are using the software.” John Tehranian, *All Rights Reserved? Reassessing Copyright and Patent Enforcement in the Digital Age*, 72 U. CIN. L. REV. 45, 50 (2003) (footnotes omitted).

⁷⁰ *Luke* 11:33.

⁷¹ Tehranian, *supra* note 69, at 50.

⁷² For a discussion of the problems of monopoly in IP, *see* Carrier, *supra* note 56, at 44-45.

⁷³ “The Congress shall have Power . . . to Promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.” U.S. CONST., art. I, § 8. As Justice Stevens explains, “The monopoly privileges that Congress may authorize are neither unlimited nor primarily designed to provide a special private benefit. Rather, the limited grant is a means by which an important public purpose may be achieved.” *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 429 (1984).

the first place.⁷⁴ As a result, individuals would create socially non-optimal amounts of IP, particularly IP that required expensive research or development.⁷⁵ Incentive theory solves the dilemma of sub-optimal IP creation by granting monopolies in IP as a social bargain between society at large and individual creators, in order to increase the overall stock of IP available.⁷⁶

Since incentive theory justifies itself as an attempt to stimulate the creation of IP (a social good) by granting limited monopolies to IP creators (a social cost), it follows that the attendant policy choices will always involve a tradeoff between these two goals.⁷⁷ Depending on the branch of IP in question, the law makes the tradeoff differently.⁷⁸ For copyrights, the relative weakness of protection is balanced by an extremely long term of protection.⁷⁹

As previously noted, however, these terms of copyright protection are getting longer and longer to the benefit of creators, such that society's end of the social bargain is arguably no longer supportable under incentive theory.⁸⁰ Indeed, recent decades have seen numerous laws extending copyright terms but very few works falling into the public domain.⁸¹ Although the Supreme Court has noted that "[t]he monopoly privileges that Congress may authorize are

⁷⁴ See Carrier, *supra* note 56, at 32-33 (emphasizing that IP is a "public good" subject to use by "free riders who have not incurred the costs of creation," a problem that can "deter future innovators and result in a suboptimal level of innovation" (footnote omitted)).

⁷⁵ *Id.*

⁷⁶ *Id.* at 33.

⁷⁷ See *id.* at 85 n.391 (speaking of the tradeoff "between providing incentives to innovate and minimizing monopoly and other losses").

⁷⁸ See *supra* note 11.

⁷⁹ See Noga, *supra* note 20, at 26 (contrasting patents with copyrights by noting that "[t]he protection for patents is greater than it is for copyrights, but patent protection lasts for a comparatively very short time").

⁸⁰ Joseph P. Liu, *Copyright and Time: A Proposal*, 101 MICH. L. REV. 409, 415-18 (2002).

⁸¹ As Justice Stevens noted in his dissent in the case upholding the constitutionality of CTEA, "no copyrighted work created in the past 80 years has entered the public domain or will do so until 2019." *Eldred v. Ashcroft*, 537 U.S. 186, 241 (2003) (Stevens, J., dissenting).

neither unlimited nor primarily designed to provide a special private benefit,”⁸² the reality seems to be that the courts consistently defer to Congress’s decisions to shift the statutory balance of power toward copyright owners.⁸³

3. Copyright theories in flux

Not surprisingly, given the relatively recent “proptertization” of IP law,⁸⁴ copyright is very much in flux as a legal field in progress. The law of real property and chattels is much better developed than the law of intellectual property,⁸⁵ and the practical upshot is a wider availability of legal remedies to all the stakeholders in real property and chattels, in order to ensure reasonably efficient use of resources.⁸⁶ For instance, real property is generally subject to excise taxes by state and local governments and thus is subject to tax foreclosure.⁸⁷ The effect of such foreclosure is to re-aggregate real property that has been divided too finely to be put to any beneficial use.⁸⁸ Other the other hand, intellectual property is generally not subject to excise taxes and is therefore not subject to the same sort of tax-and-foreclosure phenomenon.⁸⁹ As another example, market failures in real property can be overcome through the use of

⁸² *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 429 (1984).

⁸³ *See Eldred v. Ashcroft*, 537 U.S. 186, 222-42 (2003) (Stevens, J., dissenting).

⁸⁴ *Carrier*, *supra* note 56, at 4 (noting that this trend towards stronger IP rights has happened only within “the past generation”).

⁸⁵ For example, not all of the traditional property “doctrines such as adverse possession, eminent domain, easements, zoning, and the Rule Against Perpetuities . . . survive[d] the relocation to IP.” *Id.* at 5.

⁸⁶ *Id.* at 52-82.

⁸⁷ *See* 71 Am. Jur. 2d *State and Local Taxation* § 139 (2008); 72 Am. Jur. 2d *State and Local Taxation* § 812 (2008).

⁸⁸ An interesting and extreme example of such inefficient subdivision involved a breakfast cereal company that bought twenty acres of land, subdivided it into one-square-inch parcels, and gave away twenty-one million land deeds in its cereal boxes. The entire parcel of land was eventually subjected to tax foreclosure and sold to a single owner. *See HELLER*, *supra* note 45, at 6-8.

⁸⁹ As a general rule, the revenues that IP generates are taxed as income, but the IP asset itself is not taxed as property. *See Xuan-Thao N. Nguyen*, *Holding Intellectual Property*, 39 GA. L. REV. 1155, 1163-65 (2005).

government's eminent domain power.⁹⁰ In contrast, eminent domain is almost never used within an IP context.⁹¹

In general, incentive-based justifications for intellectual property do not easily map onto the classic Lockean theory of capturing chattels or land. Rather, IP seems particularly subject to network effects.⁹² Intellectual property accretes to humanity generally over time and cannot always be finely assigned to individual authors or inventors.⁹³ As Sir Isaac Newton famously put it, "If I have seen further [than certain other men] it is by standing on the shoulders of giants."⁹⁴ Humanity's greatest thinkers build on the works and inventions of those who have come before.

IV. WATER RIGHTS FROM RIPARIAN TO PRIOR APPROPRIATION

Like IP, water is a form of property that does not easily fit into the normal categories of chattel or real property. Water is "a moving, wandering thing"⁹⁵ that defies easy categorization. It is not surprising then, that water law has changed based on varying physical environments and shifting social needs. A historical review shows that a change in geography and land uses led to the development of the prior appropriation water doctrine in the late nineteenth-century American West.

⁹⁰ Carrier, *supra* note 56, at 30.

⁹¹ Even within patents for lifesaving inventions, the use of eminent domain is severely limited. "It is safe to say that authorities in the United States are more apt to use their eminent domain powers to appropriate land for real estate developers than pharmaceutical patents to secure affordable medicines for Americans. For instance, only eight out of more than two thousand new eminent domain cases filed in 2003-2004 involved intellectual property rights." Taiwo A. Oriola, *Against the Plague: Exemption of Pharmaceutical Patent Rights as a Biosecurity Strategy*, 2007 U. ILL. J.L. TECH. & POL'Y 287, 335 (2007) (footnotes omitted).

⁹² See *supra* note 69.

⁹³ See Hettinger, *supra* note 53, at 38 (observing that "[i]nvention, writing, and thought in general do not operate in a vacuum; intellectual activity is not creation *ex nihilo*").

⁹⁴ Letter from Isaac Newton to Robert Hooke (February 5, 1675), available at <http://www.bartleby.com/66/18/41418.html>.

⁹⁵ William Blackstone, *quoted in* ANDERSON & HILL, *supra* note 8, at 278.

A. Riparian use: water as real property

Riparian water doctrine developed under English common law and treated water as an adjunct to real property rights.⁹⁶ Water rights were “generally described as real property rights”⁹⁷ that tied water ownership to that of the adjacent land.⁹⁸ Specifically, riparian water rights “gave landowners along a stream a right to an undiminished quantity and quality of water.”⁹⁹ This “worked well where water was used mainly for domestic purposes, for livestock, or for driving water wheels, and where diversion for irrigation was unnecessary.”¹⁰⁰ In such contexts, water was effectively nonrivalrous: since no one was using water in quantities large enough to diminish their neighbor’s supply, any individual could take as much as she wanted without harming anyone else.¹⁰¹ Therefore, the riparian doctrine worked well in rainy England where it originally developed.¹⁰²

Riparian doctrine first made its way into the eastern United States.¹⁰³ Here the first English settlers found plenteous water as in their native land.¹⁰⁴ Since water was essentially as abundant as back in England, there was no need to modify established legal doctrines, and riparian water doctrine became the law of the new land.¹⁰⁵

⁹⁶ A. DAN TARLOCK, LAW OF WATER RIGHTS AND RESOURCES § 3:9 (2008).

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ ANDERSON & HILL, *supra* note 8, at 178.

¹⁰⁰ *Id.*

¹⁰¹ *Id.* at 178-79.

¹⁰² *Id.* at 178.

¹⁰³ *Id.* at 178-79.

¹⁰⁴ *Id.* at 200.

¹⁰⁵ *Id.*

B. Prior appropriation use: water as distinct property

As settlers moved into the American West, however, they started running into problems with the riparian doctrine.¹⁰⁶ Western lands were much drier than eastern lands, and there was much less water to go around.¹⁰⁷ Also, large-scale irrigation and mining fundamentally altered the dynamics of how water was used.¹⁰⁸ Rather than being tapped in marginally insignificant amounts from a property owner's adjoining stream, water came to be diverted over great distances in great quantities.¹⁰⁹ It was in this context that the prior appropriation doctrine developed.¹¹⁰

This new water doctrine assigned and enforced water rights very differently than under the old riparian system. Summarizing “the core” of prior appropriation doctrine in his treatise on the law of water rights and resources, Tarlock explains the elements of a good prior appropriation claim:

(1) notice of an intent to appropriation, (2) an actual diversion, and (3) the application of the water to beneficial use. If the appropriator proceeded with reasonable diligence to apply the water to a beneficial use, the priority related back to the date of the original notice of the intent to appropriate.¹¹¹

¹⁰⁶ *Id.* at 179.

¹⁰⁷ *Id.* at 180.

¹⁰⁸ *Id.* at 179.

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

¹¹¹ TARLOCK, *supra* note 96, at § 5:42.

1. Prior appropriation is date-based

Under prior appropriation, water rights are tied to actual appropriation of water as of a certain date¹¹² rather than merely to one's ability to access water via owned, adjacent land.¹¹³ Instead of the riparian doctrine's view of water as an unlimited common from which all adjacent landowners could draw, prior appropriation sees water as a limited resource that should go to those who claim it first.¹¹⁴ In keeping with general common law principles, such appropriation takes the form of first in time, first in right.¹¹⁵

2. Prior appropriation is use-based

However, if this time-based priority in appropriating water were not limited in some way, the first appropriator along a stream could simply claim all water rights and effectively shut off access to all subsequent appropriators even if that first person could not or would not use all of the water.¹¹⁶ Because such waste of water is socially undesirable—especially when it is a particularly valuable resource as in the dry American West—the doctrine of prior appropriation includes a limitation for beneficial use.¹¹⁷ In brief, beneficial use stipulates that prior claims get priority access but that those claims are only valid insofar as they represent water put to actual use.¹¹⁸

¹¹² *Id.* at § 5:29.

¹¹³ *Id.* at § 3:7.

¹¹⁴ ANDERSON & HILL, *supra* note 8, at 180.

¹¹⁵ TARLOCK, *supra* note 96, at § 5:29.

¹¹⁶ *Id.* at § 5:66.

¹¹⁷ *Id.*

¹¹⁸ *Id.* at § 5.15.

3. Prior appropriation is adopted in Western states

The legal results under a prior appropriation system have differed from the outcomes under a riparian system in the following specific ways:

First, it granted to the first appropriator an exclusive right to the water and conditioned other rights upon those prior rights. Second, it permitted diversion of water to nonriparian lands. Third, it limited the amount of water that could be claimed to that which could be put to beneficial use. Finally, it allowed voluntary exchange of water rights.¹¹⁹

These new legal outcomes have arisen from the fact that, in the drier environs of the American West, there has not been enough water to go around and thus water has been rivalrous.¹²⁰ Under such circumstances, it is not surprising that the legal system's doctrinal emphasis would shift toward a system favoring the first-come-first-served, beneficial use of water (prior appropriation) and away from the abstract enforcement of general and absolute water rights (riparian).

Given the scope of the doctrinal shift, one might expect the legal change from riparian to prior appropriation to have been hashed out by the official political process. Instead, impetus for Western states to modify their fundamental water law have come from a grassroots movement from the water users themselves, not as a top-down pronouncement from legislatures or courts.¹²¹ Indeed, the de facto legal change to prior appropriation has been only officially recognized far after the fact as "a fait accompli."¹²²

¹¹⁹ ANDERSON & HILL, *supra* note 8, at 180.

¹²⁰ *Id.* at 179.

¹²¹ TARLOCK, *supra* note 96, at § 5:1.

¹²² *Id.* at § 5:4.

V. WATER RIGHTS AS A LENS FOR COPYRIGHT

Like rights concerning water, the rights governing copyrighted works are an in-between sort of property.¹²³ As a “moving, wandering thing,”¹²⁴ water cannot be captured from the commons in the same way that chattels and land are captured. Like water, copyrights are a valuable resource¹²⁵ with their own set of capture problems. A literal water stream represents a stream of future income in agricultural and/or other fields. A copyright likewise represents a future revenue stream that can be quite valuable.¹²⁶

The current system of copyright law can be analogized to the unlimited rights afforded landowners under the riparian doctrine. Like a landowner who has an unlimited right to exploit the water connected with her property, authors currently have an unlimited right to exploit their creative works as an adjunct to their creation of it.¹²⁷ Thus, copyright owners can take as much of the copyright’s revenue stream as they want; they legally appropriate the entire revenue stream and lawfully exclude all others from sharing it.¹²⁸

Historically, U.S. law has been willing to make this bargain with authors pursuant to incentive theory.¹²⁹ This justification for IP seems to be a sensible solution insofar as any potential problems with monopoly are dissipated in light of the fact that any person can be an

¹²³ This is assuming, of course, that copyright should be considered property at all. For a contrarian view, *see generally* Carrier, *supra* note 56, at 5.

¹²⁴ *Supra* note 95.

¹²⁵ One recent estimate puts the value added by the copyright industries to the U.S. economy at \$1.52 trillion. *See* STEPHEN E. SIWEK, COPYRIGHT INDUSTRIES IN THE U.S. ECONOMY: THE 2003-2007 REPORT 3 (2009), *available at* <http://www.iipa.com/pdf/IIPASiwekReport2003-07.pdf>.

¹²⁶ *Id.*

¹²⁷ 17 U.S.C. § 106 (2006).

¹²⁸ *Id.*

¹²⁹ *See supra* Part III.B.2.

author with the power to call a copyright (and thus a monopolized revenue stream) into existence at any time.¹³⁰ Viewed this way, copyrights are a nonrivalrous resource, and absolute copyright protection akin to the riparian water doctrine is unproblematic. But if this is the current state of affairs, why did nineteenth-century Americans in western states feel the need to move from a riparian to a prior appropriation legal structure, and why should twenty-first century Americans consider an analogous move in copyright law today?

A. Copyrights: A scarce resource

Given a social policy aiming at overall efficiency, riparian water doctrine only makes sense so long as there is enough water to go around.¹³¹ For that reason, a riparian system has worked in England and the eastern U.S. because those have been relatively wet environments, and thus there has been no substantial problem with landowners getting enough water to satisfy their needs.¹³² One might say, by analogy, that expressive works protected by copyright are also relatively “wet environments.” Just as the eastern U.S. has had a functionally inexhaustible supply of water, the human mind is likewise capable of producing an inexhaustible array of expressive works.¹³³

In considering the orphan works problem, however, potential infinity is not the factor that ultimately matters. In the real world, copyrights do not extend to the infinity of potential human expression but to the finitude of actually expressed works.¹³⁴ With this view, it becomes clear that copyrighted works are more a scarce resource like water in the western states. Since it has

¹³⁰ It is, after all, *expression* rather than *ideas* that are subject to copyright. See *Baker v. Selden*, 101 U.S. 99 (1879).

¹³¹ See *supra* Part IV.

¹³² See TARLOCK, *supra* note 96, at § 5:3 (tracing the development of prior appropriation and contrasting it with riparian doctrine).

¹³³ Rubinfeld, *supra* note 60, at 38.

¹³⁴ Specifically, copyright protects works that are “fixed.” 17 U.S.C. § 102(a) (2006).

been this very scarcity that has led to the development of the prior appropriation doctrine within water law, it seems likely that a similar development might be appropriate within copyright law.¹³⁵

Perhaps it would be helpful to illustrate this scarcity of copyrighted works mathematically. Assume *arguendo* that the human mind is unlimited. It seems to follow that the potential for an infinite amount of expression exists.¹³⁶ However, it also follows that the number of existing copyrighted works is finite because (1) a finite number of copyrighted works are produced every year and (2) a finite number of years have passed since humanity began creating expressive content (let alone since the formation of the United States and the passage of its copyright laws).¹³⁷

In truth, of course, the copyright scarcity problem is actually much worse. Given the inevitable deterioration of all forms of physical and electronic media,¹³⁸ fewer and fewer copyrighted works from previous eras survive as time goes by despite the best efforts of librarians and archivists.¹³⁹ Indeed, some particular forms of media like motion picture films are

¹³⁵ One commentator makes this point by distinguishing the capture of asset “flows” vs. “stock” and noting that the law generally protects only the flows when “the costs of enforcing rights to the entire resource are deemed prohibitive.” Dean Lueck, *The Rule of First Possession and the Design of the Law*, 38 J.L. & ECON. 393, 422 (Oct. 1995).

¹³⁶ See *supra* note 60.

¹³⁷ That a finite rather than an infinite number of copyrightable expressions have been protected under U.S. copyright law in the past two-and-a-half centuries seems, as a mathematical assertion, too obvious to dispute.

¹³⁸ See Mark Roosa, Dir. for Preservation, Library of Congress, Address at the 68th IFLA Council and General Conference: Some Thoughts on the Race Against Time and Inherent Vice: Preservation Program Development in Late 20th Century America (Aug. 18-24, 2002), available at <http://www.ifla.org/IV/ifla68/papers/134-109e.pdf>.

¹³⁹ *Id.* There may yet be hope for a recovery of sorts; as a fictional character notes in one of Tom Stoppard’s greatest plays: “You should no more grieve for [the works of Sophocles lost in the fire at the great library of Alexandria] than for a buckle lost from your first shoe, or for your lesson book which will be lost when you are old. We shed as we pick up, like travellers [sic] who must carry everything in their arms, and what we let fall will be picked up by those behind. The procession is very long and life is very short. We die on the march. But there is nothing outside the march so nothing can be lost to it. The missing plays of Sophocles will turn up piece by piece, or be written again in another language.” TOM STOPPARD, *ARCADIA* 38 (1993). As much as this almost mystical

particularly susceptible to rapid decay, with examples of some unpreserved films “crumbl[ing] to dust in their storage cans” within just a few decades of their initial productions.¹⁴⁰

Thus, as a record of the past and as a cultural commons, the pool of copyrighted works is all too finite. Within a world of limited and decaying cultural resources, it seems inefficient that U.S. copyright law grants absolute, near-perpetual¹⁴¹ monopolies to copyright owners who disappear into obscurity with all their exclusive yet unexploited legal rights fastidiously intact.¹⁴² Under such circumstances, Wendy Gordon’s observation about the balance of individual and societal rights seems to have particular relevance:

Assuming the goal of copyright is to achieve maximum social benefit, there is no reason to require a potential user of a work to ask the copyright owner’s permission unless there is some way to believe the owner’s self-interest is aligned with society’s. When this is not the case—when, for example, social and private costs markedly diverge, or the interests involved are not monetizable—seeking permission should not be required.¹⁴³

B. Prior appropriation fits scarce resources better

Of course, there is no problem with achieving the maximum social benefit so long as the desired copyrighted works can be licensed. In the water context, this would be the equivalent of a landowner using her rights in a stream. The problem in both the copyright and water contexts

pronouncement may accord with human history, librarians and archivists are nonetheless prudent to hazard as little as possible to the ravages of time.

¹⁴⁰ See Noga, *supra* note 20, at 17 (footnote omitted).

¹⁴¹ See *supra* note 81.

¹⁴² Many commentators suggest that copyright owners should not be allowed to both disappear and keep their copyrights. See, e.g., Wendy J. Gordon, *Excuse and Justification in the Law of Fair Use: Transaction Costs Have Always Been Only Part of the Story*, 50 J. COPYRIGHT SOC’Y U.S.A. 149, 170.

¹⁴³ *Id.*

comes when the water/revenue stream begins to dry up, and the land/copyright owner neither uses the stream nor allows others to use it.¹⁴⁴ Because the stream is no longer valuable to her, the owner often fails to recognize the fact that the stream might still be valuable to others¹⁴⁵ or to remember to take the necessary steps¹⁴⁶ to officially allow outsiders unrestricted access.¹⁴⁷

This is a major problem giving rise to orphan works: the revenue stream mostly dries up when there is no longer any appreciable prospect of profits available for the owner of the work.¹⁴⁸ The owner then becomes like an absentee landlord who is so estranged from her property that it is no longer even clear who owns the property.¹⁴⁹ As a result, no one uses the property.

However, neither water nor revenue streams typically dry up forever and completely. Almost always there is eventually some usable stream left, even if it is not enough for large-scale irrigation (water) or feature film exploitation (copyright).¹⁵⁰ Under current copyright law, however, the owner still controls her works like a riparian landowner with rights in the water

¹⁴⁴ See *supra* Part II (copyright) and Part IV (water).

¹⁴⁵ For example, a water resource insufficient to support large-scale irrigation may yet be plentiful enough to refill the occasional traveler's canteen.

¹⁴⁶ For example, dedicating a copyrighted work to the public domain so that others can freely use it.

¹⁴⁷ Patry & Posner, *supra* note 5, at 1646 ("The clearest case for the defense is where there is no harm, or even significant benefit forgone, to the copyright owner from granting a license, but precisely because the stakes are slight the cost of negotiating a license would be prohibitive.").

¹⁴⁸ See *supra* notes 33-34.

¹⁴⁹ This analysis assumes that the transaction costs of requesting permission are too high—the classic orphan works dilemma. "If fair use was granted because market conditions made it hard to consult the owner, but a market remained desirable, then there is every reason to return to relying on the market when owner and user are put in a position where they can consult. Relying on the market means fully enforcing the copyright." Gordon, *supra* note 142, at 189.

¹⁵⁰ This sort of situation is the kind that Gordon helpfully thinks of (analogizing from a criminal law context) as an excuse: because the transaction costs are too high, society is willing to excuse the permissioning of the orphaned copyright work. See generally *id.*

stock that extend to any remaining trickle of licensing revenue.¹⁵¹ Perversely, the law allows the copyright owner to prevent anyone else from using her work.¹⁵²

Prior appropriation has developed in a water context because water is too valuable to allow scarce water resources to go to waste.¹⁵³ Having moved away from the riparian doctrine of unlimited resource exploitation, western states have begun emphasizing beneficial use and date-based appropriation.¹⁵⁴ Both of these categories are helpful in framing a solution to the orphan work problem in copyright law.

1. Beneficial use

In the copyright context, moving to limit copyright owners' rights to their beneficial use of their works would have positive effects. The law could still allow a monopoly for copyright holders so long as they were "using" their works¹⁵⁵ and could provide a considerable buffer to ensure that copyrights were not easily rescinded. If copyright owners truly were no longer putting their copyrighted works to use, however, then it makes sense for copyright law to allow others to put those works to use.¹⁵⁶ Copyrighted works are a scarce resource, and, as with water rights, society has an interest in making sure unused resources can be used by those who wish to

¹⁵¹ See *supra* Part IV.A.

¹⁵² This stock/flow dichotomy is exactly what leads toward a prior appropriation doctrine. "The rule of capture—simply a derivative of the rule of first possession—will occur when enforcing possession of the stock is prohibitively costly." Lueck, *supra* note 135, at 404.

¹⁵³ The changes in legal rights to water under prior appropriation as opposed to riparian "represented new attributes of property rights that became important as water became more valuable." ANDERSON & HILL, *supra* note 8, at 180.

¹⁵⁴ See *supra* Part IV.

¹⁵⁵ That is, putting those works to beneficial use.

¹⁵⁶ Although this clearly erodes a copyright owner's monopoly, it need not be considered an unconstitutional taking so long as the owner can see it coming. For a discussion of this concept in the water context, see TARLOCK, *supra* note 96, at § 5.12 (observing that "[t]he constitutionality of terminating rights not exercised for a period of time turns on the degree of surprise to the claimant of an unexercised right").

do so.¹⁵⁷ Within intellectual property law generally, U.S. law already recognizes the desirability of pursuing this strategy in the trademark context.¹⁵⁸ Arguably, the U.S. needs to revise its IP law to make copyrights more “use it or lose it” like their trademark counterparts.

2. Date-based appropriation

Prior appropriation provides a good corrective on beneficial use running amok. In the copyright context, the creator (or subsequent owner) is always going to be the prior appropriator. If she ceases to exploit the copyrighted work and disassociates herself to the point that the work is orphaned by definition, then a beneficial-use analysis suggests that others should be able to move in and use it.

This is not the end of the story, however. It seems reasonable to allow the copyright owner to move back in and reassert her rights to the copyright’s revenue stream.¹⁵⁹ Whether the legal system views the value taken in the interim as water under the bridge¹⁶⁰ or ex post compensable, surely U.S. policy can be made more sensible than threatening enormous statutory damage awards against unauthorized users of orphaned works.¹⁶¹

¹⁵⁷ This must be balanced, of course, with the U.S. Copyright Office’s official position that owners have the right “to say no to a particular permission request, including the right to ignore permission requests. For this reason, once an owner is located, the orphan works provision becomes inapplicable.” REPORT ON ORPHAN WORKS, *supra* note 1, at 9. Such a position allows for a sort of “beneficial non-use” to protect the author’s rights.

¹⁵⁸ See Daphna Lewinsohn-Zamir, *More is Not Always Better Than Less: An Exploration in Property Law*, 92 MINN. L. REV. 634, 685 (drawing the parallel between water law and trademark law in their use of the “use it or lose it” principle).

¹⁵⁹ Such a proposition is particularly defensible under the moral rights theory of copyrights. See John Hughes, *Fair Use Across Time*, 50 UCLA L. REV. 775, 794-97 (discussing the moral rights implications “any late-term curtailment of control of a copyrighted work”).

¹⁶⁰ This position seems to have widespread support. “With respect to injunctive relief, many commenters proposed that the orphan work user be permitted to continue the use he had been making before the owner surfaced, but that new uses of the work remain subject to injunction and full copyright remedies.” REPORT ON ORPHAN WORKS, *supra* note 1, at 7.

¹⁶¹ 17 U.S.C. § 504(c)(2) (2006).

I think that moving toward such an orphan works solution as suggested by the prior appropriation doctrine gets the incentives right. The copyright owner still has primary control over her work, but if she allows the work to be orphaned, she cannot stop the subsequent appropriation by others wishing to use that work. Even after such a lapse, however, she can still reassert herself. Such a scheme places the burden of beneficially using and/or asserting IP rights on the copyright owner herself rather than on society at large. The owner thus has a financial incentive to reassert herself, placing the burden on the actor with the least cost.

VI. MOVING TO PRIOR APPROPRIATION: SOME POLICY RECOMMENDATIONS

Perhaps the best guidance that the historical move from riparian to prior appropriation in U.S. water doctrine gives for an analogous shift in copyright doctrine is this: legal reform can come from the grassroots. After all, with the shift to prior appropriation in western states first starting with the actions of actual water users,¹⁶² changes have only been recognized by official legal institutions after the fact.¹⁶³ Indeed, the western states have acted even in the absence of clear authority with respect to federal preemption.¹⁶⁴

In a like manner, state governments and federal courts could lead the way in recognizing grassroots copyright reform. Despite Congress's endless twiddling with the copyright code,¹⁶⁵ there is no particular reason to start with federal legislation. It is important to remember that grassroots reform of copyright law has happened before¹⁶⁶ and that courts have recognized the

¹⁶² See *supra* Part IV.B. Indeed, private individuals' creation of prior appropriation brought over 7.5 million acres under irrigation by 1900, well before the federal government became heavily involved. ANDERSON & HILL, *supra* note 8, at 197.

¹⁶³ See *supra* Part IV.B.

¹⁶⁴ TARLOCK, *supra* note 96, at § 5.4.

¹⁶⁵ See *supra* note 7.

¹⁶⁶ See Liu, *supra* note 80, at 452 (noting that "the fair use defense was created by the courts, not by Congress" (footnote omitted)).

legal changes in water law long before legislatures got involved.¹⁶⁷ While a move toward a standard based more on prior appropriation and beneficial use may not follow the exact same path as previous copyright reforms, there is no reason that institutional innovation has to be top-down or clearly defined at every stage of its doctrinal development.

Indeed, a grassroots approach seems better suited to the current legal landscape. Even among copyright owners, there seems to be growing recognition that exacting applications of copyright law are not always in their own best interest, let alone society's.¹⁶⁸ Eventually, of course, U.S. policy will still need to officially legitimize the nominally unauthorized use of orphan works.¹⁶⁹

As a practical matter, developing a prior appropriation doctrine within copyright law could be done via a time-keyed, burden-shifting test.¹⁷⁰ To give an example with some concrete numbers,¹⁷¹ the law could presume that copyright owners beneficially use their copyrights during the first forty years after the creation of their works even if (1) the owners cannot be located and (2) there is no objective evidence of actual beneficial use. At year forty-one, however, the

¹⁶⁷ TARLOCK, *supra* note 96, at § 5.1 (“Prior appropriation has been a joint development of western courts and legislatures.”).

¹⁶⁸ This trend seems well underway in Japan, where “comic book fanfic writers” often “dwarf the circulation of the work they pay tribute to, and many of them are sold commercially. Japanese comic publishers know a good thing when they see it, and these fanficcers get left alone by the commercial giants they attach themselves to.” DOCTOROW, *supra* note 33, at 90. Although this trend is perhaps not as advanced in the U.S., some U.S. copyright holders—including the George Lucas *Star Wars* juggernaut—seem to be pursuing the same course. See Jessica Litman, *Creative Reading*, 70-SPG LAW & CONTEMP. PROBS. 175, 176 (2007).

¹⁶⁹ And is this really so extreme given the fact that such use is already widespread? See DOCTOROW, *supra* note 33, at 85 (“So while technically the law has allowed rightsholders to infinitely discriminate among the offerings they want to make . . . practicality has dictated that licenses could only be offered on enforceable terms.”).

¹⁷⁰ See, generally, Liu, *supra* note 80, at 409.

¹⁷¹ Any real-world numbers, of course, would need to come through general consensus and the political process. The numbers I have chosen are simply starting points for further discussion.

burden could shift against absentee owners, and the new presumption could be that no beneficial use is being made of the orphaned work.¹⁷²

Even under such a scenario, however, subsequent appropriators could be limited in their use only as under a junior claim. If the orphaned work's owner reasserted herself, the owner could cut off subsequent use of the copyrighted property without forward-looking royalty payments. Presumably, however, the once-absent owner would not be able to collect back royalties for proverbial water under the bridge.¹⁷³

Whether under a riparian or a prior appropriation system, all water eventually flows into the ocean and becomes part of the global commons.¹⁷⁴ Copyrights likewise eventually expire and pool into the world's creative commons.¹⁷⁵ In the long interim between creation and expiration, however, many specific works become separated from their authors.¹⁷⁶ Under current U.S. laws, these orphaned works are useful to almost no one since few dare risk the legal liability attendant upon unlicensed use.¹⁷⁷ In view of social wealth maximization and all copyrights' eventual expiration into the public domain, it is much better to allow such orphaned works to

¹⁷² Although it would undermine some of the efficiency gains of a true beneficial use requirement, it is important to note that beneficial use could include the right to lock down one's copyright and not allow publication. Under this scenario, the burden would still shift to the copyright holder after 40 years, but that burden would only require that she keep a high enough profile that potential users would know where to inquire to license usage rights.

¹⁷³ For its part, the U.S. Copyright Office suggests a limitation on "the ability of the copyright owner to obtain full injunctive relief in cases where the user has transformed the orphan work into a derivative work like a motion picture or book, preserving the user's ability to continue to exploit that derivative work." REPORT ON ORPHAN WORKS, *supra* note 1, at 11-12.

¹⁷⁴ See generally U.N. Convention on the Law of the Sea, Dec. 10, 1982, available at http://www.un.org/Depts/los/convention_agreements/texts/unclos/unclos_e.pdf.

¹⁷⁵ 17 U.S.C. § 302 (2006).

¹⁷⁶ See *supra* Part I.

¹⁷⁷ *Supra* note 43.

flow to a safe harbor where whosoever desires may come and use those works however she sees fit.¹⁷⁸

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¹⁷⁸ See Patry & Posner, *supra* note 5, at 1658.