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RECONCILING INTELLECTUAL AND PERSONAL PROPERTY

Aaron Perzanowski* & Jason Schultz**

INTRODUCTION

Copyright law sets up an inevitable tension between the intellectual property of creators and the personal property of consumers—in other words, between copyrights and copies. On the one hand, ownership of the copyright confers the rightsholder exclusivity over an intangible creative work. On the other, ownership of the copy secures domain over the use and alienation of a concrete instantiation of the work, sometimes in ways that would otherwise violate the exclusive rights of the copyright holder.¹ The tension between these rights highlights copyright law's role in regulating consumer behavior and personal property. It tells us, after all, where we can play our records, to whom we can display our paintings, and whether we can sell our books.²

Because of this inherent invasiveness, copyright law necessarily weighs the competing interests in intellectual and personal property.³ And for the

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1 ARTHUR W. WEIL, *AMERICAN COPYRIGHT LAW* 444 (1917) (“The law is well settled that the owner of a copy of a copyrighted work may make such physical use of it, as a physical object, as he pleases.”).

2 It even dictates the size of our televisions. See 17 U.S.C. § 110(5)(B) (2012) (providing that “communication . . . of a transmission . . . intended to be received by the general public” is not infringing if, among other things “the performance or display is communicated by means of a total of not more than 4 audiovisual devices . . . and no such audiovisual device has a diagonal screen size greater than 55 inches”).

3 See Wendy J. Gordon, *An Inquiry into the Merits of Copyright: The Challenges of Consistency, Consent, and Encouragement Theory*, 41 *STAN. L. REV.* 1343, 1422 (1989) (noting that

better part of the last century, we witnessed a well-balanced equilibrium.⁴ Copyright law successfully mediated this tension through the principle of exhaustion—the notion that once a rightsholder transfers a copy of a work to a new owner, its rights against that owner are diminished.⁵ The rightsholder’s power to prevent distributing, using, or sometimes even reproducing a work must yield to the personal property interests of consumers. As a result, libraries can lend their books,⁶ museums can display their paintings,⁷ and consumers can back up their software.⁸

Rather than an idiosyncratic carveout or exception, exhaustion is an inherent part of copyright law’s balance between the rights of creators and the rights of the public. It is a fundamental component of almost every intellectual property system.⁹ Just as fair use balances the competing interests of original and follow-on creators, exhaustion accounts for and accommodates the rights of both creators and consumers. And it recognizes that those rights are not at odds with the goals of the copyright system, but at its core. Meaningful consumer rights to use and transfer their personal property are

“intellectual property rights often operate to restrain the owners of tangible things from their ordinarily privileged uses of those things”).

4 Some have contended that personal and intellectual property rights are fundamentally incompatible. See Tom G. Palmer, *Intellectual Property: A Non-Posnerian Law and Economics Approach*, 12 *HAMLIN L. REV.* 261, 281 (1989) (“[A]ny system of ‘property rights’ that requires the violation of other property rights, e.g., the right to determine the peaceful use in one’s home of one’s own videocassette recorder or to purchase blank tapes without paying a royalty to a third party, is no system of rights at all. In short, a system of intellectual property rights is not compossible with a system of property rights to tangible objects”); see also *Hinton v. Donaldson* (Sess. 1793), in *THE DECISION OF THE COURT OF SESSION, UPON THE QUESTION OF LITERARY PROPERTY* 19 (Edinburgh, James Boswell 1774) (describing a common law copyright claim as “far from being founded on property, [but] inconsistent with it . . . [i]t is a rule in all laws, that the commerce of moveables ought to be free; and yet, according to the pursuer’s doctrine, the property of moveables may be subjected to endless limitations and restrictions that hitherto have not been thought of, and would render the commerce of moveables extremely hazardous”).

5 See Aaron Perzanowski & Jason Schultz, *Digital Exhaustion*, 58 *UCLA L. REV.* 889, 891 (2011) (discussing the history of copyright exhaustion).

6 See H.R. REP. NO. 94-1476, § 109, at 79 (1976), *reprinted in* 1976 *U.S.C.C.A.N.* 5659, 5692–93.

7 See 17 U.S.C. § 109(c).

8 See *id.* § 117(a). Exhaustion has its limits, of course. The owner of a copy of a video game cannot reproduce copies for all of her friends. See Perzanowski & Schultz, *supra* note 5, at 927–28 (discussing the common law limits on exhaustion).

9 Exhaustion doctrines have a long history in patent and trademark law as well. See *Quanta Computer, Inc. v. LG Elec., Inc.*, 553 U.S. 617, 621 (2008) (“For over 150 years this Court has applied the doctrine of patent exhaustion to limit the patent rights that survive the initial authorized sale of a patented item.”); *Sebastian Int’l v. Longs Drug Stores Corp.*, 53 F.3d 1073, 1074 (9th Cir. 1995) (“Since 1924, courts have recognized a basic limitation on the right of a trademark owner [C]ourts have consistently held that . . . the right of a producer to control distribution of its trademarked product does not extend beyond the first sale of the product.”).

essential to the ultimate goals of the copyright system, public access to, and enjoyment of, new creative works.

Exhaustion and consumer ownership facilitate those goals. They promote preservation, access, transactional clarity, privacy, platform competition, and user innovation.¹⁰ More fundamentally, they preserve the value proposition that encourages consumer participation in lawful markets for copyrighted works. Intellectual property law's exhaustion doctrines encourage consumers to pay supracompetitive prices by guaranteeing that they get something of enduring value in return: the right to use, alienate, and under certain conditions, modify their copy.¹¹

Nonetheless, many rightsholders and some courts see exhaustion as nothing more than a loophole or market inefficiency that allows consumers to make unauthorized uses of intellectual property rightly controlled by the copyright owner.¹² And in recent years, rightsholders have taken aggressive steps to circumvent exhaustion and weaken consumer property interests.¹³ They have argued that exhaustion does not apply to goods imported into the United States¹⁴ or to copies manufactured abroad;¹⁵ they have developed

10 See Perzanowski & Schultz, *supra* note 5, at 893–901 (discussing the benefits of exhaustion).

11 See Masakazu Ishihara & Andrew Ching, *Dynamic Demand for New and Used Durable Goods Without Physical Depreciation: The Case of Japanese Video Games* 10 (Rotman Sch. of Mgmt., Working Paper No. 2189871, 2012), available at <http://ssrn.com/abstract=2189871> (finding data from used video game markets shows future resale opportunities could increase consumers' willingness to pay for new copies and elimination of used markets would reduce publisher profits on average by 10% per game); Hsunchi Chu & Shuling Liao, *Buying While Expecting to Sell: The Economic Psychology of Online Resale*, 63 J. BUS. RES. 1073, 1073–1078 (2010), available at <http://dx.doi.org/10.1016/j.jbusres.2009.03.023> (finding significant estimated resale return to be a positive influence over consumer purchasing decisions for goods); ERIC VON HIPPEL, *DEMOCRATIZING INNOVATION* 161–62 (2005) (citing studies that show user willingness to pay for custom designs was significantly negatively affected by the difficulty of creating custom designs with a toolkit); Nikolaus Franke et al., *The "I Designed It Myself" Effect in Mass Customization*, 56 MGMT. SCI. 125, 137 (2010) (finding that the "higher the subjective contribution enabled by the MC toolkit, the stronger the effect of having designed a product oneself on the subjective value of the product").

12 Rightsholder antipathy towards exhaustion is nothing new. See *Bloomer v. McQueen*, 55 U.S. (14 How.) 539, 540 (1852). Nor is it hard to understand. The availability of secondary markets introduces competition between new and used versions. This competition drives down prices and results in lost sales for which the rightsholder is not compensated—at least not again.

13 This trend has been equally notable in the patent context. Patentees have succeeded in arguing that restrictive notices are sufficient to defeat exhaustion. See *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 709 (Fed. Cir. 1992). And they have unsuccessfully asserted that the sale of components that embody a patented process do not exhaust method claims. See *Quanta Computer*, 553 U.S. at 637.

14 *Quality King Distribs., Inc. v. L'anza Research Int'l, Inc.*, 523 U.S. 135, 145–54 (1998).

15 *Kirtsaeng v. John Wiley & Sons, Inc.*, 133 S. Ct. 1351, 1355–56 (2013).

technologies to prevent the resale and use of pre-owned media;¹⁶ they have used spurious takedown notices to remove used items from secondary markets like eBay.¹⁷ These efforts have met with mixed success.

But two other developments have proven much more effective in curtailing exhaustion and threatening consumer interests. First, content owners, particularly in the software industry, have endeavored to eliminate the personal property interests of consumers, redefining the notion of ownership by characterizing their transactions with consumers as licenses to use the works or the purchase of a license as opposed to the purchase of a copy.¹⁸ Because ownership triggers exhaustion, this approach has allowed rights-holders to assert control over subsequent uses and transfers of those copies, unchecked by countervailing consumer property interests. And because digital media content, as both a legal and practical matter, is increasingly indistinguishable from software, the entire copyright economy could soon be governed by this same licensing regime.¹⁹

Second, the tangible copy is rapidly disappearing from copyright markets. Once characterized by the distribution of physical products, these markets are now defined by exchanges of networked information.²⁰ In the past, a copy was easy for rightsholders, consumers, and judges to identify and accommodate. Copies were physical artifacts that resided on store shelves. Today, however, digital sales of books,²¹ music,²² video games,²³ and applications²⁴ are outstripping traditional tangible media. Rather than picking up books and records from store shelves, we stream, download, and store con-

16 See U.S. Patent Application No. 13/611,243, at [A-1] (filed Sept. 12, 2012) (describing Sony's "Electronic Content Processing System").

17 See *UMG Recordings, Inc. v. Augusto*, 628 F.3d 1175, 1178–83 (9th Cir. 2011); see also *infra* notes 94–102 and accompanying text.

18 See *infra* Part II.

19 See *infra* Part II.

20 See *infra* Part III.

21 Claire Cain Miller & Julie Bosman, *E-Books Outsell Print Books at Amazon*, N.Y. TIMES, May 20, 2011, at B2, available at http://www.nytimes.com/2011/05/20/technology/20amazon.html?_r=0 (noting that Amazon sold more e-books than hardcover and paperback books combined).

22 Casey Chan, *Digital Music Sales Beat Physical Music Sales for the First Time*, GIZMODO (Jan. 5, 2012, 4:02 PM), <http://gizmodo.com/5873471/digital-music-sales-beat-physical-music-sales-for-the-first-time> ("Digital music sales accounted for 50.3% of total music sales . . .").

23 Oliver Chiang, *Digital vs. Physical: PC Game Downloads Surpass Retail Unit Sales by 3M*, *Says Survey*, FORBES (Sept. 20, 2010, 1:37 PM), <http://www.forbes.com/sites/oliverchiang/2010/09/20/digital-vs-physical-pc-game-downloads-surpass-retail-unit-sales-by-3m-says-survey>; Thomas Whitehead, *U.S. Download Sales Increase, but Physical Games Drop in Popularity*, NINTENDO LIFE (Feb. 6, 2013, 7:30 AM), http://www.nintendolife.com/news/2013/02/us_download_sales_increase_but_physical_games_drop_in_popularity (noting that video game downloads are "increasingly close to catching up with traditional boxed games").

24 Jacqui Cheng, *Forget the Box: Downloads Dominate Online Software Purchases*, ARS TECHNICA (May 28, 2010, 4:26 PM), <http://arstechnica.com/software/news/2010/05/for-get-the-box-downloads-dominate-online-software-purchases.ars>.

tent in the cloud. And rather than enjoying a single copy in multiple contexts—reading a book at home, on the bus, at a friend’s house, or on vacation—we now shift between multiple copies rapidly and dynamically across various devices and platforms. This shift has profound implications for exhaustion and consumer property rights. Since transferring digital content from one consumer to another generally implicates the reproduction right, such actions have been found to fall outside the literal scope of copyright law’s statutory first sale doctrine.²⁵ So although a consumer is entitled to sell a used paperback, transferring a used e-book presents legal uncertainty. More broadly, digital distribution changes our relationship to the copy. Many consumers no longer experience the texture of a printed page, the groove of a vinyl record, or even the smooth plastic of a DVD. Instead, our access to the copies we own is often mediated by third parties like cloud storage providers. And even when we store copies locally, our experience of them is less immediate and less tangible than their analog counterparts.

In a marketplace that undermines ownership and deemphasizes copies, the future of consumer property interests looks bleak. According to copyright holders, you do not own the digital media you purchase online.²⁶ According to the Ninth Circuit, you do not own the plastic disc on which your software programs are encoded.²⁷ And according to the Librarian of Congress, you may not own your cell phone or gaming console.²⁸ In short, the very notion of personal property rights in any embodiment of a work protected by copyright is under attack.

The equilibrium between personal and intellectual property that exhaustion enabled depends on doctrinal assumptions about the copyright marketplace that are quickly becoming outdated. One response to these developments is to concede that both exhaustion and consumer property rights are a thing of the past. But a copyright system governed solely by terms dictated by rightsholders tips the scales too far in their favor, risking broad damage to copyright as a body of law. Rather than abandoning the counterweight of consumer rights, we argue it must be preserved, but in a manner that recognizes the differences between digital and analog distribution.

This Article builds on our earlier work on exhaustion. We have previously emphasized the common law origins of copyright exhaustion, arguing

25 See *Capitol Records, LLC v. ReDigi Inc.*, 934 F. Supp. 2d 640, 655 (S.D.N.Y. 2013) (holding that “the first sale doctrine does not protect ReDigi’s distribution of Capitol’s copyrighted works” because “it is distributing *reproductions* of the copyrighted code”).

26 See *infra* notes 143–56 and accompanying text.

27 See *Vernor v. Autodesk, Inc.*, 621 F.3d 1102, 1111 (9th Cir. 2010).

28 See MARIA A. PALLANTE, REGISTER OF COPYRIGHTS, SECTION 1201 RULEMAKING 44 (2012) (rejecting proposed exemption that would have enabled maintenance or repair of a gaming console under § 117); *id.* at 92 (noting the “lack of certainty in the law [that] makes it impossible” to determine the question of ownership of wireless handsets). To be clear, the formal question at issue in the rulemaking was whether consumers own the copies of the software embedded in their devices. But given the deeply integrated nature of hardware and software in both contexts, ownership of the embedded software copy and ownership of the device effectively collapse.

for a judicial interpretation that is more expansive than the narrow statutory first sale rule.²⁹ Subsequently, we have advocated increased reliance on exhaustion to resolve a range of disputes over personal use by consumers that are typically analyzed through the lenses of fair use and implied license.³⁰ And, most recently, we have outlined two competing legislative frameworks for a contemporary exhaustion regime as a part of the broader copyright reform effort.³¹ This Article examines both the forces undermining copy ownership and the important functions it serves within the copyright system in order to construct a workable notion of consumer property rights in digital media.

Part I begins by examining the relationship between intellectual and personal property. Sometimes courts have treated those rights as inseparable, as if transfer of a copy entails transfer of the intangible right, or retention of the copyright entails ongoing control over particular copies. But Congress and most courts have recognized personal and intellectual property as interests that can be transferred separately. Although the better view, this approach frequently overstates the independence of copyrights and rights in copies. Those interests interact; each helps to define the boundary of the other. The exhaustion principle, though historically associated with a clear distinction between copy and copyright, is in fact the primary tool in copyright law for mediating the somewhat indistinct line separating the copy and the work.

Part II begins to outline the breakdown of this once stable equilibrium, focusing on the erosion of the notion of consumer ownership. In recent decades, courts have created two distinct regimes for resolving questions of copy ownership: one that applies to software and one that applies to everything else. The software regime endorses rightsholders' efforts to "license" particular copies of their works, in contrast to the general skepticism with which courts regard such efforts. This dichotomy is driven in part by software exceptionalism—the notion that for a variety of reasons software should be treated differently. But the growing acceptance of the licensing model also reflects changing views of property. Those shifts opened the door to the substitution of statutory property rights with unilateral contract terms. As the line separating software from other media becomes increasingly blurred, the thinking reflected in the software cases suggests a creeping erosion of copy ownership.

But as Part III details, the erosion of ownership is only half of the problem. The copy, once the uncontroversial locus of consumer property rights, has transformed as well. Copies were once persistent, valuable, readily identifiable, and easily accounted. But the days of the unitary copy are numbered. Today, copies are discarnate, ephemeral, ubiquitous, and of little value in

29 See Perzanowski & Schultz, *supra* note 5, at 892, 926–45.

30 Aaron Perzanowski & Jason Schultz, *Copyright Exhaustion and the Personal Use Dilemma*, 96 MINN. L. REV. 2067, 2076–77, 2112–33 (2012).

31 Aaron Perzanowski & Jason Schultz, *Legislating Digital Exhaustion*, 29 BERKELEY TECH. L.J. (forthcoming 2015) (manuscript at 2), available at <http://ssrn.com/abstract=2474635>.

themselves. In part these changes reflect shifting consumer demand. But more importantly, they signal the increasing disconnect between copyright law's conception of the copy and today's technological reality. We are witnessing a blurring of the formerly clear distinction between the intangible work and the tangible copy, a distinction that has been central to copyright law's approach to balancing intellectual and personal property rights.

In light of the challenge of squaring the existing doctrinal framework for exhaustion with these developments, we turn in Part IV to an examination of the functions served by copy ownership. With a better understanding of the role of copy ownership within the copyright system, we will be better positioned to craft an approach to consumer property rights in the post-copy era. We identify three primary functions of copy ownership. First, locating consumer rights in a particular copy helps preserve the rivalry that distinguishes real property from intellectual property, thus preventing consumer rights from unduly interfering with the ability of the copyright holder's to exploit the work. Second, copy ownership encourages consumers to participate in copyright markets rather than rely on unauthorized sources of content. Third, a stable and reliable notion of copy ownership reduces information cost externalities by eliminating idiosyncratic transfers of rights in copies.

Part V argues that while these three functions historically have been bound up in the single, unitary copy that defined distribution in the nineteenth and twentieth centuries, the copy is not essential to achieving those goals. Instead, the copy served as a token, signaling that each of the three functional concerns at the heart of exhaustion was satisfied. With this new understanding of the place of the copy, we outline the structure of a new exhaustion doctrine that more carefully and transparently interrogates exhaustion's underlying policy concerns, rather than using the unitary copy as a proxy for consumer rights.

I. COPIES AND COPYRIGHTS

Copyright law's fixation requirement guarantees that from the moment of initial protection a work exists in two distinct forms—first, as an incorporeal expression of ideas, and second, as a tangible embodiment of that expression.³² As a result, copyright law must confront the relationship, and potential conflict, between rights in the ethereal work and rights in the fixed copy. That relationship is not immutable; we can imagine several ways to structure it. We might, for example, think of those two sets of rights as bound together. Some courts adopted this approach, holding that ownership of a tangible copy entails ownership of the copyright in the underlying work. Conversely, some cases addressing ownership of copies of computer software hold just the opposite—that by virtue of copyright ownership, rights-holders can assert ownership over physical copies seemingly purchased by

³² See 17 U.S.C. § 102(a) (2012) (noting that “[c]opyright protection subsists . . . in original works of authorship fixed in any tangible medium of expression”).

consumers. But for three hundred years, most courts have rejected the notion that control over one set of interests necessarily confers control over the other. Instead, they have taken a third tack, one that recognizes that ownership of a copyright is distinct from ownership of a copy. Under this approach, the transfer of a painting or manuscript does not affect an assignment of copyright. Nor does copyright ownership entitle a rightsholder to lay claim to all copies of a work.

Merely recognizing, however, that the transfer of one set of interests can occur independently from the other does not fully reveal the relationship between them. As this Part will argue, even if these two interests are conceptually distinguishable, they are deeply intertwined. Their boundaries are defined, at least in part, in reference to each other. While most courts have understood that personal and intellectual property are distinct, they have failed to fully appreciate the extent to which they are interdependent.

A. *Merging Personal and Intellectual Property*

A minority of courts confronting the tension between intellectual and personal property interests have staked out two inconsistent and equally extreme positions, both of which effectively merge those interests into an inseparable bundle. Early courts favored copy owners in this tug-of-war. Later, courts confronted with computer software disputes swung the pendulum in the other direction, allowing copyright owners to control copies of their programs distributed to the public.

Some courts held that the transfer of title to a particular copy of a work entailed a transfer of copyright ownership in the underlying work. For example, in *Parton v. Prang* an artist sued the purchaser of an original painting, seeking to enjoin the purchaser's reproduction and sale of copies of the pictorial work.³³ According to Parton, when he sold his painting, "he only parted with the result of his labor as property."³⁴ In other words, he sold his personal property in the canvas, but "the right to multiply copies of the picture was vested in him as the author and proprietor of the same, and that he still retain[ed] that right notwithstanding the sale."³⁵

The court disagreed, holding that an unconditional sale of the painting "had the effect to transfer to the respondent the right to reproduce or chromo the picture."³⁶ According to the court, "it is well settled law that even copyright is an incident to the ownership of a manuscript, and that it passes at common law with the transfer of a work of art."³⁷ Endorsing an 1860 Irish decision,³⁸ the court thought it a "strange proposition" that transfer of the copy would not simultaneously transfer "that which principally con-

33 18 F. Cas. 1273 (C.C.D. Mass. 1872) (No. 10,784).

34 *Id.* at 1277.

35 *Id.*

36 *Id.*

37 *Id.* at 1278.

38 *Turner v. Robinson* (1860) 10 Ir. Ch. 121.

stitutes the value of the thing transferred,” namely the right to reproduce copies.³⁹ Because Parton’s sale of his painting was absolute and unconditional, his “entire property was transferred.”⁴⁰

Seventy years later, the New York Court of Appeals followed similar logic in *Pushman v. New York Graphic Society*.⁴¹ There, Pushman sold his painting to a gallery without expressly permitting or forbidding its reproduction. When Pushman sought to enjoin the gallery’s reproduction, the court sided with the owners of the copy, reasoning that “an artist must, if he wishes to retain or protect the reproduction right, make some reservation of that right when he sells the painting.”⁴² According to the court, the failure to do so “convey[s] the artist’s whole property in his picture”—both intellectual and personal.⁴³

Although both of these cases were decided as matters of common law copyright, they demonstrate both the mutable relationship between personal and intellectual property rights and the problems that flow from treating one as nothing more than an incident of the other. By failing to distinguish between—and more importantly, balance—these competing interests, the rules applied by these courts would undermine the incentive structure of copyright law. If the sale of one copy, let alone thousands or millions, transferred all rights to the underlying work, incentives to make works available to the public and perhaps to create them in the first instance would be significantly reduced, frustrating the two key policy objectives of copyright law.

Equally troubling are cases that treat copyright ownership as determinative of personal property interests. As discussed in greater detail in Part II, the computer software cases have been anything but uniform in their resolution of the competing claims of intellectual and personal property holders. At their least nuanced, courts addressing disputes over ownership of copies of software have embraced, in the words of one commentator, a “magic words” approach.⁴⁴ These courts allowed copyright holders to control the disposition of copies so long as they asserted that they licensed rather than sold their software. In other words, software makers were deemed to own all copies of their programs by virtue of their copyright ownership of the underlying literary work, regardless of the nature of the transaction that placed those copies in the hands of consumers.

Perhaps the most influential instance of this equation of copyright ownership with copy ownership is *MAI Systems Corp. v. Peak Computer, Inc.*⁴⁵ MAI made computers and software. Peak provided maintenance service for com-

39 *Parton*, 18 F. Cas. at 1278.

40 *Id.*

41 39 N.E.2d 249 (N.Y. 1942).

42 *Id.* at 251.

43 *Id.*

44 See Brian W. Carver, *Why License Agreements Do Not Control Copy Ownership: First Sales and Essential Copies*, 25 BERKELEY TECH. L.J. 1887, 1899 (2010).

45 991 F.2d 511 (9th Cir. 1993).

puter owners.⁴⁶ To prevent Peak from servicing MAI computers, MAI sued for copyright infringement, alleging that Peak created unlawful reproductions of MAI's software programs by loading MAI software in RAM when it powered on a client's computer.⁴⁷

Peak argued that these RAM instantiations were insufficiently durable to qualify as fixed copies.⁴⁸ After rejecting that argument, the Ninth Circuit noted in passing that Peak could not avail itself of the "essential step" copy defense in section 117 of the Copyright Act. That provision allows the owner of a copy of a program "to make or authorize the making of another copy" if doing so is "an essential step in the utilization of the computer program."⁴⁹

But as the Ninth Circuit tersely explained in a footnote, "[s]ince MAI licensed its software, the Peak customers do not qualify as 'owners' of the software."⁵⁰ The Ninth Circuit provided no factual or legal support for its conclusion that Peak customers did not own the copies of MAI software residing on their computers. Presumably, it relied on the district court's factual finding that the software "ha[s] been licensed . . . [and] ha[s] not been sold."⁵¹ But that finding was supported by nothing more than MAI's own declaration.⁵²

Similarly, the court in *Microsoft v. Harmony* equated ownership of the copyright in a program and ownership of particular copies of that program.⁵³ When Microsoft sued for unauthorized distribution of copies of MS-DOS and Windows, Harmony argued its distribution was permitted under the first sale doctrine, which allows "the owner of a particular copy . . . to sell or otherwise dispose of the possession of that copy."⁵⁴ But Microsoft contended, and the court agreed, that Harmony was not the owner of the copies at issue because Microsoft "established a course of conduct . . . consistent with an intention to retain all the rights associated with the grant of copyright" in the software.⁵⁵ Because Microsoft retained ownership of the intel-

46 *Id.* at 513.

47 *Id.*

48 *Id.* at 518; see *Cartoon Network LP, v. CSC Holdings, Inc.*, 536 F.3d 121, 130 (2d Cir. 2008) (holding that instantiations "embodied in the buffer [of a cable system] for only a 'transitory' period" failed the duration requirement); see also Aaron Perzanowski, *Fixing RAM Copies*, 104 Nw. U. L. Rev. 1067, 1068 (2010) (arguing against a reading of the Copyright Act that treats temporary instantiations in computing devices' RAM as "copies").

49 17 U.S.C. § 117(a) (2012).

50 *MAI Sys. Corp.*, 991 F.2d at 518 n.5.

51 *MAI Sys. Corp. v. Peak Computer, Inc.*, No. CV 92-1654-R, 1992 WL 159803, at *2 (C.D. Cal. Apr. 14, 1992).

52 *Id.*

53 *Microsoft Corp. v. Harmony Comps. & Elecs.*, 846 F. Supp. 208, 213 (E.D.N.Y. 1994).

54 *Id.* at 212.

55 *Id.* at 213 (alteration in original) (quoting *Am. Int'l Pictures v. Foreman*, 576 F.2d 661, 665 (5th Cir. 1978)).

lectual property in its programs, according to the court, it retained any personal property interests in tangible copies of those programs as well.⁵⁶

Determining whether a sale that transfers a personal property interest to a consumer has occurred is an inquiry that should be guided by the facts and circumstances surrounding a particular transaction. Consumers can, of course, possess copies of works that they do not own. Library patrons are not owners of the books they borrow. Lessees of computers do not own the copies of software installed on them. And subscribers to cloud-based software services do not own the copies they access online. But the courts in these cases did not interrogate the details, or even the basic structure, of the transactions. Instead, they reduced the question to whether the copyright holder asserted that it licensed rather than sold its software. In doing so, these cases effectively link copyright ownership and copy ownership. So long as the rightsholder retains its intellectual property interest, it can assert a personal property interest over copies.

In many ways, this outcome is the mirror image of the common law copyright cases dealing with original paintings and manuscripts. In those cases, the transfer of a copy entailed the transfer of the copyright. In the “magic words” software cases, retention of the copyright entailed retention of personal property rights in copies distributed to third parties. Fundamentally, both sets of cases treat intellectual and personal property interests as bound together.

But while the courts in the common law copyright cases explicitly acknowledged the link between intellectual and personal property interests, the software cases appear to result from a failure to distinguish between the work and the copy. Both the first sale doctrine and § 117 are concerned with the “owner of a . . . copy.”⁵⁷ But when the *MAI* and *Harmony* courts talked about ownership of “the software,” they drew no distinction between owning the copyrighted work and owning a particular copy of it.⁵⁸ *MAI* may well have licensed certain uses of its copyrighted code. But that fact is entirely consistent with *MAI* transferring ownership of particular copies of that code.⁵⁹ By treating sales and licenses as mutually exclusive categories of transactions, the courts in those cases tied intellectual and personal property rights together.

Allowing copyright holders to assert control over copies is just as corrosive to the incentive structure of the copyright marketplace as treating the transfer of a copy as an assignment of copyright. Rather than undermining authorial incentives, the approach taken in the software cases reduces the motivation of consumers to participate in lawful copyright markets. Consumers are inclined to pay for copies because those copies impart value. The rights associated with copy ownership offer assurances of autonomy, persis-

56 *Id.* at 212.

57 See 17 U.S.C. §§ 109, 117 (2012).

58 See Carver, *supra* note 44, at 1900–01.

59 See Christopher M. Newman, *A License Is Not a “Contract Not to Sue”*: *Disentangling Property and Contract in the Law of Copyright Licenses*, 98 IOWA L. REV. 1101, 1161–62 (2013).

tence, and simplicity. If consumers are not treated as the owners of content they purchase, the value proposition presented by lawful copyright markets is diminished. If consumers are not owners, but licensees subject to the changing whims of copyright holders who can restrict otherwise lawful uses or deny access altogether, more consumers will simply opt out of the lawful copyright marketplace.⁶⁰

B. *Distinguishing Personal and Intellectual Property*

Despite the outlier cases discussed above, courts have historically distinguished between the rights of copyright holders and the rights of copy. In 1741, *Pope v. Curl* held that ownership of letters written by Alexander Pope did not entitle the copy owner to reprint and publish their contents.⁶¹ More than a century later, the Supreme Court reached the same conclusion in *Stephens v. Cady*.⁶² There the Court held that ownership of a copperplate, acquired at a sheriff's auction, did not entitle its owner to reproduce the map engraved on it.⁶³ As the Court explained, "the property acquired by the sale in the engraved plate, and the copy-right of the map secured to the author under the act of Congress, are altogether different and independent of each other, and have no necessary connection."⁶⁴ Copyright interests are "detached from the manuscript, or any other physical existence."⁶⁵

Revisiting the question a few years later, the Court explained that the owner of the copperplate is entitled to make a great many uses of his personal property, so long as they do not conflict with the interests of the copyright holder:

He may make any other use of the plate of which it is susceptible. He may keep it till the limited time, during which the exclusive right exists, shall have expired, and then use it to print maps. He may sell it to another, who has the right to print and publish, but he can no more use that right of property than he can use a press, or paper, which belongs to a third person.⁶⁶

But as the foregoing discussion suggests, some courts remained reluctant to distinguish between personal and intellectual property rights. Frustrated by the lingering inconsistency, Congress attempted to provide some

60 See *infra* Section IV.B.

61 *Pope v. Curl*, (1741) 26 Eng. Rep. 608 (Ch.); see also 2 WILLIAM F. PATRY, PATRY ON COPYRIGHT § 5:99 (2014).

62 55 U.S. (14 How.) 528, 530 (1852).

63 *Id.* at 531.

64 *Id.*

65 *Id.*

66 *Stevens v. Gladding*, 58 U.S. (17 How.) 447, 453 (1854). Importantly, the Court also understood that a transfer of ownership of the physical copy could accompany a license to the underlying intangible work. As it explained, in order for the owner of the copy to use the copy in a way that would ordinarily violate the copyright owner's rights, the copyright owner would have to expressly and intentionally license those rights to the owner of the copy. *Id.* at 452.

clarity by explicitly rejecting the rule embodied in *Pushman*.⁶⁷ Section 202 of the Copyright Act provides:

Ownership of a copyright, or of any of the exclusive rights under a copyright, is distinct from ownership of any material object in which the work is embodied. Transfer of ownership of any material object, including the copy or phonorecord in which the work is first fixed, does not of itself convey any rights in the copyrighted work embodied in the object; nor, in the absence of an agreement, does transfer of ownership of a copyright or of any exclusive rights under a copyright convey property rights in any material object.⁶⁸

Recognizing that intellectual and personal property interests are separable, however, provides only a partial explanation of the relationship between them. The proposition that they can be separately transferred reveals little about the interplay between the rights of copy and copyright owners. Courts seem to take for granted that because these rights are distinct, they are entirely unrelated. *Stephens v. Cady*, for example, repeatedly stresses that the copyright in the map and the property rights in the copperplate are “wholly independent,” “disconnected,” and “altogether different.”⁶⁹ To the extent these statements suggest that the substantive scope of personal and intellectual property rights are unrelated, they underestimate the extent to which those rights are intertwined.

Although distinct, the rights of copy owners and copyright holders share a rather porous and variable boundary. Their scope is defined, in part, in reference to each other. At the intersection of these two sets of rights, as one expands, the other necessarily contracts. So what it means to own a copy depends on what rights are reserved for the copyright holder, and vice versa. If the courts or Congress, for example, decide that ownership of a copy entails the right to publicly perform the work it contains, the rights of copy owners would be enlarged and those of copyright holders diminished. Rather than disconnected, these rights are deeply and inescapably interdependent. In this sense, consumers and copyright holders draw from a shared pool of potential rights in defining their respective property interests.

By deciding that personal and intellectual property interests are distinct, the courts and Congress are confronted with the separate but related question of appropriately balancing those respective rights. Whether they are aware of it, and whether they conceptualize it in these terms, courts and Congress cannot avoid apportioning rights between owners of copies and owners of copyrights. Any line separating the two reflects a policy choice on the question of apportionment. But that choice is not static. It is one that has been adjusted and calibrated over time in response to changing technological and market conditions.

The primary tool for fine-tuning this balance is the principle of copyright exhaustion. That principle holds that copyright owners cede the right

67 See H.R. REP. NO. 94-1476, at 124 (1976), *reprinted in* 1976 U.S.C.C.A.N. 5659, 5739–40.

68 17 U.S.C. § 202 (2012).

69 55 U.S. (14 How.) at 530, 532.

to make some otherwise protected uses of their works to copy owners after a lawful sale or other transfer of ownership of a copy.⁷⁰ The first sale doctrine, which permits copy owners to sell or otherwise dispose of their copies despite the copyright holder's exclusive right of distribution, is the most important exhaustion rule.⁷¹

Although its roots can be traced much earlier,⁷² the Supreme Court first explicitly embraced the first sale doctrine in *Bobbs-Merrill Co. v. Straus*.⁷³ The Court held that after a publisher sold copies of its work, its right to control the terms under which those copies were distributed was exhausted.⁷⁴ Although the Court characterized its decision as an exercise in statutory interpretation of the scope of the exclusive right to "vend," *Bobbs-Merrill* is better understood as an example of the sort of common law adjudication that has historically shaped much of copyright law.⁷⁵ In any case, by deciding that the rights of copy owners to resell their books trumped the rights of copyright holders to control downstream distribution, the Court staked out a boundary between personal and intellectual property. And its role in determining apportionment was inescapable. Had the Court held that publishers can restrict the terms of subsequent distribution of copies, it would have shifted the boundary in a way that expanded intellectual property at the expense of personal property. But it could not avoid the tradeoff between the two.

Both the courts and Congress have relied on the exhaustion doctrine to alter the balance between copy owners and copyright holders. A number of early courts held that copy ownership justified the creation of reproductions and derivative works to the extent necessary to realize the value of a copy.⁷⁶ More recently courts have been asked to apply the exhaustion principle to the transfer of digital copies, so far with less favorable results for copy owners.⁷⁷ Congress has enacted exhaustion rules that favor copy owners—permitting the public display of works and the creation of archival and essential step copies of software—and others that favor copyright holders—restricting the rental of phonorecords and copies of computer software.⁷⁸

Within this framework, policymakers enjoy considerable flexibility in determining which rights are controlled by copyright holders and which are

70 See Perzanowski & Schultz, *supra* note 5, at 891.

71 *Id.*

72 *Id.* at 910–11.

73 210 U.S. 339, 350 (1908). The Court had previously assumed the right to alienate in *Stevens v. Gladding*, 58 U.S. (17 How.) 447, 451 (1854) ("He may sell it to another . . .").

74 *Bobbs-Merrill*, 210 U.S. at 350.

75 *Id.*; see Perzanowski & Schultz, *supra*, note 5, at 929.

76 See, e.g., *Kipling v. G.P. Putnam's Sons*, 120 F. 631, 634 (2d Cir. 1903); *Doan v. Am. Book Co.*, 105 F. 772, 777 (7th Cir. 1901).

77 See *Capitol Records, LLC v. ReDigi Inc.*, 934 F. Supp. 2d 640, 655 (S.D.N.Y. 2013). But other courts have interpreted exhaustion more broadly. See *Case C-128/11, UsedSoft GmbH v. Oracle Int'l Corp.*, ¶ 52 (July 3, 2012), <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:62011CJ0128&from=EN>.

78 See 17 U.S.C. §§ 109, 117 (2012).

enjoyed by copy owners. Whether undertaken by the courts or Congress, this fine-tuning of the balance between personal and intellectual property has been premised on a functioning exhaustion doctrine. Exhaustion, in turn, is contingent on a meaningful notion of copy ownership. But as the next Part describes, copy ownership is increasingly at risk of becoming a relic of the past.

II. THE EROSION OF OWNERSHIP

When the Supreme Court decided *Bobbs-Merrill* in 1908, the question of copy ownership was a simple one. The Court understood that a publisher's attempt to restrain subsequent alienation of books through a printed notice did not undermine the personal property interests of book owners.⁷⁹ Despite the publisher's attempt to limit resale, those who bought books owned them.⁸⁰ A century later, the question of whether unilateral restrictions announced by copyright holders are sufficient to subvert copy ownership is one plagued by confusion and uncertainty.

In large part, that uncertainty emerged from disputes over computer software. This Part begins by describing the courts' treatment of copy ownership in the software cases. Although unable to settle on a single approach for analyzing copy ownership, many courts have endorsed efforts by copyright holders to characterize software transactions as licenses rather than sales. We offer two sets of explanations for the growing acceptance among courts of "licensing" particular copies of a work. First, some historical and functional characteristics unique to software may have convinced courts that it is particularly well-suited to a licensing regime. Second, and more generally, the conception of property as an infinitely malleable bundle of rights has left courts susceptible to strategic efforts by rightsholders to define and parcel out interests in copies as they see fit. Because this broader shift in thinking about property extends well beyond software, and because software is increasingly indistinguishable from the rest of copyrightable subject matter, copy ownership and exhaustion are at risk.

A. *The Software Ownership Cases*

Disputes over copy ownership arise in two related contexts in software copyright law. Sections 109 and 117 of the Copyright Act both offer copy owners defenses for otherwise infringing acts. Again, the first sale doctrine allows for resale or other distribution of a copy by its owner.⁸¹ Section 117 offers targeted protection to owners of copies of computer programs, permitting them to make copies or adaptations essential to the use or backup of the program.⁸² Under both of these exhaustion rules, the core question is the

79 *Bobbs-Merrill*, 210 U.S. at 350. The Court also implicitly understood that such notice did not constitute a binding agreement.

80 *Id.*

81 17 U.S.C. § 109(a).

82 *Id.* § 117(a).

same—whether the defendant is the owner of a copy of the software program.⁸³

Courts have struggled to answer this seemingly straightforward question, adopting a range of inconsistent approaches often without clearly articulating any underlying guiding principle.⁸⁴ As discussed above, the least nuanced approach allows copyright holders to avoid the consequences of exhaustion simply by unilaterally declaring that they are licensing, rather than selling, their products. Early cases like *MAI* typify this approach. But the Ninth Circuit has deployed similar reasoning as recently as 2006, where the court explained that “if the copyright owner makes it clear that she or he is granting only a license to the copy of software and imposes significant restrictions on the purchaser’s ability to redistribute or transfer that copy, the purchaser is considered a licensee, not an owner, of the software.”⁸⁵

Other courts probe the declarations of copyright holders somewhat more meaningfully, looking to the specific terms of the purported license agreement. Courts have held that where an agreement specifies a fixed duration, requires ongoing payments, or the return or destruction of the copies, they are licensed rather than sold.⁸⁶ More controversially, some courts have viewed provisions that restrict the manner in which the software can be used as undermining copy ownership. Terms that limit the number of users or specify hardware requirements, for example, have convinced some courts that a defendant did not own their particular tangible copy of the program.⁸⁷

Still other courts have turned to the Uniform Commercial Code to decide whether defendants hold title to their copy of a work.⁸⁸ The basic rule under section 2-401 is that a seller’s reservation of title to goods shipped or delivered to a buyer is, at best, considered a reservation of security interests.⁸⁹ So where goods are shipped or delivered, and full payment is rendered, the seller has no claim of ownership.⁹⁰

83 More recently, the Supreme Court resolved a dispute over the other central question in first sale cases, whether or not the copy was lawfully made. In *Kirtsaeng v. John Wiley & Sons, Inc.*, the Court rejected the argument put forth by publishers that only copies made within the territorial border of the United States were “lawfully made” for first sale purposes. 133 S. Ct. 1351, 1355–56 (2013).

84 For a thorough taxonomy of these cases and their competing approaches, see Carver, *supra* note 44, at 1892–1930.

85 *Wall Data Inc. v. L.A. Cnty. Sheriff’s Dep’t*, 447 F.3d 769, 785 (9th Cir. 2006). Beyond *MAI v. Peak*, the court cited no authority for this sweeping proposition. *Id.*

86 See *Novell, Inc. v. Unicom Sales, Inc.*, No. 03-2785, 2004 WL 1839117, at *9, 12 (N.D. Cal. Aug. 17, 2004) (finding a license where the agreement required ongoing payments and return of the copies to the rightsholder).

87 See *DSC Commc’ns Corp. v. Pulse Commc’ns, Inc.*, 170 F.3d 1354, 1361–62 (Fed. Cir. 1999).

88 See *Synergistic Techs., Inc. v. IDB Mobile Commc’ns, Inc.*, 871 F. Supp. 24, 29 (D.D.C. 1994); *Mahru v. Superior Court*, 237 Cal. Rptr. 298, 300 (Cal. Ct. App. 1987).

89 U.C.C. § 2-401 (2012).

90 See Carver, *supra* note 44, at 1914–15.

Finally, some courts have proven willing to look beyond both the licensing terms and formal title transfer to interrogate the nature of the economic transaction between the rightsholder and the copy owner. Transactions characterized by single payments and perpetual rights of possession and use have been deemed sales regardless of the rightsholder's contentions to the contrary.⁹¹ According to the Second Circuit, it would be "anomalous for a user whose degree of ownership of a copy is so complete that he may lawfully use it and keep it forever, or if so disposed, throw it in the trash" to be treated as a nonowner.⁹² Rather than focus on formal title or self-serving license terms, "courts should inquire into whether the party exercises sufficient incidents of ownership over a copy of the program to be sensibly considered the owner of the copy."⁹³

Without a consistent rule, or at least clear competing theories, the copy ownership cases are difficult to reconcile. Their seemingly ad hoc outcomes offer consumers little certainty or predictability about their rights in the copies they acquire. Despite the uncertainty, there has been an identifiable shift in judicial thinking on the question of copy ownership over the last century. For most of the twentieth century courts would have rejected out of hand the contention that a printed notice attached to a chattel could prevent a transfer of ownership. But today courts entertain and often accept that very characterization, particularly in cases involving software.

B. *Software Exceptionalism*

One reason courts may be more tolerant of limitations on consumer ownership in this context is the sense, however vague, that software is somehow different—that the rules that govern ownership of other copies and chattels generally—do not apply to the thoroughly modern stuff that is computer software.

The Ninth Circuit offers the clearest illustration of this sort of software exceptionalism. On June 7, 2010, Judges Canby, Callahan, and Ikuta heard oral arguments in two cases, both of which turned on the question of copy ownership.⁹⁴ Both involved the allegedly unlawful resale of copies of protected works in violation of the terms of license agreements that purported to preclude copy ownership by the defendants. And in both cases, the copies at issue were lawfully made, the license agreements imposed similar restrictions, and the works were embodied in the same medium, plastic discs. But the

91 *Softman Prods. Co., v. Adobe Sys., Inc.*, 171 F. Supp. 2d 1075, 1085 (C.D. Cal. 2001). Courts have considered the economic realities of nonsoftware transactions as well. *See United States v. Wise*, 550 F.2d 1180, 1192 (9th Cir. 1977) (holding that transfer of a film print that allowed for possession "at all times" for "personal use and enjoyment" but restricted transfer of the print was a sale, not a license).

92 *Krause v. Titleserv, Inc.*, 402 F.3d 119, 123 (2d Cir. 2005).

93 *Id.* at 124.

94 *See UMG Recordings, Inc. v. Augusto*, 628 F.3d 1175 (9th Cir. 2011); *Vernor v. Autodesk, Inc.*, 621 F.3d 1102 (9th Cir. 2010).

court reached very different conclusions relying on two seemingly inconsistent approaches. One case was about software; the other was not.

UMG v. Augusto involved the resale of promotional CDs given away to music reviewers and other industry insiders.⁹⁵ The defendant purchased used CDs from local record stores and resold them on eBay.⁹⁶ He argued that as the owner of the discs, his resale was protected by the first sale doctrine. But the record label insisted that Augusto was not the owner of those discs because of a notice printed on the discs declaring that they were the property of the label.⁹⁷ Despite the label's insistence, the Ninth Circuit held that title to the discs transferred to their recipients upon delivery and, eventually, to Augusto, entitling him to invoke the first sale doctrine.⁹⁸

Vernor v. Autodesk centered on the resale of discs containing not music, but software.⁹⁹ Autodesk, like UMG, argued that the notice accompanying its software discs meant that customers who paid thousands of dollars for a copy of its software did not own those plastic discs, but merely "licensed" them.¹⁰⁰ Rather than apply the rule that governed *Augusto*, however, the court looked to its prior inconsistent caselaw to distill a three-part test that asks: first, "whether the copyright owner specifies that a user is granted a license," second, "whether the copyright owner significantly restricts the user's ability to transfer the software," and third, "whether the copyright owner imposes notable use restrictions [on the intangible copyrighted work]."¹⁰¹ Since Autodesk's terms contained the necessary language, the court concluded that Autodesk owned the discs in Vernor's possession.¹⁰²

The court applied two very different frameworks in these cases. In *Augusto*, it focused on the practical reality of the transaction and the form of media upon which the work was fixed, regardless of the purported licensing terms. But in *Vernor*, it was concerned almost exclusively with the text announcing restrictions and reservations in the licensing agreement. What is more, if we apply the *Vernor* test to the facts of *Augusto*, the cases are nearly indistinguishable. Each prong of the *Vernor* test is satisfied: UMG characterized the transaction as a license; it prohibited recipients from transferring the discs to others; and it confined them to "personal" use of the discs.¹⁰³

95 *Augusto*, 628 F.3d at 1177.

96 *Id.* at 1178.

97 *Id.* at 1179. That notice provided:

This CD is the property of the record company and is licensed to the intended recipient for personal use only. Acceptance of this CD shall constitute an agreement to comply with the terms of the license. Resale or transfer of possession is not allowed and may be punishable under federal and state laws.

Id. at 1177–78.

98 *Id.* at 1180.

99 *Vernor*, 621 F.3d at 1103.

100 *Id.* at 1105.

101 *Id.* at 1110–11.

102 *Id.* at 1111.

103 *Augusto*, 628 F.3d at 1177–78. The Ninth Circuit attempted to distinguish *Augusto* and *Vernor* on the grounds that UMG, unlike Autodesk, had no mechanism in place to

This inconsistency strongly suggests that the Ninth Circuit has created two parallel regimes for distinguishing licenses from sales. In software cases, it applies a test that turns on factors entirely within the control of the rights-holder. In nonsoftware cases, it adopts a more consumer-friendly approach that turns on the nature and consequences of the transaction.

If these divergent approaches are motivated by software exceptionalism, the court's basic intuition is easy to forgive. Software is indeed different from other sorts of copyrighted works in important ways. The question, however, is whether those differences justify a shift in our thinking about the relationship between intellectual and personal property. Below, we identify three characteristics that may influence courts to treat software as a special case, none of which ultimately distinguish software from other types of copyrighted works from the perspective of copy ownership.

First, software has always been an idiosyncratic component of the copyright system. For decades, there was considerable confusion and disagreement as to whether software should be included in the copyright system at all. Congress explicitly extended protection in 1980.¹⁰⁴ But from the outset, applying that mandate has required courts to make significant accommodations. Perhaps most fundamentally, copyright law excludes any "procedure, process, system, [or] method of operation," a limitation difficult to square with the deeply functional nature of computer code.¹⁰⁵ Code is not written for its aesthetic beauty; it is written to do work. In this sense, the mere inclusion of software within copyrightable subject matter makes it a special case.¹⁰⁶

Second, the functional nature of software means that particular copies are of little intrinsic value. Unlike books, paintings, or even musical compositions, the protected expression of a computer program is not apparent to the owner of a copy.¹⁰⁷ Assuming the owner of a book is familiar with the language in which it is written, or the owner of sheet music can read musical notation, the mere viewing of a copy reveals its expressive content. The underlying work announces itself on the surface of the copy. Not so for software. You can stare at a CD-ROM or floppy disk all day and learn nothing about the program it contains. In part, this reflects the fact that software is typically distributed in object code—computer-readable ones and zeros—rather than human-readable source code.¹⁰⁸ Of course, the same is true of movies and music distributed on digital media. Where software differs from

enforce its restrictions. *Id.* at 1183. But Autodesk likewise lacked any means of terminating consumers' possession of the discs. *Vernor*, 621 F.3d at 1107.

104 17 U.S.C. § 117 (2012).

105 *Id.* § 102(b).

106 See Pamela Samuelson et al., *A Manifesto Concerning the Legal Protection of Computer Programs*, 94 COLUM. L. REV. 2308, 2323 (1994).

107 The same was true of player piano rolls a century ago. See *infra* notes 177–83 and accompanying text (discussing *White-Smith Music Publ'g Co. v. Apollo Co.*, 209 U.S. 1 (1908)).

108 See *Apple Comp., Inc. v. Franklin Comp. Corp.*, 714 F.2d 1240, 1243 (3d Cir. 1983) (distinguishing source and object code).

music and movies is the access to the work users are granted once those ones and zeros are interpreted by the appropriate machine. If you pop a DVD into your laptop, it displays the movie as plainly as a book displays words on the page. But if you put a copy of AutoCAD into your laptop, you will not see the object code on your screen, much less the source code. Instead, you will see a set of images rendered by your operating system interpreting instructions from the program.¹⁰⁹ Those images are distinct from the underlying protected software, which remains hidden even from a copy owner. And because copies of software cannot be used or enjoyed directly, they are of little use in isolation. Their value is only realized within a computer's operating environment, where running the program requires the creation of additional copies of the work, which may or may not implicate the exclusive rights of the copyright holder.¹¹⁰

Third, licensing has been a component of software transactions since mass markets for programs emerged. Book publishers, record labels, and others all attempted to impose licensing restrictions on copies of their works in the past.¹¹¹ But consumers and courts saw those efforts as anomalous departures from existing transactional forms and established expectations. By introducing licensing during its formative stages, the software industry helped shape those expectations.¹¹² To many, licensing is part of the very nature of the "thing" that is software.¹¹³ Early efforts to license software reflected the uncertainty surrounding available copyright protection and

109 The relative inaccessibility of the underlying expression is one reason courts have been receptive to intermediate copying in the software context. *Sega Enters. Ltd. v. Accolade, Inc.*, 977 F.2d 1510, 1525 (9th Cir. 1992) (noting that programs "are typically distributed for public use in object code form, embedded in a silicon chip or on a floppy disk," and "[f]or that reason, humans often cannot gain access to the unprotected ideas and functional concepts contained in object code without disassembling that code—i.e., making copies").

110 See Perzanowski, *supra* note 48, at 1104–05.

111 See *Bobbs-Merrill Co. v. Straus*, 210 U.S. 339, 350 (1908) (refusing to enforce book publisher's restrictions on resale price); *RCA Mfg. Co. v. Whiteman*, 114 F.2d 86, 87–88 (2d Cir. 1940) (refusing to enforce a restriction deeming phonographs "Not Licensed for Radio Broadcast" because "the records themselves could not be clogged with a servitude"); see also ALEX SAYF CUMMINGS, *DEMOCRACY OF SOUND* 28 (2013) (describing a 1906 congressional hearing on restricting the lending of sheet music and an industry lobbyist enthusiastically agreeing with the notion that "the property itself does not carry the right to use it" (internal citation omitted)); Pamela Samuelson, *Legally Speaking: Does Information Really Have to Be Licensed?*, *COMMUNICATIONS OF THE ACM*, Sept. 1998, at 15, 18 (noting that Victrola records carried a license purporting to restrict use of the record to one machine and "to deny authority to retransfer one's copy of the recording"); Cory Doctorow, *Thomas Edison's Crappy, Price-Fixing EULA*, *BOING BOING* (Jan. 13, 2009, 10:28 PM), <http://boingboing.net/2009/01/13/thomas-edisons-crapp.html> (describing printed notice on wax cylinder phonograph purporting to set a minimum retail price of 35 cents).

112 Consumer expectations are malleable things. In large part, the debate over digital exhaustion is as much about shaping consumer expectations as it is about defining legal doctrine.

113 See Robert W. Gomulkiewicz, *The License Is the Product: Comments on the Promise of Article 2B for Software and Information Licensing*, 13 *BERKELEY TECH. L.J.* 891, 896 (1998) ("For

concerns over confidential trade secret information.¹¹⁴ A key feature of those early licenses was “the provision that the developer retains title to—that is, licenses and does not sell—the individual copy of the program itself.”¹¹⁵ The software industry understood the power of licensing to undermine exhaustion rules, control secondary markets, and limit competition. And its licenses were in part a strategic effort to do just that.¹¹⁶ But by that point, the conception of software as a product licensed rather than sold had already established a strong foothold.

Each of these three characteristics of software—its outlier status in copyright law, the limited value of any particular copy, and the early introduction of licensing—might help to explain why courts in software cases tend to be more solicitous of aggressive licensing regimes. But they offer little justification for treating software differently than other works for purposes of copy ownership.¹¹⁷ First, the imperfect fit of software within the copyright system suggests we should be particularly careful about strategies that would enable copyright holders to leverage their statutory rights in a way that harms consumers. Second, Congress squarely addressed the limited value of the copy when it privileged the creation of necessary step copies and adaptations in order to ensure that copies retained meaningful value in § 117, a provision premised on the continued recognition of consumer ownership. Third, the fact that software licenses are commonplace tells us very little about the wisdom of enforcing them in a way that undermines consumer ownership.

But these three characteristics are not the whole story. As the next Section explains, the tendency to embrace “licensing” particular copies of a work has its roots in a deeper uncertainty about the nature of property rights.

C. *Shifting Views on Property*

In the century separating *Bobbs-Merrill* from the contemporary debate over copy ownership, our understanding of property has undergone a dramatic shift, from the certainty of Blackstonian absolutism to the rather more equivocal bundle of rights.¹¹⁸ Despite the merits of a more nuanced relational theory of property, that shift enabled a blurring of the distinction

most software products, the license *is* the product.”); Michael J. Madison, *Law as Design: Objects, Concepts, and Digital Things*, 56 CASE W. RES. L. REV. 381, 400–01 (2005).

114 Michael J. Madison, *Reconstructing the Software License*, 35 LOY. U. CHI. L.J. 275, 313–14 (2003).

115 *Id.* at 314.

116 *Id.* at 281 (“[T]he software license is designed to defeat copyright law’s doctrine of first sale.”).

117 Nor is there any obvious legal basis for such a distinction. *Id.* at 300 (“[T]here is no evidence in the statute or in the logic and history of copyright law that supports permitting owners of copyrights in computer programs to have the power to ‘license’ copies in ways that publishers of books and phonorecords cannot.”).

118 See Arthur Linton Corbin, *Taxation of Seats on the Stock Exchange*, 31 YALE L.J. 429, 429 (1922) (“Our concept of property has shifted . . . [and] ceased to describe any *res*, or object of sense, at all, and has become merely a bundle of legal relations.”).

between property and contract, which in turn bolstered efforts to redefine copy ownership through licensing terms.

Early twentieth-century thinking was dominated by a tradition rooted in natural rights and encapsulated in Blackstone's oft-quoted—if oft-misunderstood—description of property as “that sole and despotic dominion which one man claims and exercises over the external things of the world, in total exclusion of the right of any other individual in the universe.”¹¹⁹ Within that framework, property rights were rights in things held by a single owner with a nearly absolute right to exclude.¹²⁰

Beginning with Hohfeld's taxonomy of jural relations, however, our picture of property became more complex. By breaking the notion of an integrated property right into constituent rights, privileges, and powers, Hohfeld took the first steps towards deconstructing the property monolith. Moreover, he advanced the idea that property rights were not rights in things, but rights against people.¹²¹ Under this view, the central difference between rights in personam (paucital rights) and rights in rem (multital rights) is the size of the class of individuals against whom those rights apply. Paucital rights, like those arising under contract, apply to specified individuals, while multital rights, like those arising under a property regime, apply to a much larger, less specific class.¹²² A property right then does not describe the relationship between an owner and a thing, but the aggregation of relationships between individuals.¹²³ Decades later, Honoré's eleven incidents of ownership further disaggregated our notion of property into discrete component parts.¹²⁴ And according to Honoré, no particular incident or combination of incidents is necessary for ownership; any one or more may be absent.¹²⁵ Taken

119 2 WILLIAM BLACKSTONE, COMMENTARIES ON THE LAWS OF ENGLAND 1 (John L. Wendell ed., New York, Harper & Bros. 1857). Despite the frequency with which Blackstone's words are equated with property absolutism, his own position was more nuanced. See Albert W. Alschuler, *Rediscovering Blackstone*, 145 U. PA. L. REV. 1, 30–32 (1996); Carol M. Rose, *Canons of Property Talk, or, Blackstone's Anxiety*, 108 YALE L.J. 601, 630–31 (1998); David B. Schorr, *How Blackstone Became a Blackstonian*, 10 THEORETICAL INQUIRIES L. 103, 105 (2009).

120 See Abraham Bell & Gideon Parchomovsky, *A Theory of Property*, 90 CORNELL L. REV. 531, 543–44 (2005) (describing the central elements of this conception of property).

121 Wesley Newcomb Hohfeld, *Fundamental Legal Conceptions as Applied in Judicial Reasoning*, 26 YALE L.J. 710, 718 (1917).

122 *Id.* (describing multital rights as “one of a large class of fundamentally similar yet separate rights, . . . residing in a single person . . . but availing respectively against persons constituting a very large and indefinite class of people” (emphasis omitted) (footnote omitted)).

123 *Id.*

124 A.M. Honoré, *Ownership*, in OXFORD ESSAYS IN JURISPRUDENCE 107, 112–28 (A.G. Guest ed., 1961) (identifying the incidents of ownership, including: the rights to possess, use, manage, income, capital, security, transmissibility, absence of term, prohibition of harmful use, liability to execution, and the incident of residuary).

125 *Id.* at 111–12.

together, these insights form the core of the “bundle of rights” conception of property that largely defined property orthodoxy in recent decades.¹²⁶

As an alternative to the rigid formalism of earlier eras, the bundle of rights approach has much to commend it. But its critics charge that it results in a notion of property that is infinitely malleable,¹²⁷ lacking any core or essence,¹²⁸ conceptually unmoored,¹²⁹ fragmented,¹³⁰ and ultimately meaningless.¹³¹ If property rights are nothing more than a collection of relationships between individuals, infinitely divisible and alienable, and if we lack any articulable criteria for which discrete rights render one an owner or even what sorts of things are proper subjects of property rights, property lacks any distinctive character that sets it apart from other modes of allocating resources. According to this view, the “shadowy” bundle of rights model marks a transition “from a world in which property was a central idea . . . to one in which it is no longer a coherent or crucial category in our conceptual scheme. The concept of property and the institution of property have disintegrated.”¹³² As a result, “property ceases to be an important category in legal and political theory.”¹³³

Capitalizing on this perceived breakdown, some economists offer a reassuringly simple take on the role of property. From this perspective, property rights do little more than establish default entitlements to be allocated through private bargaining.¹³⁴ If property rights are nothing more than in personam rights writ large, we should expect property law to embrace the

126 See Bell & Parchomovsky, *supra* note 120, at 546.

127 *Id.* at 545–46 (“[T]he bundle of rights theory transformed property into an almost infinitely malleable concept.”).

128 J.E. Penner, *The “Bundle of Rights” Picture of Property*, 43 UCLA L. REV. 711, 770 (1996) (“The bundle of rights view leads to a ‘concept’ of property which has no determinate realm of application. Rather, property is a flexible or malleable concept, with no definable essence, and no guidelines for definition which might in any way govern its application in particular circumstances.”).

129 *Id.* at 731 (“[P]roperty is to float free from any anchorage to the concept of a ‘right to a thing.’”).

130 Adam Mossoff, *What Is Property? Putting the Pieces Back Together*, 45 ARIZ. L. REV. 371, 376 (2003) (rejecting “the fragmentation of property achieved by the bundle theory”).

131 Edward L. Rubin, *Due Process and the Administrative State*, 72 CALIF. L. REV. 1044, 1086 (1984) (“[I]t is now commonplace to acknowledge that property is simply a label for whatever ‘bundle of sticks’ the individual has been granted.”).

132 See Thomas C. Grey, *The Disintegration of Property*, in NOMOS XXII: PROPERTY 69, 74 (J. Roland Pennock & John W. Chapman eds., 1980).

133 *Id.* at 81.

134 See YORAM BARZEL, *ECONOMIC ANALYSIS OF PROPERTY RIGHTS* 33 (2d ed. 1997) (“At the heart of the study of property rights lies the study of contracts.”); Steven N.S. Cheung, *The Structure of a Contract and the Theory of a Non-Exclusive Resource*, 13 J.L. & ECON. 49, 67 (1970) (noting that the principal significance of property is to establish the right to contract); Thomas W. Merrill & Henry E. Smith, *What Happened to Property in Law and Economics?*, 111 YALE L.J. 357, 359–60 (2001) (“Coase implied that property has no function other than to serve as the baseline for contracting or for collectively imposing use rights in resources.”).

same flexibility and granularity we see in the realm of privately negotiated agreements.¹³⁵ And if so, property rights become indistinguishable from contractual ones.¹³⁶ Once property is viewed from this angle, the use of standardized contractual terms to “license” a tangible copy transferred to a consumer looks less like an anomaly inconsistent with the hundreds of years of common law rejecting equitable servitudes on chattels and more like an example of property formalism yielding to market efficiency.

Copyright law, by congressional design, lends itself to the bundle of rights characterization, and perhaps by extension, to the substitution of property rights with contractual ones.¹³⁷ The rights of a copyright holder are quite explicitly an enumerated bundle. The Copyright Act defines that bundle as comprising the exclusive rights to: reproduce, create derivative works, distribute, publicly perform, and publicly display the work.¹³⁸ And those exclusive rights are infinitely divisible. As the Act makes clear, “[a]ny of the exclusive rights comprised in a copyright, including any subdivision of any of the rights,” can be “transferred” and “owned separately.”¹³⁹ As a result, copyright law encourages the creation of narrow, idiosyncratic subdivisions of rights constrained by time, geography, medium, or any other condition devised by the initial rightsholder.¹⁴⁰ Given the malleability of this bundle, copyright’s notion of ownership of the work is correspondingly fuzzy. If assignment or exclusive license of narrow subdivisions of any exclusive right is a “transfer of ownership” for copyright purposes, a single work has a potentially infinite class of owners. And if copyright holders are free to disassemble and parcel their rights into any configuration they choose, granting some rights to use the work while withholding others, it is easier to understand how courts might buy into the myth of licensing particular copies of the work. Why should rightsholders be denied the flexibility to distribute copies to the public while retaining ownership of them if the function of property rights is merely to set the stage for private bargaining?¹⁴¹

135 See Thomas W. Merrill & Henry E. Smith, *The Property/Contract Interface*, 101 COLUM. L. REV. 773, 800 (2001).

136 Merrill & Smith, *supra* note 134, at 376 (2001) (“For modern economists, property rights are primarily regarded as a prerequisite for exchange.”).

137 Copyright holders have been criticized for their absolutist property rhetoric. See David Fagundes, *Property Rhetoric and the Public Domain*, 94 MINN. L. REV. 652, 661–67 (2010). But at the same time they espouse the Blackstonian ideal when it comes to intangible property, they seek to undermine consumer interests through private ordering inconsistent with longstanding limits on property rights. See *id.*

138 17 U.S.C. § 106 (2012).

139 *Id.* § 201(d). “Transfer of ownership” is defined as “an assignment, mortgage, exclusive license, or any other conveyance, alienation, or hypothecation of a copyright or of any of the exclusive rights comprised in a copyright, whether or not it is limited in time or place of effect, but not including a nonexclusive license.” *Id.* § 101.

140 See Shyamkrishna Balganesh, *The Uneasy Case Against Copyright Trolls*, 86 S. CAL. L. REV. 723, 734–35 (2013).

141 Perhaps not surprisingly, most courts consider copyright licensing through the lens of contract rather than property. See Newman, *supra* note 59, at 1109, 1142 (stating that

Ultimately this shift in the property paradigm toward contractualism,¹⁴² combined with the tendency of courts to see software as somehow special, helps explain the erosion of consumer ownership of copies of software. But as explained below, the licensing regime constructed for software is unlikely to remain quarantined.

D. *The Shrinking Software Divide*

Courts have endorsed attempts to characterize purchases as licenses in the software context, but have proven far less open to that characterization when it comes to more traditional copyrighted works like movies, music, and books.¹⁴³ This fact might suggest that the effects of the software licensing paradigm will be contained. But there are two reasons to think this licensing model will have ripple effects across the copyright economy. First, despite the caselaw, assertions that consumers do not own the copies they buy are not limited to software transactions. Second, the gap between software and more traditional works is narrowing.

The copyright marketplace is rife with examples of rightsholders and their intermediaries insisting that consumers do not actually own the copies they buy.¹⁴⁴ Amazon's Kindle Store is among the largest sellers of e-books in the United States. According to Amazon's Terms of Use, consumers who discover a book they would like to read and hit the "Buy now with 1-click®" button do not own the copy they download.¹⁴⁵ As those terms explain, "[u]nless specifically indicated otherwise, you may not sell, rent, lease, [or] distribute . . . any rights to the Kindle Content."¹⁴⁶ This sort of restraint on alienation is clearly inconsistent with copyright law's understanding of copy

"[t]he concept of license . . . belongs fundamentally to property, not contract" but "[n]evertheless, the contract theory of license persists").

142 The breakdown of traditional contract law, from enforcing bargained-for exchanges to enforcing adhesive boilerplate terms, bears some responsibility here as well. See generally MARGARET JANE RADIN, *BOILERPLATE* (2013).

143 *UMG Recordings, Inc. v. Augusto*, 628 F.3d 1175, 1183 (9th Cir. 2011) (concerning audio CDs); *United States v. Wise*, 550 F.2d 1180, 1192 (9th Cir. 1977) (concerning film prints); *Classic Concepts, Inc. v. Linen Source, Inc.*, Nos. 04-8088 & 04-8457, 2006 WL 4756377, at *17 (C.D. Cal. Apr. 27, 2006) (concerning copyrighted design on a rug); *Middlebrooks v. Comm'r of Internal Revenue*, 34 T.C.M. (CCH) 1187 (1975) (concerning magazines); *Old West Realty, Inc. v. Idaho State Tax Comm'n*, 716 P.2d 1318, 1320–21 (Idaho 1986) (concerning books).

144 See Christina Mulligan, *A Numerus Clausus Principle for Intellectual Property*, 80 TENN. L. REV. 235, 254 (2013) ("The Microsoft Office 2010 license . . . specifies that its software 'is licensed, not sold.' . . . Furthermore, Microsoft software marked 'Not for Resale' cannot be resold." (footnotes omitted)).

145 See, e.g., Product Description Page of *Tenth of December: Stories*, AMAZON, <http://www.amazon.com/Tenth-December-Stories-George-Saunders-ebook/dp/B008LMB4C2/> (last visited Dec. 27, 2014).

146 *Kindle Store Terms of Use*, AMAZON, <http://www.amazon.com/gp/help/customer/display.html?nodeId=201014950> (last updated Sept. 6, 2012).

ownership and likely at odds with what consumers reasonably understand the word “buy” to mean.¹⁴⁷

Apple’s iTunes Store, the largest music retailer in the world, is somewhat more conflicted in how it characterizes transactions with consumers.¹⁴⁸ After describing those transactions as “purchases” and noting that “[a]ll sales . . . are final,” Apple insists that consumers agree not to “rent, lease, loan, sell, [or] distribute” their purchases.¹⁴⁹ Amazon’s competing MP3 store offers similar terms. Although Amazon’s store “allow[s] you to purchase . . . digital versions of audio recordings,” your payment merely “grant[s] you a non-exclusive, non-transferable right to use [the] . . . Music Content . . . only for your personal, non-commercial purposes.”¹⁵⁰ However, “you may not redistribute, . . . sell, . . . rent, share, lend, . . . or otherwise transfer or use Purchased Music.”¹⁵¹

These efforts are not confined to digital downloads. Beachbody LLC, the makers of the popular P90X home workout routine, insists that its customers do not own the DVDs they purchase from the company’s website.¹⁵² According to the Beachbody Terms of Use, “[y]ou may not, without the express written permission of Beachbody or the respective copyright owner . . . sell [or] resell . . . services or products obtained through [its] Sites.”¹⁵³ Beachbody has aggressively targeted individual consumers who resold legitimate copies of its DVDs on eBay, threatening litigation and

147 Aside from the question of copy ownership for exhaustion purposes, to the extent consumers understand the terms “buy” and “purchase” to indicate the ability to alienate their purchases, and that understanding is material to their decisionmaking, digital retailers could face liability for false advertising or deceptive trade practices. See 15 U.S.C. § 1125(a)(1)(B) (2012) (prohibiting the use of “any word, term, name, symbol, or device, or any combination thereof, or any false designation of origin, false or misleading description of fact, or false or misleading representation of fact, which . . . in commercial advertising or promotion, misrepresents the nature, characteristics, qualities, or geographic origin of his or her or another person’s goods, services, or commercial activities”); *id.* § 45(a) (prohibiting “unfair or deceptive acts or practices in or affecting commerce”). Consumers would be particularly surprised to find that Amazon could disable access to the books they purchased. Joel Johnson, *You Don’t Own Your Kindle Books, Amazon Reminds Customer*, NBC NEWS (Oct. 24, 2012, 10:43 AM), <http://www.nbcnews.com/technology/you-dont-own-your-kindle-books-amazon-reminds-customer-1C6626211>.

148 See *iTunes Store Sets New Record with 25 Billion Songs Sold*, APPLE (Feb. 6, 2013), <http://www.apple.com/pr/library/2013/02/06iTunes-Store-Sets-New-Record-with-25-Billion-Songs-Sold.html>.

149 *Terms and Conditions*, APPLE, www.apple.com/legal/internet-services/itunes/us/terms.html (last updated Sept. 17, 2014); see also Evan Hansen, *eBay Mutes iTunes Song Auction*, CNET (Sept. 5, 2003, 9:56 AM), <http://news.cnet.com/2100-1027-5071566.html> (noting the removal of an eBay auction of song purchased from iTunes).

150 *Amazon Music Terms of Use*, AMAZON, <https://www.amazon.com/gp/help/customer/display.html?nodeId=200154280> (last updated June 11, 2014).

151 *Id.*

152 *Terms of Use*, BEACHBODY, http://www.beachbody.com/product/about_us/terms_of_use.do (last updated July 18, 2014).

153 *Id.*

demanding exorbitant compensation.¹⁵⁴ It is easy to understand why Beachbody would want to prevent customers from reselling their workout videos after their New Year's resolve runs out. As reasonable as three easy payments of \$39.95 may be,¹⁵⁵ used DVDs on the secondary market would introduce unwanted downward price pressure. What is harder to see is how this restraint on alienation can be squared with the principle of exhaustion or consumer property interests more generally.¹⁵⁶

These examples illustrate that, despite the caselaw, the practices of rightsholders and the experiences of consumers reflect a trend to deny copy ownership and restrict resale that extends beyond the software market. In part, this trend reflects the shrinking gap between software and other classes of copyrighted works. In its early days, software was a thing unto itself in the copyright landscape. But as traditional forms of expression—books, music, visual art—become more interactive and leverage the new avenues for creativity and the market penetration technology offers, they are becoming indistinguishable from software.

The line between programs and data has always been a largely artificial one.¹⁵⁷ But today that distinction is increasingly blurred.¹⁵⁸ Some video games are best described as interactive films.¹⁵⁹ E-books offer levels of

154 See, e.g., *If I Purchase a Set of P90x Workout DVDs Is It Legal For Me to Resell Them if I Want or Can They Restrict My Right to Resell*, AVVO, <http://www.avvo.com/legal-answers/if-i-purchase-a-set-of-p90x-workout-dvds-is-it-leg-124160.html> (last visited Dec. 27, 2014); *I Tried to Sell a P90x On eBay. I Got Removed for Copyright Infringement. Then I Got a Call and Email from an Attorney*, AVVO, <http://www.avvo.com/legal-answers/i-tried-to-sell-a-p90x-on-ebay-i-got-removed-for-439679.html> (last visited Dec. 27, 2014); *P90X Copyright Infringement, Johnson and Pham*, AVVO, <http://www.avvo.com/legal-answers/p90x-copyright-infringement-johnson-and-pham-183463.html> (last visited Dec. 27, 2014).

155 See *P90X® Is Available Now*, BEACHBODY, <http://www.beachbody.com/category/video.do?bclid=6614435001> (last visited Dec. 27, 2014).

156 Whether Beachbody would prevail if it had the nerve to attempt to enforce its license through litigation is unclear. A court applying *Vernor* would be confronted with a transaction that Beachbody asserts is a license and that imposes significant restrictions on the use and transfer of its products. But the Ninth Circuit would likely analyze this case under the more pro-consumer *Augusto* framework since Beachbody markets in traditional expressive content, not software. These competing potential outcomes only underscore the uncertainty that consumers encounter.

157 See MARTIN DAVIS, *THE UNIVERSAL COMPUTER* 164–65 (2012) (describing the distinction between program and data as an illusion); Allen Newell, *Response: The Models Are Broken, The Models Are Broken!*, 47 U. PITT. L. REV. 1023, 1033 (1986) (“[T]he boundary between data and program—that is, what is data and what is procedure—is very fluid.”). The Copyright Act’s definition of a computer program, “a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result,” applies equally well to digitally encoded data. 17 U.S.C. § 101 (2012).

158 Though more apparent today, this blurring has been in the offing for some time. Michael J. Madison, *Legal-Ware: Contract and Copyright in the Digital Age*, 67 FORDHAM L. REV. 1025, 1041–42 (1998) (noting that all digital information looks a lot like software).

159 Matt Miller, *Heavy Rain and the Birth of Interactive Film*, GAME INFORMER (Feb. 10, 2010, 11:00AM), http://www.gameinformer.com/blogs/editors/b/gimiller_blog/archive/2010/02/10/heavy-rain-and-the-birth-of-interactive-film.aspx (describing the

responsiveness to user input impossible with the printed page.¹⁶⁰ And artists like Jay-Z,¹⁶¹ Lady Gaga,¹⁶² and Bjork¹⁶³ have all released new music embedded in smartphone applications. In short, traditional expressive content and software are merging.

That blurring renders efforts to maintain the current bifurcated approach to licensing untenable. It depends on an identifiable line separating software from everything else copyright protects. If current legal and technological trends continue, the notion of personal property in copies will recede as more and more of copyright's subject matter evolves to resemble software.¹⁶⁴ As described in the next Part, that problem is compounded by the shifting nature of the copy itself.

III. THE EROSION OF THE COPY

The copy, needless to say, has been an essential concept in the law of copyright for centuries,¹⁶⁵ and part of copyright law in the United States since its inception.¹⁶⁶ The term's use is somewhat counterintuitive since "copy" refers not only to infringing and noninfringing reproductions of a

video game *Heavy Rain* as "interactive storytelling" that is "more film than it is game"); Greg Tito, *Heavy Rain Is Not a Game*, *THE ESCAPIST* (Dec. 18, 2009, 12:37 PM), <http://www.escapistmagazine.com/news/view/96957-Heavy-Rain-Is-Not-a-Game> (describing *Heavy Rain* as "not a game" but an "interactive movie").

160 See Avi Itzkovitch, *Interactive eBook Apps: The Reinvention of Reading and Interactivity*, *UX MAG.* (Apr. 12, 2012), <http://uxmag.com/articles/interactive-ebook-apps-the-reinvention-of-reading-and-interactivity>.

161 Evan Minsker, *Jay-Z Announces New LP Magna Carta Holy Grail*, *PITCHFORK* (June 16, 2013, 9:39 PM), <http://pitchfork.com/news/51187-jay-z-announces-new-lp-magna-carta-holy-grail>.

162 Alice Vincent, *Lady Gaga Announces ARTPOP, Her New Album App Release*, *TELEGRAPH* (July 12, 2013, 11:01 AM), <http://www.telegraph.co.uk/culture/music/music-news/10175597/Lady-Gaga-announces-ARTPOP-her-new-album-app-release.html>.

163 *Bjork, Damon Albarn, Snoop Dogg for Manchester International Festival*, *NME* (Mar. 17, 2011), <http://www.nme.com/news/bjork/55508>.

164 The idea that copyright law's treatment of consumer ownership in the context of its core subject matter—expressive media content like book, music, and films—should owe its origins to an approach that gained its first foothold in cases involving computer software is particularly perverse, given the serious misgivings many voiced about protecting software through copyright law at the outset. See Samuelson et al., *supra* note 106, at 2315.

165 Crown Revenues Act, 1553, 7 Edw. 6, § 17 (U.K.) (equating "copy" with "duplicate" in a statute regarding the regulation of treasury accounts); Miaoran Li, *The Pirate Party and the Pirate Bay: How the Pirate Bay Influences Sweden and International Copyright Relations*, 21 *PAGE INT'L L. REV.* 281, 283 n.11 (2009) (discussing the quote "[t]o every cow belongs her calf, therefore to every book belongs its copy" from 541 A.D. (quoting *The Cathach/The Psalter of St. Columba*, ROYAL IRISH ACADEMY, <http://www.ria.ie/Library/Special-Collections/Manuscripts/Cathach> (last visited Dec. 29, 2014))).

166 Act of May 31, 1790, 1 Stat. 124 ("An Act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies, during the times therein mentioned.").

work,¹⁶⁷ but also to the initial fixation of the work.¹⁶⁸ So Mary Shelley's original handwritten manuscript of *Frankenstein* is as much of a copy as a Xeroxed paperback.¹⁶⁹ Central to contemporary copyright thinking is the notion that copies and their statutory companions, phonorecords,¹⁷⁰ are material objects distinct from the intangible works that the copyright grant is meant to encourage.

Much like the once clear but increasingly opaque notion of ownership, the copy is now a concept plagued by uncertainty. Changes in storage and distribution technologies alongside shifting media consumption patterns have profoundly altered the way in which we interact with copyrighted works. The tangible copy, once the primary means of distribution, has been displaced by cloud storage, streaming, and "software as a service." Copies were once finite, stable, and valuable. But the unitary copy—the hardcover, the LP, the film reel—has been largely displaced. Today's marketplace is characterized by ubiquitous, temporary instantiations of works that have diminished independent value. Copyright law has struggled to assimilate these developments. This Part first describes those changes and then turns to the efforts of the courts to make sense of the shifting role of the copy and the implications for the distinction between the copy and the work.

A. *Technology and the Copy*

Dramatic improvements in remote computational capacity and storage, along with increasingly fast and pervasive data connectivity, allow consumers to acquire, store, and access their media through the much-ballyhooed cloud, that assemblage of remote servers housing our contacts, family photos, and media collections. Consumers can choose between cloud storage services from Amazon, Apple, Dropbox, Google, and Microsoft, among others,

167 See *Hudson v. Patten*, 1 Root 133, 133–34 (Conn. Super. 1789) (discussing the unauthorized publication of Webster's Institute of English Grammar); *Kilty v. Green*, 4 H. & McH. 345, 345–46 (Gen. Ct. Md. 1799) (discussing the unauthorized publication of a book of laws).

168 17 U.S.C. § 101 (2012) (defining copies as "material objects, other than phonorecords, in which a work is fixed by any method now known or later developed, and from which the work can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device," and "[t]he term 'copies' includes the material object, other than a phonorecord, in which the work is first fixed").

169 The Shelley-Godwin Archive hosts scans of several drafts of *Frankenstein*. *About the Frankenstein Notebooks*, SHELLEY-GODWIN ARCHIVE, <http://shelleygodwinarchive.org/contents/frankenstein> (last visited Dec. 29, 2014).

170 See 17 U.S.C. § 101 (defining phonorecords as "material objects in which sounds . . . are fixed by any method now known or later developed, and from which the sounds can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device"). The tangible embodiment of a sound recording is a phonorecord; the embodiment of any other work is a copy. The term emerged as federal copyright law expanded to include sound recordings. See H. COMM. ON THE JUDICIARY, 88TH CONG., COPYRIGHT LAW REVISION PART 3: PRELIMINARY DRAFT FOR REVISED U.S. COPYRIGHT LAW AND DISCUSSIONS AND COMMENTS ON THE DRAFT 445–46 (Comm. Print 1964).

at nearly no cost. But the cloud has moved beyond mere storage. Amazon's MP3 store enables consumers to buy, save, and play their purchases directly from its Cloud Player without ever downloading a permanent file to their laptop or mobile device, let alone handling a plastic disc.¹⁷¹ Software-as-a-service offerings, like Adobe Creative Cloud—the new home for Photoshop and other editing and layout programs—or the Google Apps suite of office productivity tools, prove that the functionality that once required the distribution of copies can be achieved by remotely accessing data and processing power.¹⁷²

These technological developments have been accompanied and partly driven by changing consumer preferences. As evidenced by the fact that close to half of internet traffic is attributable to Netflix, many consumers would rather access a library of streaming video titles than purchase or even rent tangible copies.¹⁷³ The popularity of Spotify, Pandora, and other streaming music services suggest the same might be true for music.¹⁷⁴ This transition from distribution to performance is evident in the video game market as well. OnLive launched a cloud-based gaming platform in 2010.¹⁷⁵ And Sony has recently announced Playstation Now, a cross-platform service that will allow subscribers to rent and stream games to consoles and mobile devices.¹⁷⁶ Taken together, these changes offer great promise to consumers. But they also threaten to destabilize our understanding of the copy and its place in the copyright system.

B. *Law and the Copy*

Four cases—one from the early twentieth century and three of more recent vintage—illustrate the ongoing dialogue between technological innovation and the legal understanding of the copy.

In the late 1800s, the advent of perforated player piano rolls prompted both the courts and Congress to reconsider what constituted a copy. In *White-Smith v. Apollo*, the Supreme Court was asked to decide whether perforated rolls, which in conjunction with a player piano performed copyrighted

171 See *Get Our Free Music App and Start Listening Now*, AMAZON, <http://www.amazon.com/b?node=2658409011> (last visited Dec. 29, 2014).

172 *Adobe Creative Cloud*, ADOBE, <http://www.adobe.com/products/creativecloud/tools-and-services.html> (last visited Dec. 29, 2014); *Google Apps for Work*, GOOGLE, <http://www.google.com/enterprise/apps/business> (last visited Dec. 29, 2014).

173 Joan E. Solsman, *Netflix, YouTube Gobble Up Half of Internet Traffic*, CNET (November 11, 2013, 6:31 AM), http://news.cnet.com/8301-1023_3-57611722-93/netflix-youtube-gobble-up-half-of-internet-traffic.

174 Lauren DeLisa Coleman, *Why Apple's iTunes Radio Isn't a Threat to Pandora or Spotify . . . Yet*, THE DAILY BEAST (Nov. 12, 2013), <http://www.thedailybeast.com/articles/2013/11/12/why-apple-s-itunes-radio-isn-t-a-threat-to-pandora-or-spotify-yet.html>.

175 *Background*, ONLIVE, <http://www.onlive.com/about> (last visited Dec. 29, 2014).

176 Brian Solomon, *Gamestop Plunges After Sony Unveils Playstation Now Streaming Service*, FORBES (Jan. 7, 2014, 4:57 PM), <http://www.forbes.com/sites/briansolomon/2014/01/07/gamestop-plunges-after-sony-unveils-playstation-now-streaming-service>.

musical compositions, were infringing copies.¹⁷⁷ The Court, following a number of earlier opinions addressing both piano rolls and phonographs,¹⁷⁸ held that the perforated rolls were not “a written or printed record of . . . intelligible notation.”¹⁷⁹ If “even those skilled in the making of these rolls are unable to read them as musical compositions,” they could not be copies.¹⁸⁰ To hold otherwise, according to the Court, would be to force “a strained and artificial meaning” on the copy.¹⁸¹ Congress, revising the Copyright Act just a year later, had an opportunity to weigh in on *White-Smith’s* vision of the copy.¹⁸² However, it took a decidedly unclear position, ultimately maintaining the general *White-Smith* interpretation but extending protection to piano rolls.¹⁸³

White-Smith demonstrates that judicial and legislative struggles to understand the idea of the copy are a function of the day’s technology. Two more recent cases illustrate how that same basic challenge confronts courts faced with contemporary technological advances.

If the question in *White-Smith* was whether embodiments of a work were too inscrutable to count as copies, the question in *Cartoon Network LP v. CSC Holdings, Inc.* was whether they were too temporary.¹⁸⁴ Defendant Cablevision was sued for offering consumers access to a Remote Storage Digital Video Recorder system (RS-DVR) that functioned similarly to a set-top home DVR but stored programs centrally at a Cablevision data center.¹⁸⁵

177 *White-Smith Music Publ’g Co. v. Apollo Co.*, 209 U.S. 1, 8–9 (1908).

178 *See Stern v. Rosey*, 17 App. D.C. 562, 564–65 (1901) (“We can not regard the reproduction, through the agency of the phonograph, of the sounds of musical instruments playing the music composed and published by the [complainants], as the copy or publication of the same within the meaning of the act. . . . Conveying no meaning, then, to the eye of even an expert musician and wholly incapable of use save in and as a part of a machine specially adapted to make them give up the records which they contain, these prepared wax[ed] cylinders can neither substitute the copyrighted sheets of music nor serve any purpose which is within their scope.”); *see also Kennedy v. McTammany*, 33 F. 584, 584 (C.C.D. Mass. 1888) (“I cannot convince myself that these perforated [sheets] of paper are copies of sheet music[] within the meaning of the copyright law. They are not made to be addressed to the eye as sheet music, but they form [a] part of a machine.”).

179 *White-Smith*, 209 U.S. at 17 (internal quotation marks omitted).

180 *Id.* at 18.

181 *Id.* at 17.

182 In 1906, there was much discussion over the inclusion of sound recordings in the Copyright Act of 1909. *See To Amend and Consolidate the Acts Respecting Copyright: Hearing on S. 6330 & H.R. 19853 Before H. Comm. & S. Comm. on Patents*, 59th Cong. 20–21 (1906) (statement of R. R. Bowker, Vice-President of American Copyright League).

183 Copyright Act of 1909, Pub. L. No. 60-349, 35 Stat. 1075 (1909); Kenneth M. Alfano, *Copyright in Exile: Restoring the Original Parameters of Exclusive Reproduction*, 11 J. TECH. L. & POL’Y 215, 231–32 (2006) (discussing how the Copyright Act of 1909 maintained the definition of “copy” from the *White-Smith* decision despite contradicting its result by providing protect for piano rolls).

184 *Cartoon Network LP v. CSC Holdings, Inc.*, 536 F.3d 121, 127 (2d Cir. 2008).

185 In support, the court went out of its way to note that

“the RS-DVR is not a single piece of equipment,” but rather “a complex system requiring numerous computers, processes, networks of cables, and facilities

The RS-DVR system divided the data stream containing Cablevision's television programming into separate streams for each television channel using a device called the Broadband Multimedia Router (BMR).¹⁸⁶ In this process, the BMR briefly loaded the data stream into its buffer memory, for as much as 1.2 seconds.¹⁸⁷ The BMR then relayed the separated data streams to a server containing hard drives on which recorded programs were stored.¹⁸⁸ The server buffered one tenth of a second of video for each channel at any time.¹⁸⁹ If a customer initiated a recording of a program, the server moved data for the selected channel to another buffer, after which data were written to the hard drive for later viewing.¹⁹⁰ Upon playback by a customer, the data passed through a streaming buffer, bringing the total number of buffer instantiations to four, not counting the more durable copies on the hard drive.¹⁹¹

Cartoon Network alleged that each of these buffers resulted in infringing copies of their television programs. The case turned on whether the buffer data were fixed in a tangible medium and therefore copies of the Plaintiffs' television programs. Unlike earlier courts, the Second Circuit recognized that fixation entails two distinct requirements. First, the work must be sufficiently embodied to be perceived, reproduced, or communicated.¹⁹² And second, that embodiment must persist for more than a transitory duration.¹⁹³ Because "[n]o bit of data remains in any buffer for more than a fleeting 1.2 seconds . . . [and] each bit of data here is rapidly and automatically overwritten as soon as it is processed," the court was satisfied that the "works in this case are embodied in the buffer for only a 'transitory' period" and thus not copies.¹⁹⁴

Although we applaud the Second Circuit's careful statutory and factual analysis,¹⁹⁵ it highlights an important conceptual difficulty for copyright law. If, as the court rightly concluded, buffer data are not copies, what exactly are they? They are not the intangible work, but seem to occupy some interstitial space within the copy/work dichotomy. The uncertain status of embodiments like these suggests a growing difficulty in identifying where copies end and where non-copies begin. And if copyright law cannot tell us what

staffed by personnel twenty-four hours a day and seven days a week." To the customer, however, the processes of recording and playback on the RS-DVR are similar to that of a standard set-top DVR.

Id. at 125 (quoting *Twentieth Century Fox Film Corp. v. Cablevision Sys. Corp.*, 478 F. Supp. 2d 607, 612 (S.D.N.Y. 2007) (citation omitted)).

186 *Id.* at 124.

187 *Id.* at 125.

188 *Id.* at 124.

189 *Id.*

190 *Id.*

191 *Id.* at 124–25.

192 *Id.* at 127.

193 *Id.*

194 *Id.* at 129–30.

195 See Perzanowski, *supra* note 48, at 1085.

embodiments even count as copies, copy ownership faces a significant challenge.

In *Capitol v. ReDigi*, we saw yet another challenge to our understanding of the copy—or in this case, the phonorecord.¹⁹⁶ There, ReDigi attempted to create a secondary marketplace for digital media by offering consumers a platform for the resale of pre-owned digital music.¹⁹⁷ If a consumer who bought a copy of “The Sign” by Swedish pop group Ace of Base from the iTunes Music Store in a fit of 1990s nostalgia later regretted that purchase, ReDigi would allow her to recapture some of her investment by transferring her interest in the song to another equally nostalgic buyer.

According to ReDigi, its software first verifies that the music was legitimately purchased.¹⁹⁸ Next, it uploads the seller’s file to ReDigi’s Cloud Locker, where the file is stored until purchased by another user.¹⁹⁹ The technical design of ReDigi’s upload process introduces an important wrinkle to the copyright analysis. ReDigi argues that the upload does not create a new copy, it merely migrates the file from one location to another.²⁰⁰ As each packet of information that comprises the file is uploaded to the cloud, it is deleted from the user’s local drive, virally transporting the file.²⁰¹ And “at the end of the process, the digital music file is located in the Cloud Locker and not on the user’s computer.”²⁰² Finally, the software deletes any additional copies of the file on the user’s computer and devices.²⁰³ In this way, ReDigi’s platform is intended to mimic the consequences of an analog sale, a transfer of ownership that terminates the rights of one party and establishes the rights of another.

Capitol Records sued ReDigi, alleging that the process described above is nothing more than an unauthorized reproduction of its protected works.²⁰⁴ The question for the court, in essence, was whether the copy on Redigi’s server should be understood as new and distinct from the one that previously resided on the seller’s hard drive, or instead, as ReDigi contended, the identity of that copy persisted as it moved from one storage location to the next.

ReDigi analogized its service to an artist who used emulsions to lift images from greeting cards and apply them to ceramic plaques.²⁰⁵ But the court rejected this analogy, holding that the migration process created a new

196 *Capitol Records, LLC v. ReDigi Inc.*, 934 F. Supp. 2d 640 (S.D.N.Y. 2013).

197 *Id.* at 640.

198 *Id.* at 645.

199 *Id.* at 645–46.

200 *Id.* at 645.

201 *Id.* at 646.

202 *Id.*; see also U.S. Patent No. 8,627,500 (filed Dec. 31, 2010) (naming the patent “Methods and Apparatus for Sharing, Transferring and Removing Previously Owned Digital Media”).

203 *Capitol Records*, 934 F. Supp. 2d at 646.

204 *Id.* at 646–47.

205 *C.M. Paula Co. v. Logan*, 355 F. Supp. 189, 190 (N.D. Tex. 1973).

material object and thus, a new phonorecord.²⁰⁶ In doing so, the court drew a sharp distinction between the copyrighted sound recording—the work—and the “appropriate segment of the hard disk”—the phonorecord.²⁰⁷ The court characterized this conclusion as not only demanded by the Copyright Act, but dictated by the limits of technology:

This understanding is, of course, confirmed by the laws of physics. It is simply impossible that the same “material object” can be transferred over the Internet. . . . Because the reproduction right is necessarily implicated when a copyrighted work is embodied in a new material object, and because digital music files must be embodied in a new material object following their transfer over the Internet, the Court determines that the embodiment of a digital music file on a new hard disk is a reproduction within the meaning of the Copyright Act.

This finding holds regardless of whether one or multiple copies of the file exist. . . . Simply put, it is the creation of a *new* material object and not an *additional* material object that defines the reproduction right.²⁰⁸

But far from confirming that the rules imposed by law and those imposed by physics are aligned, the *ReDigi* opinion underscores the mismatch between our current technological capability and copyright law’s preoccupation with the unitary copy. Digital consumers are awash in a sea of copies. Copies flit into and out of existence. They are created, used, discarded, and created yet again. Through memory virtualization, they can even be distributed across many different storage media, often across great distances.²⁰⁹ Cloud computing frees us from the burden of the unitary copy. Consumers no longer need to lug their digital media collections with them everywhere they go; they simply need a data connection. Even in the pre-cloud environment, the *ReDigi* court’s reasoning overlooks the continual creation of copies necessary for computers to operate. The notion that we can identify the particular copy that a consumer purchased from iTunes is almost hard to square with the reality of networked distribution. Yet the *ReDigi* court felt a need to pin the tail on the proverbial donkey and identify particular phonorecords within the ReDigi system.

206 *Capitol Records*, 934 F. Supp. 2d at 650–51.

207 *Id.* at 649 (“[W]hen a user on a [P2P] network downloads a song from another user, he receives into his computer a digital sequence representing the sound recording. That sequence is magnetically encoded on a segment of his hard disk (or likewise written on other media). . . . The electronic file (or, perhaps more accurately, the appropriate segment of the hard disk) is therefore a ‘phonorecord’ within the meaning of the statute.” (alterations in original) (quoting *London-Sire Records, Inc. v. Doe*, 542 F. Supp. 2d 153, 171 (D. Mass. 2008))).

208 *Capitol Records*, 934 F. Supp. 2d at 649–50.

209 See Clive Cook, *Memory Virtualization, the Third Wave of Virtualization*, VMBLOG (Dec. 14, 2008, 10:12 AM), <http://vmblog.com/archive/2008/12/14/memory-virtualization-the-third-wave-of-virtualization.aspx> (describing virtualization).

Finally, in *UsedSoft GmbH v. Oracle*, the European Court of Justice approached the question of the identity of the copy very differently.²¹⁰ There, Oracle sued UsedSoft for allowing users to purchase second-hand software licenses.²¹¹ Oracle claimed that when these consumers subsequently downloaded the software from its servers, along with patches and updates, they illegally reproduced the code.²¹² The court rejected this theory, holding that the doctrine of exhaustion applied not only to the initial download, but to all subsequent updates and patches, even if downloaded by a subsequent user.²¹³ The court reasoned that the sale was not tied to a particular download or copy, but rather extended to any “functional equivalent” so long as payment was initially made to Oracle.²¹⁴ In other words, the court was less concerned with particular copies—that is, particular downloads to particular material objects—than it was with the rights of subsequent transferees to access the work. If exhaustion applied, it did so regardless of the identity of any particular copy.²¹⁵

Together, these cases signal a growing uncertainty about the definition of the copy and the legal status of those instantiations of a work that occupies that middle ground between the tangible unitary copy and the intangible work. Historically, copyright law has conceptualized consumer rights as situated in the particular copy they own. As the role of the unitary copy is diminished, the exhaustion principle and the values it serves are at risk. As the next Part explores, disaggregating rights from copies may offer a clearer picture of the values at stake in copyright exhaustion.

IV. THE FUNCTIONS OF COPY OWNERSHIP

Without a stable understanding of the copy or a meaningful notion of copy ownership, copyright law’s exhaustion doctrine—as it has been historically understood and applied by courts—faces a crisis. Although some rights-holders would celebrate the end of first sale and other exhaustion rules, our prognosis is not quite so dire. Rather than give up altogether on the consumer rights that flow from copy ownership, this Part identifies the functions copy ownership has served in order to reformulate the exhaustion principle in a way that preserves its crucial role in the copyright system.

210 Case C-128/11, *UsedSoft GmbH v. Oracle Int’l Corp.*, ¶ 52 (July 3, 2012), <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:62011CJ0128&from=EN>.

211 *Id.* ¶¶ 25–27.

212 *Id.*

213 *Id.* ¶ 52.

214 *Id.* ¶ 61.

215 A subsequent decision by a German court has clarified that *UsedSoft’s* interpretation is based entirely on section 51 of the EU Computer Programs Directive and therefore would not apply to other types of digital copyrighted works, such as e-books. See Case No. 4 O 191/11, Landgericht Bielefeld [LG] [German Regional Court] (Ger.), available at http://www.boersenverein.de/sixcms/media.php/976/LG_Bielefeld_vom_05.03.13_Klage_Verbraucherzentralen.pdf.

There is nothing magical about the tangible copy or inherently transformational about the label “owner.” The copyright system has relied on copy ownership as one of many tools for delineating the scope of copyright holders’ control over their works and balancing that power against the interests of the public in using and deriving value from those creations. Here we consider why. What is it about the relationship between the rightsholder, the work, and the consumer that justifies extending rights to copy owners that would otherwise fall within the exclusivity of the copyright holder?

We argue that copy ownership serves as a proxy for a cluster of related considerations that together justify distinguishing copy owners from the public at large as a matter of copyright policy. These core functions of copy ownership—the contribution to incentives for authors, the inducement of consumer participation in lawful markets for protected works, and the reduction of information costs—explain why copyright law confers special status on some users of protected works. But they do not dictate how. With a clearer understanding of the reasons we privilege copy owners in place, we detail an approach to copyright exhaustion that legislators and courts can use to more transparently balance the competing interests of consumers and creators.

A. *Author Incentives*

The creation of economic incentives for creative production is among the core constitutional and instrumental objectives of copyright law in the United States.²¹⁶ Because creative works are public goods, copyright theory worries that, absent some legal intervention to limit competition and create artificial scarcity, creators will underinvest in new works.²¹⁷ Through legal exclusivity, “copyright supplies the economic incentive to create and disseminate ideas.”²¹⁸ Although the descriptive accuracy of this incentive story is an open question,²¹⁹ copyright law remains deeply committed to the notion that

216 U.S. CONST. art. I, § 8, cl. 8 (“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.”); *Mazer v. Stein*, 347 U.S. 201, 219 (1954) (“The economic philosophy behind the clause empowering Congress to grant patents and copyrights is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors.”).

217 See WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW* 40 (2003); Glynn S. Lunney, Jr., *Reexamining Copyright’s Incentives-Access Paradigm*, 49 VAND. L. REV. 483, 493 (1996) (“The specter of such copying competitors might lead many would-be authors to forego authorship altogether, resulting in the underproduction of such works.” (citation omitted)).

218 *Harper & Row, Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 558 (1985).

219 Of course, not all creators are motivated exclusively or even primarily by legal exclusivity or pecuniary interests in general. See Eric E. Johnson, *Intellectual Property and the Incentive Fallacy*, 39 FLA. ST. U. L. REV. 623, 624 (2012) (“New strains of thinking in the fields of economics, psychology, and business-management studies now debunk the long-venerated idea that legal authority must provide some artificial inducement to artistic and technological progress.”).

exclusive rights are intended to ensure that authors are compensated for their work.²²⁰

For much of our recent history, the financial and popular success of copyrighted works has been a function of the sale of copies. There are exceptions of course. Box office returns and ticket sales for live performances are significant revenue streams for some creators. And streaming, subscriptions, and rentals offer increasingly important nonsale revenue. But as a general rule, authors who sell more copies make more money. As a result, copy ownership provides a strong indication that compensation sufficient to motivate an author has been paid. The exclusive right of initial distribution gives copyright holders the power to set their desired price for sales to the public. Once that price has been paid, we should assume that the copyright holder has reaped what it considers a fair reward and continued exclusivity can no longer be justified.²²¹ Perhaps not surprisingly, a number of courts have recognized the centrality of this compensatory justification for exhaustion rules.²²²

An exhaustion rule triggered by copy ownership is one that strikes a balance between the rights of authors and the rights of the public, a balance calibrated to preserve creative incentives. Exhaustion applies only to lawfully made copies disposed of at an initial price set by the rightsholder.²²³ This ensures that the rightsholder receives a measure of compensation sufficient to justify its investment. In this way, copy ownership functions as a limit on

220 Whether copyright law in practice achieves that goal is debatable. See Julie E. Cohen, *Copyright as Property in the Post-Industrial Economy: A Research Agenda*, 2011 Wis. L. Rev. 141, 143 (noting that “[t]he incentives-for-authors formulation of copyright’s purpose is so deeply ingrained in our discourse and our thought processes that it is astonishingly hard to avoid invoking it” but arguing that in practice “the purpose of copyright is to enable the provision of capital and organization so that creative work may be exploited”); Jessica Litman, *Real Copyright Reform*, 96 IOWA L. REV. 1, 8–9 (2010) (noting that “[t]he law’s congruence with the [incentive] theory, at least in many fields of authorship, is more aspirational than real”).

221 *Brilliance Audio, Inc. v. Hights Cross Commc’ns, Inc.*, 474 F.3d 365, 373–74 (6th Cir. 2007) (“Once a copyright holder has consented to distribution of a copy of that work, this monopoly is no longer needed because the owner has received the desired compensation for that copy.”).

222 *Platt & Munk Co. v. Republic Graphics, Inc.*, 315 F.2d 847, 854 (2d Cir. 1963) (noting that “the ultimate question embodied in the ‘first sale’ doctrine” is “whether or not there has been such a disposition of the article that it may fairly be said that the patentee [or copyright proprietor] has received his reward for the use of the article” (quoting *United States v. Masonite Corp.*, 316 U.S. 265, 278 (1942)) (internal quotation marks omitted)); *Parfums Givenchy, Inc. v. C & C Beauty Sales, Inc.*, 832 F. Supp. 1378, 1389 (C.D. Cal. 1993) (“[T]he distribution right and the first sale doctrine rest on the principle that the copyright owner is entitled to realize no more and no less than the full value of each copy or phonorecord upon its disposition.”); *Burke & Van Heusen, Inc. v. Arrow Drug, Inc.*, 233 F. Supp. 881, 884 (E.D. Pa. 1964) (“[T]he ultimate question under the ‘first sale’ doctrine is whether or not there has been such a disposition of the copyrighted article that it may fairly be said that the copyright proprietor has received his reward for its use.”).

223 See *Kirtsaeng v. John Wiley & Sons, Inc.*, 133 S. Ct. 1351, 1354–55 (2013) (describing the relation between the “first sale doctrine” and exhaustion).

copyright holder authority, but one that respects the incentive structure of the copyright system.

B. *Consumer Incentives*

Creative incentives are copyright law's immediate instrumental aim. But spurring creativity is not an end unto itself.²²⁴ As Jessica Litman put it: "The most important reason we encourage creators to make, and distributors to disseminate, works of authorship is so that people will read the books, listen to the music, look at the art, and watch the movies. . . . That is the way that copyright law promotes the Progress of Science."²²⁵ Copyright law has developed a number of tools aimed at serving these two seemingly inconsistent objectives.²²⁶ But it relies primarily on market mechanisms to both encourage creation and ensure consumption. Consumer participation in the copyright market is therefore an important goal of the system.

Copy ownership, by encouraging consumer engagement, benefits the copyright system as a whole. The practical and legal advantages that copy ownership extends to consumers provide strong reasons to participate in lawful markets for copyrighted content.²²⁷ In order for copyright incentives to

224 See *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 429 (1984) ("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. It is intended to motivate the creative activity of authors and inventors by the provision of a special reward, and to allow the public access to the products of their genius after the limited period of exclusive control has expired."); *Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151, 156 (1975) ("Creative work is to be encouraged and rewarded, but private motivation must ultimately serve the cause of promoting broad public availability of literature, music, and the other arts. The immediate effect of our copyright law is to secure a fair return for an 'author's' creative labor. But the ultimate aim is, by this incentive, to stimulate artistic creativity for the general public good." (citation omitted)).

225 Litman, *supra* note 220, at 13 (footnote omitted).

226 The limited duration of copyright protection has historically guaranteed that, after a period of exclusivity, works will eventually enter the public domain, where they are free for anyone to use and reproduce. Although given the current copyright term, this once meaningful limitation has little practical effect. See 17 U.S.C. § 302(a) (2012) (stating that the current limitation is the person's life and 70 years after her death). The fair use doctrine sometimes increases the accessibility of works by permitting certain otherwise infringing uses. See, e.g., *Authors Guild, Inc. v. Google Inc.*, 954 F. Supp. 2d 282, 284 (S.D.N.Y. 2013) (holding that Google was engaged in fair use when it scanned millions of books and provided copies to libraries). Statutory licenses and exceptions carve out specified uses that can be made without copyright holder permission at little or no cost, resulting in broader accessibility. See, e.g., 17 U.S.C. § 115 (providing a statutory license for the reproduction of musical works); *id.* § 110 (permitting performance or display of a work for educational purposes in a classroom setting).

227 The erosion of copy ownership has also increased confusion and raised ethical conundrums among consumers that had not previously existed. See Chuck Klosterman, *Steal This E-Book*, N.Y. TIMES, Sept. 28, 2014, <http://www.nytimes.com/2014/09/28/magazine/steal-this-e-book.html>.

do their job, consumers must be willing to pay supracompetitive prices for protected works despite their widespread availability at near-zero marginal cost. The struggle facing the copyright system is convincing consumers that a lawful copy is more desirable than an unlawful one. The most obvious way to do that is through the stick of infringement liability.

But the carrot is equally important. A clear exhaustion principle that entitles consumers to use and alienate copies makes the value proposition presented by copyright compliance more attractive than it otherwise would be. Copy ownership and exhaustion offer consumers real value. They can resell the copy and recoup some of its value.²²⁸ They can also preserve, loan, and modify their copy to suit their needs.²²⁹ When lawfully available copies lack the freedoms consumers expect, they are less desirable.²³⁰ And unlawful copies are necessarily more attractive in comparison. But when consumers can rely on getting something of value for their money—a set of rights that includes unrestricted personal use and the power to alienate their interests—they may be more likely to opt into the copyright economy. In short, first sale and related rights steer consumers towards lawful markets, those that promise compensation to rightsholders. In doing so, consumer property rights help copyright law serve its dual objectives of incentivizing creative production and encouraging access to the resulting creative output.

C. Copies and Information Costs

On a broader level, exhaustion helps consumers navigate the marketplace for protected works by limiting information costs. Unlike contract law, which imposes no limits on creative permutations of rights and limitations transferred between two parties, exchanges of property rights are limited to an identifiable number of standard forms.²³¹ This commitment to a closed set of property forms, or the principle of *numerus clausus*, not only helps dis-

228 Chu & Liao, *supra* note 11, at 1073; Ishihara & Ching, *supra* note 11, at 1.

229 See generally Benedict G.C. Dellaert & Pratibha A. Dabholkar, *Increasing the Attractiveness of Mass Customization: The Role of Complementary On-Line Services and Range of Options*, 13 INT'L J. ELEC. COM. 43 (2009) (looking at the value of mass customizations to consumers); Nikolaus Franke & Martin Schreier, *Why Customers Value Self-Designed Products: The Importance of Process Effort and Enjoyment*, 27 J. PRODS. MGMT. 1020 (2010) (same).

230 When Microsoft initially announced its Xbox One console, it was roundly criticized for plans to restrict the use of second-hand games. Tim Cushing, *Microsoft's Attack on Used Game Sales Asks Customers to Sacrifice Their Rights to Save an Industry*, TECHDIRT (June 4, 2013, 11:39 AM), <http://www.techdirt.com/articles/20130603/19194423302/microsofts-attack-used-game-sales-asks-customers-to-sacrifice-their-rights-to-save-industry.shtml>. Because of this overwhelmingly negative feedback, Microsoft eventually relented. Don Matrick, *Your Feedback Matters—Update on Xbox One*, XBOX WIRE (June 19, 2013, 2:00 PM), <http://news.xbox.com/2013/06/update>; see also NICOLE DUFFET ET AL., DIGITAL MUSIC USAGE AND DRM: RESULTS FROM AN EUROPEAN CONSUMER SURVEY 25 (2005), available at http://www.indicare.org/tiki-download_file.php?fileId=110 (noting that consumers are willing to pay substantially more for digital music with more functionality).

231 Thomas W. Merrill & Henry E. Smith, *Optimal Standardization in the Law of Property: The Numerus Clausus Principle*, 110 YALE L.J. 1, 3 (2000).

tinguish property regimes from private contractual ordering, it is one of property's principle advantages. By favoring sales and discouraging idiosyncratic transfers of rights in copies, exhaustion rules limit information costs.

One justification for limiting property transactions to a small universe of standardized forms is a concern over restraints on alienation.²³² Unpredictable bundles of rights, potentially divided among numerous parties, increase transaction costs in a way that could discourage transfers of property and hinder more valuable uses. As between the parties to the transaction, however, the *numerus clausus* solution to this potential anticommons problem can frustrate the intentions of the parties. But that worry is only convincing to the extent we believe the terms of the transfer reflect an actual bilateral agreement. In the case of nonnegotiable, standard form agreements attached to mass marketed copies that purport to bind subsequent parties, there is less reason to be deferential to the freedom of contract.²³³

Setting aside the potential impact of idiosyncratic configurations of property interests on parties to a transaction, the imposition of information cost externalities on unrelated third parties offers another strong reason to curtail the proliferation of new property arrangements. Even if clear-eyed parties with equal bargaining power agree to a bespoke bundle of rights, that choice imposes costs on other market participants to investigate the details of property transactions with much greater scrutiny.²³⁴ Once on notice that property bundles deviating from the standard forms are accepted, those acquiring property interests, as well as those hoping to avoid infringing them, bear the burden of due diligence to uncover their potentially unique characteristics.²³⁵

This concern is not new.²³⁶ But it is a particularly pressing one today in markets for copyrighted works given the increasing complexity of license

232 See Michael A. Heller, *The Boundaries of Private Property*, 108 YALE L.J. 1163, 1199 (1999) (describing the century-long concern of alienation in regard to property); Carol M. Rose, *What Government Can Do for Property (and Vice Versa)*, in *THE FUNDAMENTAL INTERRELATIONSHIPS BETWEEN GOVERNMENT AND PROPERTY* 209, 214–15 (Nicholas Mercuro & Warren J. Samuels eds., 1999).

233 NANCY S. KIM, *WRAP CONTRACTS: FOUNDATIONS AND RAMIFICATIONS* (2013); RADIN, *supra* note 142.

234 Merrill & Smith, *supra* note 231, at 8 (“When property rights are created, third parties must expend time and resources to determine the attributes of these rights, both to avoid violating them and to acquire them from present holders. The existence of unusual property rights increases the cost of processing information about all property rights. Those creating or transferring idiosyncratic property rights cannot always be expected to take these increases in measurement costs fully into account, making them a true externality. Standardization of property rights reduces these measurement costs.”).

235 Merrill & Smith, *supra* note 135, at 777 (“[T]he adoption of novel forms of property has implications not only for the immediate parties to the transaction but also for third parties, who must incur additional costs of gathering information in order to avoid violating novel property rights or to decide whether to seek to acquire these rights.”).

236 *Keppell v. Bailey*, 39 Eng. Rep. 1042, 1049 (Ch. 1834) (“[G]reat detriment would arise and much confusion of rights if parties were allowed to invent new modes of holding and enjoying real property, and to impress upon their lands and tenements a peculiar

terms that purport to govern those transactions and the escalating information costs they impose.²³⁷ The current iTunes terms are over 15,000 words, translating into sixteen pages of fine print.²³⁸ If the Chief Justice of the Supreme Court cannot expend the effort to wade through those terms, we should not expect the average consumer to take on those costs either.²³⁹

The *numerus clausus* principle avoids these problems by refusing to recognize certain transactional forms.²⁴⁰ Assured that nonstandard “fancies” are not lurking in the marketplace, parties are relieved of the burden of investigating the particulars of each transaction or interest they encounter.²⁴¹ Instead, they need only gather enough information to identify a property interest as fitting within one of the few established forms.²⁴² Traditionally, those accepted forms have been limited with respect to real property, and constrained even more so in when it comes to personal property.²⁴³

But as the infinite divisibility of copyright interests illustrates, the *numerus clausus* principle is largely absent from intellectual property law.²⁴⁴ Exhaustion, perhaps because it mediates the border between intellectual and personal property, is one notable exception.²⁴⁵ A functioning exhaustion rule—one that incorporates a robust notion of copy ownership—serves as

character, which should follow them into all hands, however remote. . . . [I]t would hardly be possible to know what rights the acquisition of any parcel conferred, or what obligation it imposed.”).

237 See Mulligan, *supra* note 144, at 249 (noting that in intellectual property law there are few limitations on form).

238 *Terms and Conditions*, *supra* note 149.

239 Mike Masnick, *Supreme Court Chief Justice Admits He Doesn't Read Online EULAs or Other Fine Print*, TECHDIRT (Oct. 22, 2010, 9:48 AM), <http://www.techdirt.com/articles/20101021/02145811519/supreme-court-chief-justice-admits-he-doesn-t-read-online-eulas-or-other-fine-print.shtml> (noting that Chief Justice John Roberts doesn't read website terms of use but that he worries that “providing too much information defeats the purpose of disclosure, since no one reads it”).

240 See Merrill & Smith, *supra* note 231, at 13–14 (noting, for example, that courts have refused to recognize attempts “to create a kind of hybrid between a life estate and a fee simple” and instead see their task as “squeeze[ing] the interest into one of the established categories”).

241 *Id.* at 45. Of course, information costs might be lowest in a world in which all consumers were fully aware that their purchases gave them no rights whatsoever. Aside from running headlong into the problem of consumer incentives discussed above, that approach would raise pure consumer protection concerns. Whether treated as unconscionable or void as against public policy grounds, we would expect courts to refuse to enforce fundamentally one-sided adhesive contracts. While we believe a strong pure consumer protection case can be made, our focus is limited to the ways in which exhaustion functions as a component of the copyright system.

242 *Id.*

243 *Id.* at 17.

244 Mulligan, *supra* note 144, at 249.

245 See *id.*

copyright's expression of the *numerus clausus* principle.²⁴⁶ Exhaustion is an effort to effectively limit the permissible forms of transfers of copies and prevent the proliferation of idiosyncratic interests and the negative consequences that flow from them.

The statutory basis for this reading of the Copyright Act begins with the right of distribution itself, which enumerates the ways in which copies can be distributed to the public. It provides that copyright holders have the exclusive right “to distribute copies or phonorecords of the copyrighted work to the public *by sale or other transfer of ownership, or by rental, lease, or lending.*”²⁴⁷ This language suggests a bifurcated universe of copy transfer. First, we have transfers of ownership, which entail a perpetual right to possess and use the copy: sales or gifts. Second, we have transfers of limited duration: rental, lease, or lending. If we take exhaustion and *numerus clausus* seriously, transactions must fall within one of these two categories. Certainly, many licenses are easy enough to characterize as rentals, leases, or lendings. A consumer is not the owner of a book she borrows from the library. Nor does a Netflix subscriber own the physical or digital copies of movies she watches. Copyright holders, even under our reading of the distribution right and the exhaustion doctrine, retain considerable flexibility to devise subscription, streaming, and other business models not premised on the sale of copies. But distribution by license is not among the standard forms of transfers of copies recognized by copyright law.²⁴⁸ In this sense, the licensed copy is simply not a thing.

Taken together, these three functions of copy ownership—safeguarding authorial incentives, encouraging consumer participation in copyright markets, and reducing information costs—explain why copyright law privileges copy owners over consumers at large. Next, we consider how to preserve those basic functions within a marketplace that deemphasizes the copy and a legal system that has diluted the notion of consumer ownership.

V. DECOUPLING EXHAUSTION FROM THE COPY

Although exhaustion has been tied to the copy historically, none of the functions detailed above are dependent on any particular medium of expression or method of distribution. These functions, like any property right, help define and structure the relationships between parties. All three are intended to construct a functioning marketplace in which creators and consumers are encouraged to participate. But the success of that market does

246 *Id.* at 252 (“The first sale doctrine is a form of the *numerus clausus* principle because it effectively acts as a prohibition on nonpossessory property interests in particular copies of copyrighted works and patented inventions.”).

247 17 U.S.C. § 106(3) (2012) (emphasis added).

248 Carver, *supra* note 44, at 1948 (“[T]here is simply no such thing as distribution of a copy by means of a *license*. Instead, every transaction falls into one of two categories: those that provide perpetual possession are sales or other transfers of ownership (e.g., gifts) and those that provide a limited period of possession are either a rental/lease or a lending, depending on whether consideration is required.”).

not depend on the transfer of unitary copies. Instead, it depends on the exchange of rights between consumers and creators and an appropriate legal mechanism for ensuring the right balance between them.

The copy, because of the technological limitations that prevailed for most of copyright's history, was a helpful tool for calibrating those incentives. Ownership of a copy served as a sort of talisman that reassured courts that a defendant's behavior was not a threat to the system. The copy served as judicially administrable shorthand for a more complicated calculus. But the copy no longer serves that role effectively and may soon fail to exist as part of the modern digital environment. Courts need a new way to think through conflicts between the rights of consumers and the rights of creators. This Part begins by arguing against the notion that the copy is an indispensable concept for a functioning exhaustion doctrine. It then outlines an approach to exhaustion that, although less intuitive, offers greater transparency and adaptability.

A. *The Copy as Token*

Within the exhaustion framework, the copy is a token.²⁴⁹ It represents a set of rights that entitle copy owners to make otherwise prohibited uses of a work, not because the copy itself has any special inherent virtue, but because it signifies that those uses satisfy a broader set of policy considerations. We can take away the copy, and we can even dispense with the preoccupation with ownership, so long as we have some other means of verifying that consumers stand in this privileged relation to the work.

The distinction between rights to the copy and rights in the work, and the related conceptual division between personal and intellectual property, have been useful constructs in copyright law. But both have served as proxies for a more complicated calculus weighing the respective rights of creators and consumers. These heuristics helped courts and policymakers balance those competing interests without undertaking an individualized analysis of the impact on the incentives and costs associated with each contested use. But at the same time, those heuristics have obscured the policy considerations that underlie the contest between intellectual and personal property rights.²⁵⁰ And because of shifts in technology and the marketplace, those proxies are an increasingly unreliable measure of the interests they once incorporated. Although the U.S. Copyright Office continues to see it as a

249 There are, of course, many systems that manage rights in intangibles through tangible proxies. For example, bearer bonds are a classic example of a physical token that merely signals ownership without actually constituting the object of value itself. See Bell & Parchomovsky, *supra* note 120, at 582 (discussing bearer bonds).

250 The effect of our overreliance on the copy as a token, in Felix Cohen's words, "is to dull lay understanding and criticism of what courts do in fact. What courts are actually doing, of course . . . is [creating and distributing] a new source of economic wealth or power." Felix Cohen, *Transcendental Nonsense and the Functional Approach*, 35 COLUM. L. REV. 809, 816 (1935).

“defining element” of exhaustion, the copy looks increasingly like a “mere relic.”²⁵¹

Thinking about the copy as a proxy reveals how little ultimately separates personal and intellectual property rights. At bottom, the difference between personal and intellectual property is simply who prevails. When the interests of consumers are given more weight, we speak in terms of personal property. When the interests of copyright holders carry the day, we invoke intellectual property. But the rights themselves are not qualitatively different. The rights to distribute, reproduce, and display, for example, are equally at stake in both personal and intellectual property. Nor does insistence that personal property concerns copies while intellectual property protects the work meaningfully distinguish between these two categories. Tying the consumer’s right to her particular copy has been a convenient and easily understood way of articulating the limits of the consumer’s rights to exploit the underlying work.²⁵² But it does not change the fact that in the context of exhaustion, intellectual, and personal property regulate the same sets of behaviors and relationships.²⁵³

Calling the statutory interests the Copyright Act establishes for creators and consumers “property” ultimately states a conclusion about the degree to which the law will vindicate them.²⁵⁴ But that label alone does not help us resolve conflicts between those rights.²⁵⁵ Proponents of broader and stronger intellectual property protection frequently leverage the rhetorical force of the property label.²⁵⁶ By recognizing that both creators and con-

251 U.S. COPYRIGHT OFFICE, DMCA SECTION 104 REPORT 86 (2001).

252 The copy did much the same for consumers. See Madison, *supra* note 158, at 1042 (explaining that physical copies give us cues about what we can do with them while digital works introduce ambiguity).

253 When consumers make uses that fall outside of the scope of § 106 rights altogether—when they use a book as a doorstop, for example—we can readily distinguish intellectual property rights from personal property rights since they address different classes of behavior.

254 See Arnold S. Weinrib, *Information and Property*, 38 U. TORONTO L.J. 117, 120 (1988) (“It also makes plain the conclusory nature of the term ‘property’: it is a legal characterization, a statement that the court has chosen to assign a particular form of protection to the interest in question.” (footnote omitted)); see also Johnson v. M’Intosh, 21 U.S. (8 Wheat.) 543, 572 (1823) (stating that property claims “must be admitted to depend entirely on the law of the nation in which they lie”); JEREMY BENTHAM, THE THEORY OF LEGISLATION 113 (C. K. Ogden ed., 1950) (“Property and law are born together, and die together. Before laws were made there was no property; take away laws, and property ceases.”).

255 See Carol M. Rose, *Possession as the Origin of Property*, 52 U. CHI. L. REV. 73, 85 (1985) (“[Property law] puts an imprimatur on a particular symbolic system and on the audience that uses this system. Audiences that do not understand or accept the symbols are out of luck. . . . [S]ome audiences win, others lose.”).

256 See David Fagundes, *Property Rhetoric and the Public Domain*, 94 MINN. L. REV. 652, 659 (2010) (examining the use of invoking property as a “rhetorical trope”); Margaret Jane Radin, *Information Tangibility*, in ECONOMICS, LAW AND INTELLECTUAL PROPERTY 395, 400 (Ove Granstrand ed., 2003) (noting that “analogies to physical property, and invasion of physical property are showstoppers of persuasion”).

sumers can lay equal claim to the property mantle, policymakers might be better equipped to thoughtfully consider the merits of proposals to expand intellectual property.²⁵⁷

In effect, exhaustion rules allocate usage rights to a defined group of consumers to make particular uses of a work without the permission of the copyright holder. But that allocation is constrained in important respects. Gifts, lending, and resale are limited to the number of copies acquired.²⁵⁸ Public displays are limited to the location where the copy is housed.²⁵⁹ Archival copies cannot be retained after the transfer of the originally acquired copy.²⁶⁰ In each case, these rights and their limitations are justified in reference to a set of underlying policy considerations rooted in costs and incentives.

Historically, copy ownership has served a dual role in this system. It has identified the class of consumers granted these usage rights. And it has helped to define and reinforce the limitations of those rights. For the reasons we have documented here, copy ownership can no longer effectively serve those functions. Copyright law needs a new way to identify this class of consumers. And it needs to formulate new limitations on consumer usage rights that are sensitive to the three policies we have described.

B. A Digital Exhaustion Framework

In our earlier work, we have argued that given the comparatively broad scope of common law copyright exhaustion, courts have the authority to drive the evolution of the doctrine.²⁶¹ But we have also recognized the potential value of legislative intervention.²⁶² Although we still maintain that courts are empowered to act alone, the ideal solution is one in which the legislature endorses a more flexible digital exhaustion rule, but leaves courts to engage in the necessary balancing of competing interests. In much the same way Congress endorsed the common law doctrine of fair use without

257 To revisit our critique in Part II, our objection is that courts in copyright disputes have too readily accepted the idea that bilateral agreements can substitute for and effectively displace property rules. Instead, they should have closely interrogated the values that informed the statutory allocation of rights between creators and consumers. That reassessment may well change the balance between the author and the audience, but it would not allow copyright holders to unilaterally determine what rights, if any, consumers acquire in their purchases.

258 17 U.S.C. § 109(a) (2012).

259 *Id.* § 109(c).

260 *Id.* § 117(a).

261 Perzanowski & Schultz, *supra* note 5, at 892–907 (discussing the history of copyright exhaustion). The Supreme Court recently emphasized this history in *Kirtsaeng*, describing the first sale rule as “a common-law doctrine with an impeccable historic pedigree” dating back to the early seventeenth century. *Kirtsaeng v. John Wiley & Sons, Inc.*, 133 S. Ct. 1351, 1363 (2013).

262 See generally Perzanowski & Schultz, *supra* note 31 (outlining two potential legislative approaches to exhaustion reform).

constraining its future development,²⁶³ Congress could legislate a flexible exhaustion framework that identifies important factors to consider, but trusts courts to do the heavy lifting.

Although criticized as unpredictable and inconsistent, fair use cases—when clustered together on the basis of common fact patterns—are reasonably predictable.²⁶⁴ Equally importantly, the current fair use framework has proven remarkably resilient and adaptable over time. Exhaustion could profitably follow this model of judicial decisionmaking, guided by congressional input.

Any framework for exhaustion needs to address two questions. First, which consumers are granted personal property rights? And second, what do those rights entitle them to do?

The first of these questions addresses the ongoing license versus sale debate. So far, judicial handling of this question has been marked by a host of inconsistent approaches. And the legislative approach is characterized by utter silence. The question is whether a particular consumer stands in relationship to the work sufficient to justify granting rights not available to the public at large. Copy ownership, as currently construed by courts in software cases, is no longer a useful benchmark for identifying the relationship between the consumer and the work that triggers exhaustion. But articulating the right standard is not an easy task. Although there is no simple test for identifying transactions that give rise to this relationship, we think there are three key factors courts should take into account:

1. The duration of consumer possession or access;
2. Whether the payment structure is one-time or ongoing; and
3. The characterization of the transaction communicated to the consumer, including whether it is referred to as a sale or purchase.

No single factor is dispositive. Alone, each of these factors seems incapable of capturing the appropriate mix of incentives and costs. The most obvious dividing line between sales and lesser transfers is perpetual possession. But as a standalone consideration, perpetual possession is problematic. In the digital marketplace, a transaction that is clearly structured and marketed as a rental or subscription might entail perpetual possession of a copy. When a user rents a movie from iTunes, for example, a full copy is delivered to her hard drive that she can retain in perpetuity. What distinguishes that file from a purchased movie title is not that it must be returned, but that a small bit of code renders the file unplayable after a designated period of time. An

263 The 1976 Act explicitly acknowledged fair use for the first time, enshrining the four factors courts relied upon most often in deciding cases under the common law. H.R. REP. NO. 95-1476, at 65–66 (1976), *reprinted in* 1976 U.S.C.C.A.N. 5678–80. Congress intended to embody this common law history without impeding the future development of the fair use doctrine. *Id.*

264 See Michael J. Madison, *A Pattern-Oriented Approach to Fair Use*, 45 WM. & MARY L. REV. 1525, 1687 (2004); Pamela Samuelson, *Unbundling Fair Uses*, 77 FORDHAM L. REV. 2537, 2548–55 (2009).

exhaustion rule premised on perpetual possession alone could foreclose this business model and interfere with creative incentives. Conversely, a transaction that is called a sale and requires a one-time payment for unlimited ongoing access to a work may not require possession in the traditional sense of the word at all. A consumer who “buys” an MP3 from Amazon and stores and accesses that file from Amazon’s Cloud Player appears to satisfy the requirements for exhaustion despite never having done more than access a temporary, ephemeral data stream.

Perpetual rights to access or use the work are equally unsatisfying. First, perpetual use might be conditioned on an ongoing payment. If this sort of subscription or renewable lease option triggered exhaustion, it would undermine creative incentives, limit available distribution models, and frustrate consumer choice. Second, perpetual use is an easily evaded trigger. A rights-holder who structured a transaction as a 1,000-year rental could avoid the consequences of exhaustion.²⁶⁵

Payment structure is another consideration that, although highly relevant, is insufficient to distinguish transactions that confer usage rights to consumers and those that do not. The iTunes rentals described above, while characterized by one-time payments, are not the sort of transactions that should result in exhaustion. Nor is a one-time payment necessary for exhaustion to apply. Consumers who purchased P90X workout videos are no less owners if they opted for three easy payments instead of a single lump sum.

The way a transaction is described in advertisements and other communications to the public also gives courts useful guidance. Of course, some courts have held that rightsholders can avoid exhaustion by calling a transaction a license²⁶⁶ or by asserting restrictions on use or alienation in a license agreement.²⁶⁷ But the courts’ inquiry should be confined to the terms of a purported license agreement. Because those terms are nonnegotiable, they give copyright holders complete control over their content. And since so few of us actually read end user license terms, they provide little information about how the transaction looks through the consumer’s eyes. A test that looks purely at the representations of the rightsholder is open to the same sort of licensing by fiat that plagues software markets. In many instances, license agreements structured to avoid exhaustion accompany public-facing marketing that induces consumers to click a shiny button that says “Buy Now” or “Purchase.” To the extent a transaction is held out as a sale or purchase, it seems appropriate to take the copyright holder at its word. At the very least,

265 If the Supreme Court’s literal reading of “limited times” in connection to copyright duration is any indication, any finite period would escape the label “perpetual possession” so long as it had a definite end. *See Eldred v. Ashcroft*, 537 U.S. 186, 199 (2003) (interpreting the word “limited” broadly).

266 *See, e.g., Microsoft Corp. v. Harmony Comps. & Elecs., Inc.*, 846 F. Supp. 208, 213 (E.D.N.Y. 1994).

267 *See Vernor v. Autodesk, Inc.*, 621 F.3d 1102, 1102 (9th Cir. 2010) (basing holding on a license agreement).

this approach would encourage more effective notice of the restrictions imposed on consumers.²⁶⁸

Taken together, we think these factors—though inconclusive in isolation—provide courts an avenue for assessing the consumer’s relationship to the work. And if applied consistently, they would offer consumers greater confidence about whether they are buying something they can later alienate, donate, repurpose, recycle, or customize. Rightsholders could reliably structure transactions to avoid exhaustion by conditioning ongoing access on future payments, by clearly communicating time-limited access, or by marketing or advertising the transaction without using concepts such as purchase or buy. This would allow the continued development of rental, streaming, and subscription business models while simultaneously clarifying the choice between those delivery channels and true sales.

After establishing a transaction that triggers exhaustion, courts need to determine whether a consumer’s actions fall within the lawful scope of her personal property rights. A workable digital exhaustion doctrine cannot be limited to the distribution right alone. It should also permit limited acts of reproduction, and even the creation of derivative works, to the extent necessary to enable transfers across competing technology platforms. But purchasers of digital content cannot be given free rein. In assessing consumer behavior, courts should consider whether:

1. The purchaser fully parted with possession of or access to the work;
2. The use deprives rightsholders of a fair return; and
3. Whether the purchaser has materially altered the underlying expression.

The first of these factors isolates the central feature of a lawful secondary transaction. Whether permanently or temporarily, resale or lending entails the seller transferring possession or access to the buyer. For digital goods, no less than physical ones, such a transaction cannot result in an increase in the number of individuals who can simultaneously enjoy the work. Rather than try to legislate the myriad ways these transfers of possession and access might work in practice through statutory rules, this factor allows courts to focus on the end result of a transaction rather than its mechanics.

The second factor, much like the fourth fair use factor, considers the impact of the use on the incentives of rightsholders. Sensitive to concerns about creative incentives, courts often justify exhaustion on the grounds that the rightsholder, having completed a sale, has been fairly compensated.²⁶⁹

268 Importantly, it would also enable consumers to meaningfully choose between streaming and sales models. So long as the unclear licensing terms and misleading advertising define digital “sales,” the market is incapable of communicating consumer preferences effectively.

269 See *Platt & Munk Co. v. Republic Graphics, Inc.*, 315 F.2d 847, 854 (2d Cir. 1963) (noting that “the ultimate question embodied in the ‘first sale’ doctrine is ‘whether or not there has been such a disposition of the article that it may fairly be said that the patentee [or copyright proprietor] has received his reward for the use of the article’” (alteration in

In the analog world, fair compensation was guaranteed by the rightsholder's ability to set the initial price and by the inherent limits of physical goods. As copyright holders point out, digital distribution alters the economics of secondary markets.²⁷⁰ The physical world imposes limits not present in the digital one. You can only lend a favorite novel to so many friends before wear and tear, and the occasional spilled drink, take their toll. But digital goods are more durable and easier to reproduce.²⁷¹ However, digital goods face their own challenges; rapidly changing hardware and software trends often mean that digital works are often practically inaccessible long before their analog counterparts.²⁷² Perhaps more importantly, the transaction costs of resale and lending are greatly reduced. The physical book must be delivered and returned—or not, depending on your friends. The digital book can be transferred far more quickly and at much lower cost. Under these conditions, courts need to safeguard against secondary transactions that could undermine the primary markets for protected works.

Imagine an online community for e-book lending. Thousands or millions of users sync their e-book collections with this service, enabling users to search for books they want to read. When you borrow a book from user *A*, the book is transferred to your device, and no one else including user *A* can access that book by virtue of user *A*'s right to lend it. So far, this does not sound much different from analog book borrowing. But imagine that the e-book lending platform knows whether the book is being actively read at any given moment. And if not, it can enable another user to “check out” that book from the lending library via a temporary transfer of user *A*'s rights to

original) (quoting *United States v. Masonite Corp.*, 316 U.S. 265, 278 (1942)); *Parfums Givenchy, Inc. v. C & C Beauty Sales, Inc.*, 832 F. Supp. 1378, 1389 (C.D. Cal. 1993) (“[T]he distribution right and the first sale doctrine rest on the principle that the copyright owner is entitled to realize no more and no less than the full value of each copy or phonorecord upon its disposition.”); *Burke & Van Heusen, Inc. v. Arrow Drug, Inc.*, 233 F. Supp. 881, 884 (E.D. Pa. 1964) (“[T]he ultimate question under the ‘first sale’ doctrine is whether or not there has been such a disposition of the copyrighted article that it may fairly be said that the copyright proprietor has received his reward for its use.”).

270 Of course, digital distribution also alters economics in ways that favor rightsholders. Most obviously, costs of production and transportation plummet for digital goods.

271 These concerns have led some to attempt to recreate the imperfections of the analog world for digital works. See *Aging File System*, U.S. Patent No. 20,110,282,838 (describing IBM's self-degrading file system); see also Evan Hess, *Code-ifying Copyright: An Architectural Solution to Digitally Expanding the First Sale Doctrine*, 81 *FORDHAM L. REV.* 1965, 2009 (2013) (suggesting a “regulatory regime that implemented an aging file system” in order to implement a digital first sale doctrine). We believe these backward looking efforts to preserve the downsides of pre-digital information storage are both counterproductive and unnecessary.

272 See Mulligan, *supra* note 144, at 280 (“Digital works have greater hurdles to preservation than analog or physical copies of works; in addition to preserving a copy and translating the language, ‘digital translation’ presents an additional problem.”); R. Anthony Reese, *The First Sale Doctrine in the Era of Digital Networks*, 44 *B.C. L. REV.* 577, 633–39 (2003) (noting the difficulties of preserving readable digital content in an environment in which languages, software, hardware, and file formats undergo rapid change).

the book. With a sufficiently large user base, this far more efficient lending system could guarantee that once sold, an e-book would never have a wasted cycle. Someone, somewhere on the planet, would be reading it every second of every day—without any fear of broken bindings or torn pages—all thanks to user *A*'s purchase. Unless rightsholders radically increase the price for an e-book purchase, that sort of lending system would pose a genuine risk to copyright incentives.

This example illustrates why we cannot simply port the exhaustion rules of the analog world over to the digital marketplace. It does not prove, despite the claims of some rightsholders, that exhaustion is fundamentally inconsistent with digital distribution. Our second factor would enable courts to interrogate, assess, and if necessary, prevent, the harmful effect such a platform could have on rightsholder incentives.

Finally, the third factor prevents exhaustion from becoming a back door to transformative uses better considered under fair use. To be effective in enabling robust secondary markets, copyright exhaustion should permit some limited adaptation by consumers. Just as § 117 allows consumers to adapt their computer programs to work with new hardware and software, courts could endorse format and platform shifting to the degree necessary to alienate or use lawfully acquired content. For example, if an Amazon customer wants to purchase a used Apple iBook, either the buyer or the seller might need to create a new copy in the appropriate format. On the other hand, this factor would weigh against permitting remixing or other expressive changes based on the mere purchasing of the underlying raw material.²⁷³

These two multifactor tests allow courts the ability to directly, openly, and transparently assess the impact of allegedly infringing consumer behavior through the lens of the three core functions of the exhaustion doctrine. Although this approach might not initially offer the intuitive appeal of one rooted in the inherent and familiar limits of the tangible copy, we think in time courts, consumers, and rightsholders could embrace our proposal. It will require all three to become more thoughtful and better attuned to the policy motivations underlying the longstanding exhaustion principle, rather than relying on unstated assumptions about the physical world. But we believe ultimately this more adaptable framework is better suited to the rapidly changing copyright marketplace.

CONCLUSION

What will copyright law look like in the post-copy world? We can imagine a number of possible copyright futures after the demise, or at least the decline, of the traditional copy. In one, the copyright system would be divided into rightsholders and licensees. The rights of alienation, modifica-

²⁷³ Annotations and commentary would fall somewhere in the middle under this factor. A user who has taken extensive notes on her e-book has arguably created a derivative, but probably has not materially altered the underlying expression.

tion, and preservation would be things of the past. In another, rightsholders may permit tightly controlled licensed resale markets in an effort to recreate the sense of ownership consumers have come to expect. Some of the rights enjoyed by consumers would persist, in a diluted form and subject to the permission of copyright holders. In a third possible future, we follow the framework we outlined here.²⁷⁴ There, copyright exhaustion would be disentangled from particular copies and apply to consumer rights to intangible products. Each of these possible futures has very different consequences for the policy goals of copyright.

If, as a consequence of technological and legal shifts, copy ownership is eliminated and streaming services and tightly controlled licensing arrangements define the market, the experiences of consumers will change profoundly. More importantly, such a model would disrupt the incentives so central to a functioning copyright ecosystem. With regard to authorial incentives, this model has already produced mixed results. Spotify has been subject to several ongoing controversies over the size of its payments to artists and the metrics used to calculate them.²⁷⁵ A number of artists have complained that these models provide insufficient incentives for musical creativity.²⁷⁶ Whether such claims are ultimately true, they raise serious questions about authorial incentives.

In part, payments to artists are constrained by the price consumers are willing to pay for temporary access to a shifting library of content. And there is little reason to suspect consumers will be willing to pay more for a system that reduces them to passive recipients of content. They do not own anything. They do not store anything. They cannot resell, loan, or otherwise dispose of anything. Even their access is contingent on the licensing agreements between copyright holders and service providers, which can result in works disappearing and reappearing without any predictability.²⁷⁷ That

274 This approach is similar to the one envisioned by the European Court of Justice in *UsedSoft*. See *supra* text accompanying notes 210–15.

275 See Sven Grundberg, *Spotify Reveals the Math Behind Its Music Royalties*, WALL ST. J., Dec. 3, 2013, <http://online.wsj.com/articles/SB10001424052702303670804579236292495590448> (“A spokeswoman for YouTube said: ‘Because of the complexity of the algorithm that determines what ad runs on what video, it’s impossible to directly equate a YouTube view with a certain amount of money.’”); David Holmes, *What Spotify’s Royalty Numbers Don’t Tell Us*, PANDODAILY (Dec. 4, 2013), <http://pando.com/2013/12/04/what-spotifys-royalty-numbers-dont-tell-us/>; Victor Luckerson, *Here’s How Much Money Top Musicians Are Making on Spotify*, TIME (Dec. 3, 2013), <http://business.time.com/2013/12/03/heres-how-much-money-top-musicians-are-making-on-spotify> (noting that “Spotify doesn’t pay on a ‘per song stream’ model, exactly: the total royalty pie is split among all rightsholders based on the percentage of total Spotify streams their songs garner”).

276 David Byrne *Now Burning Down the Online-Streaming House*, SPIN (Oct. 11, 2013), <http://www.spin.com/articles/david-byrne-online-streaming-culture-creativity/>; Damon Krukowski, *Making Cents*, PITCHFORK (Nov. 14, 2012), <http://pitchfork.com/features/articles/8993-the-cloud/>.

277 *Albums Suddenly Unavailable*, RDIO, <http://help.rdio.com/customer/portal/questions/2969223-albums-suddenly-unavailable> (last visited Dec. 29, 2013); *Songs Not Available?*, SPOTIFY, <http://community.spotify.com/t5/Help-Accounts-and-Subscriptions/Songs->

unpredictability drives up information costs for both artists exploring new means of distribution and consumers building a media collection.

A variant on this future attempts to replicate some of the benefits of copy ownership within the confines of a licensing regime. Amazon and Apple have both patented technologies that would allow for licensed secondary markets.²⁷⁸ And both are tentatively experimenting with simulacra of lending and sharing.²⁷⁹ Within those respective platforms, consumers could alienate their purchases not as a matter of property law, but rather as the result of copyright owner permission expressed through the vendor's terms of service. But these ersatz secondary markets are unsatisfactory on a number of levels. Privacy and anonymity would be threatened. The risk of consumer lock-in would increase since content can only be loaned or transferred within a particular technology platform, potentially threatening incentives for both authors and consumers. From an information cost perspective, allowing the details of alienability to turn on each provider's terms of service imposes considerable costs on consumers and rightsholders. And these commercial offerings provide consumers no reliable assurances about their future availability.²⁸⁰

The approach we advocate is more in keeping with the policy concerns motivating exhaustion rules. In this future, copyright exhaustion would not be tied to a particular copy but would grant an identifiable subset of consumers' limited rights to use, modify, and alienate their interests in a work, regardless of its embodiment in any particular tangible form. This model offers the consumer incentives and low information costs of the traditional property-based approach. And if properly limited, it would maintain creative incentives by ensuring fair rewards for the sale of well-defined transferable interests in works to the public.

The contours of the copyright law, and by extension the respective rights of creators and consumers, have been shaped by the interactions of unchang-

Not-Available/td-p/102579 (last visited Dec. 29, 2014); *Unavailable Music and Catalog Requests*, RDI0, <http://help.rdio.com/customer/portal/articles/58995-unavailable-music-and-catalog-requests> (last updated Sep. 4, 2014); see also Brad Stone, *Amazon Erases Orwell Books from Kindle*, N.Y. TIMES, July 17, 2009, <http://www.nytimes.com/2009/07/18/technology/companies/18amazon.html>.

278 Caitlin Dewey, *Amazon Patents Resale Marketplace for Used E-Books, Songs and Other Digital Goods*, WASH. POST, Feb. 6, 2013, http://www.washingtonpost.com/business/technology/amazon-patents-resale-marketplace-for-used-e-books-songs-and-other-digital-goods/2013/02/06/22f7d12e-70a0-11e2-a050-b83a7b35c4b5_story.html; Ben Lovejoy, *Apple Patent Applications Address User-to-User Resale and Lending of iTunes Store Content*, MACRUMORS (Mar. 7, 2013, 6:33 AM), <http://www.macrumors.com/2013/03/07/apple-patent-applications-address-user-to-user-resale-and-lending-of-itunes-store-content/>.

279 Molly Wood, *Apple and Amazon Take Baby Steps Toward Digital Sharing*, N.Y. TIMES, Sept. 18, 2014, <http://bits.blogs.nytimes.com/2014/09/18/apple-and-amazon-take-baby-steps-toward-digital-sharing>.

280 Nate Hoffelder, *Scholastic to Close Storia eBookstore; Customers Could Lose Access to Their eBook Purchases*, THE DIGITAL READER (July 27, 2014), <http://the-digital-reader.com/2014/07/27/scholastic-close-storia-ebookstore-customers-will-lose-access-ebook-purchases>.

ing policy commitments and the contingencies of existing technology, markets, and practices. As that backdrop changes, copyright law should and must adapt. But it should do so with an eye to its underlying purposes and justifications. The transition to digital distribution of information demands a change to our approach to copyright exhaustion. But that transition should not be exploited as an opportunity to do away with a key component of copyright's balance between the creators and the public. The approach we outlined above helps ensure that the exhaustion principle and the policy commitments at its core outlive the paperback.

