

A RECONSIDERATION OF COPYRIGHT’S TERM

Kristelia A. García & Justin McCrary

INTRODUCTION	353
I. COPYRIGHT’S TERM & ITS DISCONTENTS	358
A. <i>A History of Obsession with Term</i>	358
B. <i>A Single, Lengthy Term with Uniform Protection</i>	361
1. <i>Term</i>	361
2. <i>Protection & Exceptions</i>	362
C. <i>Critique</i>	363
1. <i>Economic</i>	364
2. <i>Intuitive</i>	367
3. <i>Empirical</i>	368
D. <i>Support</i>	371
1. <i>Economic</i>	371
2. <i>Moral</i>	372
II. MUSIC: A CASE STUDY	373
A. <i>Data</i>	374
B. <i>Methodology and Empirical Analyses</i>	376
1. <i>Sales</i>	377
2. <i>Streaming</i>	380
C. <i>Normative Analyses</i>	383
1. <i>Commercial Viability</i>	383
a. <i>Versioning</i>	384
b. <i>Winner-Takes-All</i>	386
c. <i>Consumer Behavior</i>	387
2. <i>Selection Bias</i>	390
III. SUMMARY AND POLICY IMPLICATIONS	391
A. <i>Summary</i>	391
B. <i>Implications</i>	392
1. <i>For Copyright Owners</i>	393
a. <i>Dynamic Copyright Protection</i>	393
b. <i>Differential Copyright Terms</i>	397
c. <i>Rights Reversion</i>	398
d. <i>Use It or Lose It</i>	399
2. <i>For Users & Society</i>	402
a. <i>Orphaned and Mismanaged Works</i>	402

<i>b. Disadvantaged Groups & Marginalized Works</i>	403
3. <i>For Legislators</i>	404
CONCLUSION	405

A RECONSIDERATION OF COPYRIGHT'S TERM

*Kristelia A. García & Justin McCrary**

For well over a century, legislators, courts, lawyers, and scholars have spent significant time and energy debating the optimal duration of copyright protection. While there is general consensus that copyright's term is of legal and economic significance, arguments both for and against a lengthy term are often impressionistic. Utilizing music industry sales data not previously available for academic analysis, this Article fills an important evidentiary gap in the literature. Using recorded music as a case study, we determine that most copyrighted music earns the majority of its lifetime revenue in the first five to ten years following its initial release (and in many cases, far sooner than that).

Our analysis suggests at least two results of interest to legislators, lawyers, and scholars alike. First, it contributes to the normative debate around copyright's incentive–access paradigm by proposing a more efficient conception of copyright's term for information goods: namely, one that replaces the conventional “life plus” durational standard with one based on the commercial viability of the average work. Second, it demonstrates that advocates’ and legislators’ tendency to focus on atypical works leads to overprotection of the average work, suggesting that copyright's term is not nearly as significant for copyright owners as conventional wisdom submits.

INTRODUCTION

For well over a century, legislators, courts, lawyers, and scholars have spent a significant amount of time and energy debating the optimal duration of copyright protection. Speaking about the dangers of copyright's monopoly in 1841, Thomas Macaulay warned Britain's House of Commons that “the evil effects of the monopoly are proportioned to the length of its duration. But the good

* Kristelia A. García is an associate professor at the University of Colorado Law School and Director of the Content Initiative at the Silicon Flatirons Center for Law, Technology, and Entrepreneurship. Justin McCrary is the Paul J. Evanson professor of law at Columbia Law School, a professor of law at the University of California, Berkeley, School of Law, and a faculty research associate at the National Bureau of Economic Research. The authors thank the following for their generous and helpful comments on various versions and drafts of this project: Michael Abramowicz, David Abrams, Ian Ayres, Frederic Bloom, Joseph Fishman, Daniel Gervais, John Golden, Paul Heald, Mark Lemley, Glynn Lunney, Matthew Sag, Pamela Samuelson, Harry Surden, Molly Shaffer Van Houweling, and participants at the 2017 Vanderbilt IP Scholars Roundtable, at the 2018 Intellectual Property Scholars Conference at the University of California, Berkeley School of Law, at the University of Texas School of Law's IP, Science, and Technology Workshop, at the 2019 American Law and Economics Association (ALEA) annual meeting, at the University of Pennsylvania Law School's fourth annual Copyright Scholarship Roundtable, and at the 2019 Society for Economic Research on Copyright Issues (SERCI) conference. For extensive research assistance and data analysis, the authors thank James Hicks, Ph.D. candidate, Jurisprudence and Social Policy Program, University of California, Berkeley, School of Law. A special thank you also to Margaret Tharp, and to the University of Colorado Law Library for additional editing and research assistance. The data set analyzed in this project is the copyrighted product of The Nielsen Company, licensed for use herein. The authors thank the University of Colorado Law School, especially Dean James Anaya and Kristen Carpenter, and the University of California, Berkeley for generous research support.

effects for the sake of which we bear with the evil effects are by no means proportioned to the length of its duration.”¹ In his seminal work on copyright—drafted at the time Congress was considering extending copyright’s term from fifty-six years to “life plus fifty”—Justice Stephen Breyer concluded that such an extension was not justified because it would not provide any additional incentive to authors or publishers.²

The last legislative effort to address copyright’s term—the Copyright Term Extension Act of 1998 (CTEA), popularly known as the Sonny Bono Act—extended the period of protection to life of the author plus 70 years (or, in the case of works made for hire, to 95 years from the date of distribution or 120 years from the date of creation, whichever comes first).³ While many copyright owners have cheered this development—which brought the United States into harmony with some of its foreign counterparts under the Berne Convention⁴—critics have lamented the potential for waste, inefficiency, and overreach that this extended term brings.⁵

The historic import of term to copyright law cannot be overstated. For example, in *Eldred v. Ashcroft*, the Supreme Court case that considered the constitutionality of the Sonny Bono extension, thirty-five separate amicus briefs were filed.⁶ Notably, most of the arguments for and against a lengthy copyright term were impressionistic. Largely due to lack of data, there has been, to date, little robust empirical analysis of copyright’s usefulness over time.

The current term represents a legislative compromise intended to address this inherent tension, often referred to as the “incentive–access paradigm.”⁷ As

1. Thomas Babington Macaulay, Speech Delivered to the House of Commons (Feb. 5, 1841), in *PROSE AND POETRY* 731, 735 (G.M. Young ed., Harvard Univ. Press rev. ed. 1970).

2. Stephen Breyer, *The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs*, 84 HARV. L. REV. 281, 324–25 (1970).

3. Sonny Bono Copyright Term Extension Act, Pub. L. No. 105-298, § 102, 112 Stat. 2827, 2827 (1998) (codified as amended at 17 U.S.C. §§ 108, 203, 301–04).

4. Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, 25 U.S.T. 1341, 1161 U.N.T.S. 3 (as revised at Paris July 24, 1971) [hereinafter Berne Convention].

5. See Dennis S. Karjala, Statement of Copyright and Intellectual Property Law Professors in Opposition to H.R. 604, H.R. 2589, and S. 505, at 16 (Jan. 28, 1998), <http://homepages.law.asu.edu/~dkarjala/OpposingCopyrightExtension/legmats/1998statement.html#page%2016>. At the same time, the CTEA created disharmony in various ways—e.g., by extending protection of works-for-hire to ninety-five years versus the European Union’s seventy. See *id.* The CTEA is also not reciprocal. See, e.g., William F. Patry, *The Copyright Term Extension Act of 1995: Or How Publishers Managed to Steal the Bread from Authors*, 14 CARDOZO ARTS & ENT. L.J. 661, 693 (1996).

6. For a list of all amicus filings, see *OPENLAW: Eldred v. Ashcroft*, BERKMAN KLEIN CTR. FOR INTERNET & SOC’Y, <https://cyber.harvard.edu/openlaw/eldredvashcroft/legal.html> (last visited Sept. 17, 2019) [<https://perma.cc/39GL-4Y8A>].

7. For a full explanation of the incentive–access paradigm in copyright, see Glynn S. Lunney, Jr., *Reexamining Copyright’s Incentives–Access Paradigm*, 49 VAND. L. REV. 483, 485 (1996) (“Broadening the scope of copyright increases the incentive to produce works of authorship and results in a greater variety of such works. Broadening copyright’s scope, however, also limits access to such works both generally, by increasing their price, and specifically, by limiting the material that others can use to create additional works. Given these competing considerations, defining copyright’s proper scope has become a matter of balancing the benefits of broader protection, in the form of increased incentive to produce such works, against its costs, in the form of lost access to such works.”).

a policy lever, term has long been viewed as key to bridging this divide. According to the incentive theory of copyright, society encourages the production of creative works by offering protections designed to result in financial rewards for creators.⁸ Some creation, of course, will take place with or without such protections.⁹

Because those works' creators are largely indifferent to copyright's protection, copyright law is not concerned with them. Other creation, including most commercial information goods—i.e., movies, television, music, and books—is incentivized by financial gain, both that of the author herself and that of the intermediary—i.e., book publisher, film studio, record label, etc. These goods—music in particular—are the subject of this Article and its recommendations.

The centrality of term to copyright's function (or malfunction, as the case may be) has long occupied scholars. The consensus among many intellectual property (IP) scholars is that the current copyright term is too long.¹⁰ Some

8. See, e.g., *Harper & Row Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 558 (1985) (“By establishing a marketable right to the use of one’s expression, copyright supplies the economic incentive to create and disseminate ideas.”).

9. See, e.g., KAL RAUSTIALA & CHRISTOPHER SPRIGMAN, *THE KNOCKOFF ECONOMY: HOW IMITATION SPARKS INNOVATION* 7 (2012) (considering creative industries such as fashion and food that enjoy little to no copyright protection and yet see plenty of innovation); Jeanne C. Fromer, *Expressive Incentives in Intellectual Property*, 98 VA. L. REV. 1745, 1765–66 (2012) (discussing reasons authors might create in the absence of financial incentives). Some artists—such as tattoo artists, comedians, and graffiti artists—perhaps would be motivated by financial incentives but, in their absence, have come to be motivated by cultural norms. See, e.g., Dotan Oliar & Christopher Sprigman, *There’s No Free Laugh (Anymore): The Emergence of Intellectual Property Norms and the Transformation of Stand-Up Comedy*, 94 VA. L. REV. 1787, 1790 (2008) (showing that stand-up comedians create jokes independently of copyright’s incentives); Aaron Perzanowski, *Tattoos & IP Norms*, 98 MINN. L. REV. 511, 513–14 (2013) (describing the tattoo industry’s market-driven alternative to IP). To be clear, the fact that some works are created without regard to financial gain does not diminish the fact that financial incentives are central to copyright. See *Mazer v. Stein*, 347 U.S. 201, 219 (1954) (holding that the “economic philosophy” of copyright is to “advance public welfare” by “encourag[ing] . . . individual effort” through “personal gain”).

10. See, e.g., Breyer, *supra* note 2, at 350 (“The period of copyright protection is at present too long and should not be extended beyond fifty-six years.”); Dennis S. Karjala, *Judicial Review of Copyright Term Extension Legislation*, 36 LOY. L.A. L. REV. 199, 251 (2002) (referring to the CTEA as “broad,” “indiscriminate,” and “unconstitutional”). A limited scholarly exception is Professor William Landes and Judge Richard Posner’s 2003 proposal for an indefinitely renewable copyright. William M. Landes & Richard A. Posner, *Indefinitely Renewable Copyright*, 70 U. CHI. L. REV. 471, 473 (2003). The authors based their proposal on an analysis of copyright registration and renewal data held by the Copyright Office, a limited data set at best, since neither registration nor renewal is required by law. *Id.* at 496. See also discussion *infra* Part I.C.3 Of course, some commentators have argued in favor of the current term (and even in support of longer terms), citing “incentivized creation” on intuitive grounds. See, e.g., Brief of Amicus Curiae American Intellectual Property Law Association in Support of Respondent at 16–17, *Eldred v. Ashcroft*, 537 U.S. 186 (2003) (No. 01-618) (“[E]xtending the term of existing copyrights makes it easier for copyright holders, and other creators, to pursue opportunities to further develop, disseminate, and exploit existing works. . . . In this way, too, extending the term of existing copyrights promotes progress by ‘motiv[at]ing the creative activity of authors and inventors’” (second alteration in original) (quoting *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 429 (1984))). The authors are not aware of any empirical evidence that the Sonny Bono Act has resulted in greater creation or access thereto, for example.

have made economic arguments against a long copyright term, concluding that, over time, the cost of strong copyright protection outweighs the benefit.¹¹

Others have made thoughtful and interesting arguments focused on the inefficiency that an overly long copyright term can bring, including the encouragement of market entry that may be of questionable social value.¹² Most of the arguments against a lengthy copyright term, however, are intuitive or instinctual. Justice Breyer's seminal conclusion that copyright's term should not be extended (and is likely already too long) is, in his own words, "impressionistic and derived from conversation with publishers."¹³ Nonetheless, term is widely considered key to harmonizing copyright's dual goals of incentivizing creation of and promoting access to content. But how important is term really? This is the question we set out to answer in this Article.

Utilizing music industry sales data that track unit sales, streaming, and other consumption of songs and albums by format (CD, digital download, stream) over time, this Article fills an important evidentiary gap in the literature. Using a representative sample of recorded music as a case study, we empirically model the extent of commercial viability over time. Our central finding is that for the average musical work, sales drop sharply soon after release. Importantly, our analysis herein focuses on the overall empirical patterns in a representative set of music, because copyright does not protect subgroups of music differently but instead treats all music in the same way. Consequently, while subgroup analyses might be interesting from a social science perspective, they are less interesting from a legal perspective. For this reason, we do not here address subgroup analyses, and instead leave that question to future empirical research.

Our analysis suggests two primary results of interest to legislators, lawyers, and scholars alike. First, we establish an important empirical baseline for future policy discussion: for the average work, the societal cost of strong copyright protection that goes beyond the point of commercial viability outweighs the benefit to both creators and consumers as the marginal return on this protection decreases sharply. A more efficient regime can support creators and intermediaries by offering them the most protection very early in the term when they have the most to gain. After that point, consumers might be better served, and copyright owners scarcely affected, by a looser regime of protection that brings greater access, sooner. Our analysis therefore contributes to the normative debate around copyright's incentive–access paradigm by proposing a more efficient conception of copyright law: one that replaces the conventional "life

11. See, e.g., Brief of George A. Akerlof et al. as Amici Curiae in Support of Petitioners at 3, *Eldred*, 537 U.S. 186 (No. 01-618) [hereinafter Akerlof] ("Taken as a whole, it is highly unlikely that the economic benefits from copyright [term] extension . . . outweigh the additional costs.").

12. See, e.g., Michael Abramowicz, *A New Uneasy Case for Copyright*, 79 GEO. WASH. L. REV. 1644, 1680 (2011) ("Though [even stronger copyright protection] would maximize the production of works, rent dissipation theory indicates that the marginal works produced might be of little or negative social value . . .").

13. Breyer, *supra* note 2, at 325 n.171.

plus” durational standard with one based on the commercial viability of the average work.¹⁴

Second, and most importantly, our determination that the average information good has an incredibly short commercial lifespan demonstrates that advocates’ and legislators’ tendencies to focus on atypical works—i.e., those that are exceptionally successful, or unusually delayed in their earnings—leads to overprotection of the average work, suggesting that copyright’s term is not nearly as significant to copyright owners¹⁵ as conventional wisdom submits and that reformation efforts might be better spent elsewhere.

Our analysis proceeds as follows. Part I offers a positive description and brief history of the debate around the current copyright term; a review of some of the literature critiquing its propensity toward suboptimal incentivization, rent seeking, and social waste; and a summary of the case in favor. This Part is expected to be uncontroversial yet critical; it establishes term as a quintessential copyright problem to be solved. Part II picks up where Justice Breyer’s intuition left off to make the empirical case that the strongest protections are needed when an information good is at its most commercially viable. Strong copyright protection makes the most sense for the first five to ten years following their release, since most information goods earn the majority of the revenue that they are ever going to earn in that time.¹⁶ Part II goes on to explain how this conclusion is normatively consistent with phenomena commonly observed in the relevant industries and discusses the selection bias that leads to and perpetrates overprotection. Part III summarizes our empirical and normative findings and teases out some possible policy implications. The Article concludes with the determination that, notwithstanding a century of debate to the contrary, term is in fact *not* central to the optimization of copyright’s protection, such that advocates’ time and energy could be more productively spent elsewhere. In-depth analysis of streaming’s impact, as well as a breakdown by status (blockbuster v. nonblockbuster), genre, age of release, and platform, are reserved for future work.

14. Both Professors Justin Hughes and Joseph Liu have made similarly time-based proposals in the fair use context. See Justin Hughes, *Fair Use Across Time*, 50 UCLA L. REV. 775, 799 (2003) (“When a work is new, unauthorized uses are less likely to be fair uses; when a work approaches the end of its copyright term, unauthorized uses are increasingly likely to be fair uses. As more and more of a work’s term is in the past, unauthorized uses, particularly small ones, should be more likely to be fair uses.”); Joseph P. Liu, *Copyright and Time: A Proposal*, 101 MICH. L. REV. 409, 410 (2002) (“[T]he older a copyrighted work is, the greater the scope of fair use should be—that is, the greater the ability of others to re-use, critique, transform, and adapt the copyrighted work without permission of the copyright owner. Conversely, the newer the work, the narrower the scope of fair use.”).

15. Discussion herein will distinguish between private and social effects, the latter of which remain significant.

16. To be sure, the exact length of the strong protection period is debatable but need not be determined with precision here to make the point that it is a lot shorter than the current, uniform term.

I. COPYRIGHT'S TERM & ITS DISCONTENTS

Lawmakers, lawyers, and scholars alike have long focused on copyright's duration as key to optimizing the balance struck under the incentive–access paradigm. This Article suggests that this emphasis is misplaced and that copyright's term is yet another example of the sneaky divergence between law in doctrine and law in practice. This Part begins with a brief history of the ongoing debate around copyright's term in an effort to highlight the (misplaced) importance placed upon it. Part I.B lays out a positive description of the current copyright term, and Part I.C offers a brief review of some of the representative literature. Finally, Part I.D summarizes, and responds to, arguments in support of a lengthy copyright term.

A. A History of Obsession with Term

Copyright, as we know it, began—under the Statute of Anne, passed in 1710—with a term of fourteen years, renewable for one additional fourteen-year period only if the author was still alive upon the original period's expiration.¹⁷ The Copyright Act of 1790 brought that renewable fourteen-year term to the colonies.¹⁸ Eventually, that fourteen-year term was extended to twenty-eight years (with a one-time option to extend for an additional fourteen years) in 1831.¹⁹ The 1909 Copyright Act kept the original twenty-eight-year term but augmented the extension period to an additional twenty-eight years.²⁰ The current statute, the Copyright Act of 1976 (the Copyright Act), extended the term to life of the author plus fifty years (or seventy-five years in the case of works for hire).²¹ It was the Sonny Bono Act that got us where we are today by adding yet another twenty years to the term.

The Sonny Bono Act was introduced in 1995.²² Backed by the entertainment industries that were led by the Disney Corporation, the bill sought an extension that was both prospective and retrospective.²³ Disney's Mickey Mouse copyright—worth \$8 billion in 1998²⁴—was set to expire in 2003,²⁵ and

17. Copyright Act of 1710, 8 Ann. c. 21 (Eng.).

18. Copyright Act of 1790, ch. 15, 1 Stat. 124, 124.

19. Copyright Act of 1831, ch. 16, 4 Stat. 436, 439.

20. Copyright Act of 1909, ch. 320, 35 Stat. 1075, 1080.

21. Copyright Act of 1976, Pub. L. No. 94-553, § 302, 90 Stat. 2541, 2572.

22. Daren Fonda, *Copyright Crusader*, BOS. GLOBE MAGAZINE, Aug. 29, 1999, at 12.

23. Sonny Bono Copyright Term Extension Act, Pub. L. No. 105-298, § 102, 112 Stat. 2827, 2827 (1998) (codified as amended at 17 U.S.C. §§ 108, 203, 301–04).

24. Fonda, *supra* note 22, at 25.

25. *Disney Lobbying for Copyright Extension No Mickey Mouse Effort*, CHI. TRIB., Oct. 17, 1998, at 22.

the company had much to gain by extending this revenue stream (among others).²⁶ To that end, Disney's then-CEO Michael Eisner met with then-Senate Majority Leader Trent Lott, who shortly thereafter signed on as cosponsor of the bill.²⁷ Of the thirteen sponsors of the House bill, Disney financially contributed directly to ten of them.²⁸ In the Senate, Disney financially contributed to eight of the twelve sponsors.²⁹ Three years after its introduction, the Sonny Bono Act was signed into law by President Clinton on October 27, 1998.³⁰

Beaten but not defeated, the coalition of librarians, scholars, and others who opposed the CTEA focused their litigation efforts on the retrospective component of the extension. Led by Harvard law professor Larry Lessig, the lawsuit, originally titled *Eldred v. Reno* when filed at the District Court for the District of Columbia,³¹ made it to the Supreme Court as *Eldred v. Ashcroft* in 2002.³² Two of the constitutional challenges raised by appellants focused on the Intellectual Property Clause of the Constitution, which grants to Congress the authority 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.”³³

Appellants argued that the retrospective portion of the CTEA violated both the “limited Times” language of the Intellectual Property Clause and the spirit of the mandate by failing to “promote the Progress of Science and useful Arts.”³⁴ As to the former, appellants argued that repeated extensions of the Copyright Act effectively amount to protection of indefinite duration.³⁵ As to the latter, they argued that one cannot promote the creation of extant works.³⁶ Thirty-five separate amicus briefs were filed on both sides of the case by authors ranging from economists and library associations to AOL Time Warner and the Directors Guild of America.³⁷

Citing, among other things, parity with patent law extensions, the Supreme Court ultimately determined that Congress acted within its authority under the Intellectual Property Clause's “limited Times” requirement in passing the

26. For example, Winnie the Pooh was worth nearly as much as Mickey Mouse. *See, e.g.*, Damian Reece, *Disney Faces Loss of \$6bn Pooh Revenues*, TELEGRAPH (May 11, 2003, 12:01 AM), <https://www.telegraph.co.uk/finance/2851501/Disney-faces-loss-of-6bn-Pooh-revenues.html> [<https://perma.cc/3HSK-ZR29>].

27. *Disney Lobbying for Copyright Extension No Mickey Mouse Effort*, *supra* note 25.

28. *Id.*

29. *Id.*

30. Sonny Bono Copyright Term Extension Act, Pub. L. No. 105-298, 112 Stat. 2827 (1998) (codified as amended at 17. U.S.C. §§ 108, 203, 301–304).

31. 74 F. Supp. 2d 1 (D.D.C. 1999).

32. *Eldred v. Ashcroft*, 534 U.S. 1126 (2002), *amended by* 534 U.S. 1160 (2002).

33. U.S. CONST. art. I, § 8, cl. 8. There was also a First Amendment argument not relevant for the immediate purposes.

34. *Id.*; Brief for Petitioners at 18–22, *Eldred v. Ashcroft*, 537 U.S. 186 (2003)(No. 01-618).

35. *Id.* at 18.

36. *Id.* at 22.

37. *See OPENLAW*: *Eldred v. Ashcroft*, *supra* note 6.

CTEA. In so determining, the Court looked to historical precedent for retroactive copyright extension, which reasoned that an “author who had sold his [work] a week ago [should not] be placed in a worse situation than the author who should sell his work the day after the passing of [an extension].”³⁸

Despite the Supreme Court’s nod to previous patent extensions, the historical tendency toward extension of the copyright term is a marked departure from the approach to duration taken elsewhere in IP. Compared to copyright’s seventy-plus-year term, patents currently enjoy a nonrenewable term of twenty years,³⁹ while federally registered trademarks are granted an initial ten-year period of protection, renewable in ten-year increments only when continuing use can be shown.⁴⁰ The conventional explanation for the divergence between copyright term and patent term is that patent protection is stronger than copyright protection, thereby justifying a shorter term.⁴¹

The uniformity of terms across categories of copyrighted goods is also unique. In other areas of IP, it is common to differentiate between types of work when determining the duration of protection. For example, design patents enjoy a term of protection ranging from fourteen to fifteen years (depending on whether they were filed before or after May 13, 2015),⁴² as compared to the standard patent term of twenty years. The Semiconductor Chip Protection Act of 1984 (SCPA)⁴³ establishes a ten-year term of protection for semiconductor chips.⁴⁴ Likewise, the Vessel Hull Design Protection Act (VHDPA)⁴⁵ grants a ten-year term of protection⁴⁶ to “[t]he design of a vessel hull, deck, or combination of a hull and deck.”⁴⁷

38. *Eldred*, 537 U.S. at 204 (first alteration in original) (quoting 7 REG. DEB. 424 (1831)).

39. The original 1790 Patent Act set the maximum term for a patent at fourteen years. Patent Act of 1790, ch. 7, 1 Stat. 109, 109. An amendment in 1861 extended that term to seventeen years. Act of Mar. 2, 1861, ch. 88, 12 Stat. 246, 249. Finally, the 1994 Uruguay Round Agreements Act extended patent protection to its current term of twenty years. Uruguay Round Agreements Act, Pub. L. No. 103-465, § 154(2), 108 Stat. 4809, 4984 (1994).

40. Trademark’s protection is potentially infinite at this point.

41. In a working manuscript, Professor Peter Menell has warned against the making of false equivalencies between the three branches of IP. Peter Menell (unpublished manuscript) (on file with authors).

42. See 35 U.S.C. § 173 (2012); *1505 Term of Design Patent [R-08.2017]*, USPTO.GOV, <https://www.uspto.gov/web/offices/pac/mpep/s1505.html> (last visited Oct. 3, 2019).

43. Semiconductor Chip Protection Act of 1984, Pub. L. No. 98-620, 98 Stat. 3335, 3347 (1984).

44. 17 U.S.C. § 904(b) (2012). Although the SCPA is codified under Title 17, it is not a copyright but rather a *sui generis* form of IP. See *Brooktree Corp. v. Advanced Micro Devices, Inc.*, 977 F.2d 1555, 1563 (Fed. Cir. 1992).

45. Vessel Hull Design Protection Act, Pub. L. No. 105-304, 112 Stat. 2860, 2905 (1998). As with the SCPA, the VHDPA is codified in Title 17 (in this case, as part of the Digital Millennium Copyright Act) but is a *sui generis* form of IP. See, e.g., U.S. COPYRIGHT OFF. & U.S. PATENT & TRADEMARK OFF., *THE VESSEL HULL DESIGN PROTECTION ACT: OVERVIEW AND ANALYSIS 1* (2003), <https://www.copyright.gov/reports/vhdpa-report.pdf> [<https://perma.cc/ZNQ7-8B26>] (“The provisions [pertaining to vessel hull design] do not . . . provide copyright protection. Rather, they establish *sui generis* protection for original designs of vessel hulls.”).

46. 17 U.S.C. § 1305(a).

47. *Id.* § 1301(a)(2).

Some jurisdictions likewise differentiate even between types of copyrighted works. For example, “[v]irtually all industrialized nations recognize a more robust sound recording performance right than the United States.”⁴⁸ For its part, the United States did not extend copyright protection to sound recordings until the 1976 Act.⁴⁹ Indeed, and as discussed further in Part III, the U.S. copyright regime prior to 1976 had significantly more term variation among different works than the current regime has.

Given the existence of shorter grants of protection elsewhere in IP and the availability of different term lengths for different types of protected works, it is particularly surprising that little robust empirical analysis has been conducted to assess copyright’s effectiveness *over time*. There has certainly been no shortage of academic attention to the topic of copyright’s term: a Westlaw search of law journals and reviews for “(‘copyright term’ or ‘copyright duration’ or ‘copyright extension’) & (Eldred or CTEA or ‘Sonny Bono’)” turns up an astounding 7,978 results.⁵⁰ Some of this work is discussed further in Part I.C.

B. *A Single, Lengthy Term with Uniform Protection*

Copyright is unique among the branches of IP for its exceptional duration and undifferentiated level of protection. All copyrighted works, regardless of type, are entitled to the same term.

1. *Term*

The current copyright regime protects a copyrightable work⁵¹ for the life of the author plus 70 years, after which the work goes into the public domain where it may be used freely.⁵² In the case of a work for hire,⁵³ the duration of

48. U.S. COPYRIGHT OFFICE, COPYRIGHT AND THE MUSIC MARKETPLACE: A REPORT OF THE REGISTER OF COPYRIGHTS 89 (Feb. 2015), <https://copyright.gov/docs/musiclicensingstudy/copyright-and-the-music-marketplace.pdf>. This distinction is because, at least in part, some other jurisdictions protect sound recordings under a noncopyright regime. *See, e.g.*, Daniel Gervais, *Related Rights in United States Law* 12–22 (Vanderbilt Univ. Law Sch., Research Paper No. 18-59, 2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3267501 (discussing the differential treatment of sound recordings in, and outside of, the United States).

49. Copyright Act of 1976, Pub. L. No. 94-553, 90 Stat. 2541.

50. This search was conducted Sept. 20, 2018.

51. “Copyrightable work” is defined as an “original work[] of authorship fixed in any tangible medium of expression,” including literary, musical, dramatic, choreographic, pictorial, graphic, sculptural, motion picture, sound recording, and architectural works. 17 U.S.C. § 102.(a). The definition explicitly excludes ideas. 17 U.S.C. § 102(b).

52. *See id.* § 302(a). Continuing trademark protection, the existence of copyrighted derivative works, or both may limit this use somewhat.

53. The Copyright Act defines a “work made for hire” as:

- (1) a work prepared by an employee within the scope of his or her employment; or
- (2) a work specially ordered or commissioned for use as a contribution to a collective work, as a part of a motion picture or other audiovisual work, as a translation, as a supplementary work, as a compilation, as an instructional text, as a test, as answer material for a test, or as an atlas, if the

the copyright is 95 years from publication or 120 years from creation (whichever is shorter).⁵⁴ In either case, the level of protection remains the same throughout the entire copyright period, with the copyright owner enjoying the same rights in year one as they do in year sixty-eight, for example.⁵⁵

2. *Protection & Exceptions*

While a copyright remains in force, the copyright laws grant a rights holder the exclusive right to reproduce, to distribute, to prepare derivative works, and (for certain classes of works) to display and perform the work publicly.⁵⁶ Absent a finding of fair use, violation of any of these exclusive rights constitutes copyright infringement.⁵⁷ Remedies include monetary damages (actual or statutory) and equitable relief (such as injunction or seizure).⁵⁸ The federal government can also bring criminal charges, although this remedy is rare.⁵⁹

Once a work reaches the end of its copyrighted life and enters the public domain, anyone may use it for any purpose. Until then, 17 U.S.C. § 106 makes clear that all derivative uses of a work must be authorized by the rights holder.⁶⁰ Assuming a derivative use is approved, § 103(b) assigns a copyright to the derivative work itself, with protection limited to the derivative author's incremental additions to the original work.⁶¹

Some prospective users may be able to take advantage of one of the extant compulsory licenses, such as the § 115 license for cover songs.⁶² Otherwise, in order to avoid a claim of copyright infringement, one looking to create a work derivative of a copyrighted work can seek permission from, or negotiate a license with, the rights holder. An especially patient (and long-lived) prospective user might instead wait until the copyright term expires and the work enters the public domain, after which point it may be used freely.

parties expressly agree in a written instrument signed by them that the work shall be considered a work made for hire.

Id. § 101.

54. *Id.* § 302(c).

55. This assumes no future retroactive term extensions. *See* H.R. 3301, 115th Cong. (2018).

56. 17 U.S.C. §§ 106(1)–(6).

57. *Id.* § 501.

58. *Id.* §§ 501–03.

59. *Id.* § 506.

60. *Id.* § 106.

61. Section 103(b) reads, in relevant part:

The copyright in a compilation or derivative work extends only to the material contributed by the author of such work, as distinguished from the preexisting material employed in the work, and does not imply any exclusive right in the preexisting material. The copyright in such work is independent of, and does not affect or enlarge the scope, duration, ownership, or subsistence of, any copyright protection in the preexisting material.

Id. § 103(b).

62. *See id.* § 115.

Alternatively, a prospective user may qualify for an exception to infringement under § 107 of the Copyright Act, which allows for certain “fair uses” of copyrighted works upon consideration of several factors, including the purpose of the use (e.g., educational), the nature of the copyrighted work, the amount and substantiality of the material used, and the effect of a use on the market for the work.⁶³ Some courts observe an unspoken fifth factor: good faith.⁶⁴ By “good faith,” courts mean that a judge or jury will often consider whether the derivative artist sought out the original artist and whether the derivative artist attempted to attribute the borrowed work.⁶⁵ While different courts have weighed these factors differently in different cases, it is commonly understood that the greater the effect the use of a derivative work has on the market, the less likely it is to pass fair-use scrutiny.⁶⁶ Under this rationale, a parody of a film, for example, is more likely to be deemed fair use (owing to its nonsubstitutability with the original film) than a remix of a song (which may obviate the need to purchase the original song altogether).

C. Critique

This Subpart summarizes some of the representative literature critiquing copyright's long and uniform term. We wish to emphasize that the critique presented in this Subpart is not a critique of copyright protection generally. The authors, and the literature as a whole, recognize the value of copyright's existence in incentivizing creation as a baseline matter. The critique, rather, focuses solely on copyright's duration. A recent paper by economists Michela Giorcelli and Petra Moser is illustrative of this distinction. In one of the few natural experiments afforded by copyright, Giorcelli and Moser analyze data on operas produced across eight Italian states from 1770 to 1900.⁶⁷ In 1801, two Italian states—Lombardy and Venetia—fell under French rule and assumed French copyright laws that did not exist in the remaining Italian states.⁶⁸ Giorcelli and Moser observed a statistically significant increase in new operas produced in Lombardy and Venetia following the adoption of copyright laws, perhaps providing evidence of copyright's contribution to creative production.⁶⁹ When Lombardy and Venetia later moved to *extend* their copyright terms, however,

63. While earlier jurisprudence viewed fair use as an affirmative defense, the recent Ninth Circuit decision in *Lenz v. Universal Music Corp.* brought case law in line with the statutory language of § 107 by confirming fair use as an exception to copyright infringement. 815 F.3d 1145, 1152 (9th Cir. 2016) (“Given that 17 U.S.C. § 107 expressly authorizes fair use, labeling it as an affirmative defense that excuses conduct is a misnomer . . .”).

64. See, e.g., *Núñez v. Caribbean Int'l News Corp.*, 235 F.3d 18, 23 (1st Cir. 2000).

65. See *id.*

66. See 17 U.S.C. § 107.

67. See Michela Giorcelli & Petra Moser, *Copyrights and Creativity: Evidence from Italian Operas* 2 (May 16, 2019) (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2505776.

68. *Id.*

69. *Id.* at 2–3. We say “perhaps” in acknowledgement of the fact that there may have been other cultural influences at play.

“there was no clear increase in the level or the quality of output, even though both states had responded strongly to the adoption of basic copyright laws.”⁷⁰ In other words, the *existence* of copyright contributed to increased production of creative works, but an *extension* of copyright’s term did not have any incremental effect.

The scholarly critique of copyright’s term falls into two broad categories: economic and intuitive.⁷¹ We summarize these critiques in Parts I.C.1 and I.C.2. There have also been a few empirical analyses conducted using tangential data, such as inventory numbers and registration renewals; we highlight the key take-aways from those projects in Part I.C.3.

1. *Economic*

The size of the economic incentive provided to creators by copyright is measured by the present value of the anticipated compensation. The longer the term, the smaller the marginal additional incentive is in present-value terms, and the greater the incremental burden on society (as the copyright monopoly permits above-cost pricing).⁷² Writing in an amicus brief to the Supreme Court regarding *Eldred*, a group of prominent economists summarized it this way: “Term extension for new works induces new costs and benefits that are too small in present-value terms to have much economic effect.”⁷³

In their work on copyright and antitrust, Professors Linda Cohen and Roger Noll determined that “[n]o plausible incentive rationale exists for this incredibly long duration.”⁷⁴ They explained:

As a matter of practical economics, the current duration of copyright amounts to a perpetual right in terms of the potential for financial reward to the creator. If the typical work is produced 30 years before the author’s death, the discounted present value of a dollar of royalty income in the 105th year of the right is about \$.00003. Put another way, if a work could capture \$1 million in royalties in its 105th year, the present value of that prospect in the year the copyright was granted is \$30. If the work can earn \$1 million forever, the present value on the copyright date of the stream of revenues from year 106 to the end of time is \$300. Thus, for this incredibly valuable asset, the difference between the current copyright law and a perpetual right is almost nothing. Of

70. *Id.* at 4.

71. We might also add *constitutional*, but since the Supreme Court settled the constitutional question in *Eldred v. Ashcroft*, we will focus here on the economic and the intuitive. 537 U.S. 186, 194 (2003) (“In prescribing [the term extension], we hold, Congress acted within its authority and did not transgress constitutional limitations.”).

72. See Akerlof, *supra* note 11, at 11.

73. *Id.* at 15.

74. Linda R. Cohen & Roger G. Noll, *Intellectual Property, Antitrust and the New Economy*, 62 U. PITT. L. REV. 453, 471 (2001).

course, virtually no copyrighted work has anything remotely resembling this durability.⁷⁵

In other words,

the result of the blanket extension of the copyright term [referring to the CTEA] was that a huge amount of intellectual property having little or no commercial value, yet potential value as a public domain input into future intellectual property, will be kept out of the public domain for another twenty years.⁷⁶

When it comes to IP, deadweight loss—a form of economic inefficiency—is a real concern: “Strong intellectual property rights increase the deadweight loss on innovations that would be forthcoming . . . [and] can lead to an inefficient duplication of R&D costs”⁷⁷ Due to its exceptionally long duration, copyright in particular may overprotect the average work over time. Our analysis in Part II supports the conventional wisdom that copyright’s protection should be limited where it merely works to raise the cost of competing expression.

Some commentators have alternately suggested that overly strong copyright protection afforded at later points in a work’s term may lead to, at best, marginally valuable works and, at worst, rent seeking over-entry into the various content markets.⁷⁸ Consequently, the stronger the copyright protection, the more entry is encouraged—even where that entry may be of questionable social value.

In other words, incremental expansion of the number of works in a particular genre over time is unlikely to add much social value. For example, in his work on product differentiation in copyright, Professor Michael Abramowicz offers the following illustration of this intuition:

By writing a vegetarian cookbook, I may be able to win many sales that otherwise would have gone to the . . . vegetarian cookbooks that already exist. My entry into the cookbook market might thus be an example of rent dissipation, because my investment in the cookbook project is aimed . . . at taking away rents . . . that the authors of existing cookbooks otherwise would have enjoyed. Of course, my cookbook may offer some new recipes . . . and other features that . . . might increase the total rents available. The more cookbooks

75. *Id.* Cohen and Noll use a discount rate of 10%. More recent research suggests a discount rate closer to 2.6%, which would yield, in their example, a present value of \$71,762—not \$1 million but also not \$30. See Stefano Giglio, Matteo Maggiori & Johannes Stroebel, *Very Long-Run Discount Rates*, 130 Q.J. ECON. 1, 2 (2015).

76. WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW* 221 (2003) (discussing the inefficiency of the CTEA).

77. SUZANNE SCOTCHMER, *INNOVATION AND INCENTIVES* 98 (2004).

78. See, e.g., Michael Abramowicz, *A Theory of Copyright's Derivative Right and Related Doctrines*, 90 MINN. L. REV. 317, 322 (2005) (suggesting that the efforts invested in some copyrighted works are of questionable social value and might be better spent elsewhere); Christopher S. Yoo, *Copyright and Product Differentiation*, 79 N.Y.U. L. REV. 212, 259 (2004).

of a particular type that already exist, however, the smaller this increase is likely to be.⁷⁹

In other words, the optimal level of copyright protection for an information good like a cookbook maxes out where any further increase in protection will merely raise the cost of new expression. This is because as the number of works in the public domain decreases (a result of strong protections that last too long), the cost of creation increases—there is less “raw material” for follow-up creators to work with.⁸⁰

The second and third vegetarian cookbooks ever published, for example, may be appreciated not only for their diversity of recipes and introduction of consumer choice but also for the price control that each may exert on the others. Competition lowers prices but only to a point. In a free market (for these purposes, a world without copyright), new cookbooks will cease to be created once the cost of doing so exceeds the revenue that the cookbook can demand. Even with copyright protection, the 3,000th vegetarian cookbook arguably introduces little to no social value at the margin. For this reason, some scholars have suggested that weaker copyright protection might avoid this kind of questionably, or at least ambiguously, beneficial creation—creation that may be encouraged at the expense of other endeavors deemed more socially beneficial, such as opening a vegetarian restaurant.⁸¹

Finally, the current copyright regime, with its lengthy term and uniform level of protection throughout, can, and often does, lead to overreach or rights accretion. Rights accretion—or the accession of additional (nonstatutory) rights to a copyright owner—results from an abundance of caution on the part of prospective licensees. Fear of infringement claims can lead prospective users to request and pay for licenses when none are necessary.⁸² This phenomenon is a predictable, and undesirable, result of a copyright regime whose protections are so broad—and its punishments so severe⁸³—for so long as to suggest to a prospective user that it is better to be safe than sorry.

79. Michael Abramowicz, *An Industrial Organization Approach to Copyright Law*, 46 WM. & MARY L. REV. 33, 39 (2004). A cookbook is admittedly not the strongest example given the very thin protection afforded them by copyright, but the point is taken.

80. William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL STUD. 325, 332 (1989) (“Creating a new work typically involves borrowing or building on material from a prior body of works The less extensive copyright protection is, the more an author, composer, or other creator can borrow from previous works without infringing copyright and the lower, therefore, the costs of creating a new work.”).

81. See, e.g., Abramowicz, *supra* note 79.

82. See James Gibson, *Risk Aversion and Rights Accretion in Intellectual Property Law*, 116 YALE L.J. 882, 903 (2007) (describing a “doctrinal feedback” loop that leads risk averse licensors to over-license).

83. See, e.g., Ben Depoorter, *Copyright Enforcement in the Digital Age: When the Remedy is the Wrong*, 66 UCLA L. REV. 400, 404 (2019) (“There is a growing understanding that statutory damage awards, as written into the Copyright Act in 1976, are a poor fit for the digital age. Because a statutory damage award is set for each individual infringed work, the total damages can add up significantly for online infringements that involve multiple works.” (footnotes omitted)); Pamela Samuelson & Tara Wheatland, *Statutory Damages in Copyright Law: A Remedy in Need of Reform*, 51 WM. & MARY L. REV. 439, 441 (2009) (“Awards of statutory damages are frequently arbitrary, inconsistent, unprincipled, and sometimes grossly excessive.”).

2. *Intuitive*

Two of the most enduring arguments against a lengthy term of copyright are taken from the publishing industry. Specifically, they are based on conversations with, and testimonials from, booksellers themselves.

The intuition that the commercial lifespan of information goods is far shorter than copyright's term is not new. Perhaps the earliest such account can be found in a speech against a proposal for the extension of copyright given by Thomas Macaulay in the House of Commons on February 5, 1841:

[T]he evil effects of the monopoly are proportioned to the length of its duration. But the good effects for the sake of which we bear with the evil effects are by no means proportioned to the length of its duration. A monopoly of sixty years produces twice as much evil as a monopoly of thirty years, and thrice as much evil as a monopoly of twenty years. But it is by no means the fact that a posthumous monopoly of sixty years gives to an author thrice as much pleasure and thrice as strong a motive as a posthumous monopoly of twenty years. On the contrary, the difference is so small as to be hardly perceptible. We all know how faintly we are affected by the prospect of very distant advantages, even when they are advantages which we may reasonably hope that we shall ourselves enjoy. But an advantage that is to be enjoyed more than half a century after we are dead, by somebody, we know not by whom, perhaps by somebody unborn, by somebody utterly unconnected with us, is really no motive at all to action.⁸⁴

Consider also Arnold Plant's 1934 work on copyright in books:

If the now existing compulsory license or royalty system . . . were made to operate a few years—say five years—after first publication, instead of being delayed as at present until twenty-five years after the death of the author, security for publishers against competition would be preserved until their first editions were either disposed of or 'remaindered,' remuneration for authors would continue on all sales throughout the full copyright period, and the public would no longer have to wait more than five years for cheap copies of the books they wish to buy. The first edition might still be issued by the publisher at the price which best suited his pocket under conditions of monopoly, but if he wished to retain the whole of the business the compulsory license system would then compel him to follow the present practice of many publishers and reissue his successes before the end of the five-year period at a price low enough to deter competitors.⁸⁵

Plant bases this proposal for a significant shortening of copyright's term on several historical observations. He frequently refers to the travails of Scottish author David Hume as he navigates the London booksellers' market: "David Hume wrote to his publisher William Strahan: 'I have heard you frequently say,

84. Macaulay, *supra* note 1, at 735–36.

85. Arnold Plant, *The Economic Aspects of Copyright in Books*, 1 *ECONOMICA* 167, 194–95 (1934).

that no bookseller would find profit in making an edition which would take more than three years in selling.”⁸⁶

In his seminal work considering the justifications for copyright, Justice Breyer reaches a similar conclusion:

Nor would extension [of the copyright term] provide significant additional incentive for publishers, for [book publishers] now normally base their publication decision upon an expectation that a book will earn a return within two years (tradebooks), five years (some texts), or at most ten or twenty years (certain reference books).⁸⁷

By his own admission, Justice Breyer’s claim here was “impressionistic” and obtained through conversation with various publishers.⁸⁸

3. *Empirical*

To date, empirical work around copyright’s term has had to make use of peripheral data, such as retail inventory and registration data made available by the U.S. Copyright Office.

For example, using a random sample of books for sale on Amazon.com, Professor Paul Heald conducted an empirical analysis of the availability for sale of new versus public-domain books. He reached the surprising conclusion that, contrary to the “underexploitation hypothesis”—the idea that copyright’s term should be long to prevent works from falling into the public domain only to never be heard from again—“[s]hortly after works are created and propertized, they tend to disappear from public view only to reappear in significantly increased numbers when they fall into the public domain.”⁸⁹ As such, Heald concludes that, to the extent that “availability matters, . . . further attempts to extend the copyright term should be resisted, not encouraged.”⁹⁰ Part II will show that this analysis makes sense for most information goods, where a work’s commercial success or failure is typically evident within a very short time after publication, at which point the copyright owner either collects her rents or licks her wounds and moves on to the next project.

In addition to being excessively lengthy, a copyright regime whose duration is based on the life of the author is arguably arbitrary; it necessarily affords different lengths of protection to different works with no discernable policy rationale. Consider, for example, two people, both age thirty, write a novel this year. One dies in a horrible car crash next year; the other lives to be ninety. Are

86. *Id.* at 194.

87. Breyer, *supra* note 2, at 325.

88. *Id.* at 325 n.171.

89. Paul J. Heald, *How Copyright Keeps Works Disappeared*, 11 J. EMPIRICAL LEGAL STUD. 829, 830 (2014). The dissemination of works that have entered the public domain may alternately reflect rent dissipation as producer surplus declines. The question then might be whether consumer surplus increases by enough to make society as a whole better off.

90. *Id.* at 861.

we to understand that the novel written by the accident victim is deserving of less protection by virtue of her unexpected death? In another example, two people compose a song this year—one age seventeen, the other age seventy. Are we to understand that the song written by the seventy-year-old is deserving of less protection due to the age of its composer?

The historical explanation for a “life plus” term is that it was intended to cover two generations. Indeed, the move from “life . . . plus 50 years” to “life . . . plus 70 years” was meant to account for the increase in human longevity.⁹¹ The so-called “two generation” standard comes from the Berne Convention,⁹² but its adoption in the United States is curiously incomplete. Section 203 of the Copyright Act, for example, contemplates a termination right that vests in the author thirty-five years from the date that the copyright was originally granted to a third party, irrespective of the author’s age or lifespan.⁹³

In their quantitative work on copyright’s demographics, Professors Robert Brauneis and Dotan Oliar note, for example, that the average age of a creator registering a piece of music is 36.08, while the average age of a creator registering a book is 46.25.⁹⁴ They conclude: “This suggests that despite a facially uniform copyright term for individual authors, effectively music is protected for longer. Thus, society is holding out a greater carrot for those who create music. Society, at least at the margin, is signaling to authors that they should invest their efforts in some creative fields over others.”⁹⁵

In addition, they note that “female authors of music, in particular, are on average more than two years older than male authors of music.”⁹⁶ Unless those women live at least two years longer than their male counterparts, this would seem to suggest that women are somehow entitled to less copyright protection than men. These and similarly nonsensical results are inherent in a “life plus” durational standard.

In a new book looking at whether stronger copyright protections lead to more or less output, Professor Glynn Lunney engages four data sources—Nielsen SoundScan release data, Rolling Stone’s 500 Greatest Albums of All Time list, Billboard Hot 100 Chart, and Spotify’s list of the top 1,001 songs streamed in 2014 worldwide that had appeared on Billboard’s Hot 100 Chart before

91. See S. REP. NO. 104-315, at 10 (1996).

92. See Berne Convention, *supra* note 4.

93. 17 U.S.C. § 203 (2012). *Cf.* Copyright Act, R.S.C. 1985, c. C-42 (Can.) (describing Canadian copyright law’s reversionary right for authors, which terminates all grants twenty-five years after the author’s death).

94. Robert Brauneis & Dotan Oliar, *An Empirical Study of the Race, Ethnicity, Gender, and Age of Copyright Registrants*, 86 GEO. WASH. L. REV. 46, 80 (2018).

95. Robert Brauneis & Dotan Oliar, *Copyright’s Race, Gender and Age: A First Quantitative Look at Registrations* 36 (Geo. Wash. Law Sch. Pub. Law & Legal Theory, Paper No. 2016-48, 2016), <https://ssrn.com/abstract=2831850>.

96. *Id.* at 26.

2006—to conclude that stronger protections actually lead to lower productivity.⁹⁷ While Lunney’s work focuses on the strength of protections rather than their duration, the two are inextricably linked: any inefficiencies caused by a miscalculation in the strength of protection are exacerbated by an overly long term. As such, his conclusion in favor of a shorter copyright term is also supported by our work herein.

A 2003 project by Landes and Posner utilized data on copyright registrations and renewals over a ninety-year period to consider whether a system of indefinite renewals for copyright might be more efficient than a “life plus” term. They found that “most copyrights depreciate rapidly and therefore few would be renewed if even a slight fee were required; the sheer bother of applying for renewal appears to be a significant deterrent.”⁹⁸ This is consistent with the pattern seen in patent law, where more than half of patents granted are never renewed.⁹⁹ Ultimately, owing to the existence of both commercially viable and non-commercially viable works, they determine that a system of indefinite renewal might be a better deal for both types: owners of commercially viable works are more likely to be willing to incur the cost and hassle of registration and renewal than owners of non-commercially viable works, resulting in more of the latter works making it into the public domain quicker. In their analysis, Landes and Posner reasonably assumed that only owners of a copyright on a commercially viable work would bother with registration and renewal. Since neither registration nor renewal are required under copyright law, however, and because rights holders register (or fail to register) for a variety of reasons—including cultural background, money (or the lack thereof), and know-how¹⁰⁰—our analysis here offers a more accurate and precise measure of commercial viability.

In 2009, Professors Raymond Ku and Jiayang Sun, along with Ph.D. candidate Yiyang Fan, also took a look at copyright registration patterns in an effort to test the incentive theory of copyright.¹⁰¹ Utilizing U.S. copyright registrations filed from 1870 through 2006 as a proxy for the number of works created—again, a rough proxy, as registration has not been required since March 1,

97. GYNN LUNNEY, COPYRIGHT’S EXCESS: MONEY AND MUSIC IN THE US RECORDING INDUSTRY 86–116 (2018).

98. Landes & Posner, *supra* note 10, at 474.

99. See Oren Bar-Gill & Gideon Parchomovsky, *A Marketplace for Ideas?*, 84 TEX. L. REV. 395, 424 (2005) (“[M]ore than half of patents awarded are deemed unworthy of renewal and are abandoned by their conceivers ten years after the application date.”).

100. See, e.g., Justin Hughes & Robert P. Merges, *Copyright and Distributive Justice*, 92 NOTRE DAME L. REV. 513, 551 (2016) (observing a disadvantage posed by former registration requirements that “handicapped protection of original expression of authors who lacked sophisticated knowledge of the law or access to legal representation”).

101. Raymond Shih Ray Ku, Jiayang Sun & Yiyang Fan, *Does Copyright Law Promote Creativity? An Empirical Analysis of Copyright’s Bounty*, 62 VAND. L. REV. 1667, 1671–72 (2009).

1989¹⁰²—the authors considered whether changes in copyright protections move consistently with registrations. They found that they do not.¹⁰³

In what is probably the most relevant empirical work for our purposes, economist Rufus Pollock, in a pair of papers considering copyright over time, used available data to establish an optimal copyright term for recordings and books of fifteen years and to predict that this optimal term is likely to fall as production costs decline.¹⁰⁴ The author's primary source of data for this work is a Centre for Intellectual Property and Information Law (CIPIL) report based on self-reported industry data, allowing only for empirics that are, in the author's words, "somewhat crude."¹⁰⁵ Our work in the next Part utilizes a data set that is considerably more robust.

D. Support

Despite the prevalence of anti-term extension sentiment that permeates the literature, there are also plentiful arguments in favor of a lengthy copyright term.

1. Economic

Some of these arguments are based in policy, economics, or both. Some argue, for example, that a longer copyright term better allows a creator to take advantage of future technological developments that may extend his or her work's commercial value, potentially leading to broader distribution: "Because term extension gives copyright owners the incentive to exploit these opportunities [presented by technological development], existing works have been published in new, more usable and versatile formats, and disseminated widely."¹⁰⁶

Another popular argument in favor of a longer copyright term is cross-subsidization, or the business model under which intermediaries attempt to diversify their risk portfolios by taking a chance on a variety of projects with the expectation that the hits will subsidize the flops. Because the content industries tend to operate as winner-takes-all markets,¹⁰⁷ for every hit, there are many,

102. See, e.g., U.S. COPYRIGHT OFFICE, COPYRIGHT NOTICE 1 (2017), <https://www.copyright.gov/circs/circ03.pdf> [<https://perma.cc/8XAR-3P8Z>].

103. Ku, Sun & Fan, *supra* note 101, at 1672 ("Despite the logic of the theory that increasing copyright protection will increase the number of copyrighted works, the data do not support it. Instead, our findings demonstrate that the historic long-run growth in new copyrighted works is largely a function of population. Sharp changes are mostly due to procedural shifts . . .").

104. Rufus Pollock, *Forever Minus a Day? Calculating Optimal Copyright Term*, 6 REV. ECON. RES. ON COPYRIGHT ISSUES 35, 52 (2009); Rufus Pollock, *Optimal Copyright Over Time: Technological Change and the Stock of Works*, 4 REV. ECON. RES. ON COPYRIGHT ISSUES 51, 51 (2007).

105. Pollock, *Forever Minus a Day? Calculating Optimal Copyright Term*, *supra* note 104, at 56.

106. Brief of Amici Curiae American Society of Composers, Authors & Publishers, et al. in Support of Respondent at 18, *Eldred v. Ashcroft*, 537 U.S. 186 (2003) (No. 01-618) (referencing the 1995 Senate Hearing 34 statement of Bruce Lehman, assistant secretary of commerce and commissioner of patents and trademarks).

107. See discussion *infra* Part II.C.1.c.

many flops. For this reason, “any extension of copyright protection inherently reduces intermediaries’ cost of capital, thereby improving intermediaries’ capacity to fund, distribute and market new creative projects.”¹⁰⁸ This may be true of extant copyright intermediaries, but it is inarguably outside the scope of copyright’s mandate to favor one particular model of intermediation over another.

On the international stage, a lengthy copyright term mirrors the policy adopted in other high-profile jurisdictions, such as the European Union.¹⁰⁹ Without this harmonization, U.S. artists may lose out on income from abroad. In a House hearing leading up to adoption of the CTEA, Hoagy Bix Carmichael, then-president of AmSong, cautioned that:

due to the shorter term of copyright in the U.S. our authors are not guaranteed equivalent protection in foreign countries. As a result, some of our greatest cultural treasures are falling into the public domain while they are still commercially viable and would continue to generate significant revenues for the U.S. from abroad.¹¹⁰

2. *Moral*

Other arguments in favor of a lengthy copyright term are moral in nature, which is to say that they focus on the need for lengthy protection in order to demonstrate respect for the artists and art that enrich our lives, communities, and culture. In an article exploring the intersection of copyright and creation, Matthew Barblan writes that artists “need to put their kids through college, pay the mortgage, save for retirement, and pay for healthcare expenses” just like everyone else.¹¹¹ He goes on to note that:

While it’s fashionable to point out that technology has lowered the costs of artistic production, creating art can nonetheless require significant investment of time and money. . . . For a high-quality, professional album, costs for the studio, recording engineer, producer, studio musicians, back-up singers, mixing, and mastering can push the price tag into the hundreds of thousands of dollars. In film, independent film budgets can run into the millions of dollars, and the biggest blockbusters can reach into the hundreds of millions of dollars. Without copyright to secure creators’ property interests in their work, it is hard to fathom how artists would be empowered to undertake [such] projects. . . .¹¹²

108. Jonathan M. Barnett, *Copyright Without Creators*, 9 REV. L & ECON. 389, 408–09 (2013).

109. Norma Dawson, *Copyright in the European Union—Plundering the Public Domain*, 45 N. IR. LEGAL Q. 193, 193 (1994).

110. *Pre-1978 Distribution of Recordings Containing Musical Compositions; Copyright Term Extension; and Copyright Per Program Licenses Before the H. Subcomm. on Courts and Intellectual Property of the H. Comm. on the Judiciary*, 105th Cong. 218 (1997) (statement of Hoagy Bix Carmichael).

111. Matthew Barblan, *Copyright as a Platform for Artistic and Creative Freedom*, 23 GEO. MASON L. REV. 793, 794 (2016).

112. *Id.* at 795 (footnotes omitted).

As the next Part will show, there is really no need to choose a side in this debate. Even assuming that creators are financially incentivized and that copyright is the optimum means of doing so, the term over which that financial incentive is earned is significantly shorter than the current one.

II. MUSIC: A CASE STUDY

“Somebody said to me, ‘But the Beatles were anti-materialistic.’ That’s a huge myth. John and I literally used to sit down and say, ‘Now let’s write a swimming pool.’”

– Paul McCartney¹¹³

The incentive theory of copyright says that copyright can encourage the production of creative works by offering protections designed to financially reward creators.¹¹⁴ As the Supreme Court in *Mazer v. Stein* explained: “The economic philosophy behind the [Intellectual Property C]lause . . . 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.”¹¹⁵ To that end, our analysis in this Part looks at the commercial half-life of songs and albums.

According to a 2013 analysis conducted by the Bureau of Economic Analysis (BEA), most songs depreciate 65% in their first year of life¹¹⁶ and earn almost all of the revenue that they are going to make in the first five years from the date of release.¹¹⁷ A decade from its initial release, the average album retains a mere 19% of its initial value, reflecting a depreciation rate of 26.7% per year.¹¹⁸

To compare, the BEA sets the depreciation rate for movies on premium cable at 10% per year and on regular cable at 5% per year.¹¹⁹ Sequel rights are estimated to constitute 5% of a movie’s total value.¹²⁰ Sequels, where they will

113. David Fricke, *Paul McCartney: One for the Road*, ROLLING STONE (Feb. 8, 1990), <https://www.rollingstone.com/music/features/one-for-the-road-19900208> [<https://perma.cc/TBE6-AMXT>].

114. *Harper & Row Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 558 (1985) (“By establishing a marketable right to the use of one’s expression, copyright supplies the economic incentive to create and disseminate ideas.”).

115. 347 U.S. 201, 219 (1954).

116. Rachel Soloveichik, *Music Originals as Capital Assets* 27 (Bureau of Econ. Analysis, Working Paper No. WP2013-8, 2013), <https://www.bea.gov/system/files/papers/WP2013-8.pdf> [<https://perma.cc/23WG-PZ49>].

117. RACHEL H. SOLOVEICHIK, RESEARCH SPOTLIGHT: ARTISTIC ORIGINALS AS CAPITAL ASSETS 50 (2011), https://estadisticas.pr/files/BibliotecaVirtual/estadisticas/biblioteca/BEA_2011_ArtasCapitalAssets.pdf.

118. Soloveichik, *supra* note 116, at 27. To be clear, this sharply declining revenue stream is typically enjoyed by an intermediary record label, not directly by the artist. Instead, musicians are generally motivated by the prospect of future fortune and fame under the winner-takes-all model, irrespective of copyright protections. For a detailed look at musician revenue streams, see generally Peter DiCola, *Money From Music: Survey Evidence on Musicians’ Revenue and Lessons About Copyright Incentives*, 55 ARIZ. L. REV. 301 (2013).

119. Rachel Soloveichik, *Theatrical Movies as Capital Assets* 20 (Bureau of Econ. Analysis, Working Paper No. WP2013-7, 2013), <https://www.bea.gov/system/files/papers/WP2013-7.pdf>.

120. *Id.* at 21.

exist, are most commonly produced within five years of the release of the original movie.¹²¹

Episodes of long-lived television programs lose approximately one-third of their value in the first year following their release.¹²² For about a decade following that, television episodes depreciate at a rate of roughly 11.4% per year (or 4.16% per quarter).¹²³ Again, the current copyright regime affords television programs the same level of protection during their commercially productive lifespan as in the decades following, to no apparent advantage.

In publishing, there are a very small number of commercially successful books. The handful of commercially successful books released each year earn most of their revenues in the first few years and have an annual depreciation rate of 12% per year.¹²⁴ In other words, publishing sees revenues approaching zero three years after initial publication.

While there are some differences in the way that each of the commercial information goods categories behave, the overarching pattern of depreciation is the same.¹²⁵ Since music is widely considered the category to first feel the impact of technological developments and changes in consumer behavior,¹²⁶ it serves as a good proxy for commercial information goods as a whole.¹²⁷

A. Data

In the following pages, we analyze a random sample of 1,200 albums released between January 1, 2008, and December 31, 2017.¹²⁸ For each album, our data include the number of physical and digital units sold, as well as the total number of individual sales and streams of its constituent songs. These sales figures are reported weekly for the entire study period. The data set provides highly granular commercial information for up to ten years per album (the actual length of each window depends on when the album was released).¹²⁹

121. *Id.*

122. Rachel Soloveichik, *Long-Lived Television Programs as Capital Assets* 28 (Bureau of Econ. Analysis, Working Paper No. WP2013-9, 2013), <https://www.bea.gov/system/files/papers/WP2013-9.pdf> [<https://perma.cc/AFN6-6AFZ>].

123. *Id.*

124. Rachel Soloveichik, *Books as Capital Assets* 3 (Bureau of Econ. Analysis, Working Paper No. WP2013-11, 2013), <https://www.bea.gov/system/files/papers/WP2013-11.pdf> [<https://perma.cc/ZH96-KG7S>].

125. *See generally* Soloveichik, *supra* note 124, at 14–19 (depreciation of books); Soloveichik, *supra* note 122, at 22–29 (depreciation of television); Soloveichik, *supra* note 116, at 21–29 (depreciation of music); Soloveichik, *supra* note 119, at 16–28 (depreciation of movies).

126. *See, e.g.*, U.S. COPYRIGHT OFFICE, *supra* note 48, at 12 (noting that technological development has put music copyright “under significant stress”).

127. The authors look forward to running similar analyses on other categories of information goods when, or if, the data become available.

128. This date range is a function of data limitations. Nielsen did not begin tracking all sales types—i.e., albums, tracks, and streams—until 2008, thereby limiting the universe of releases within which we can compare apples to apples.

129. Both of these data sets are © The Nielsen Company, used herein under license.

Our data are stratified by year, with each stratum containing a random sample of 120 albums released in each year between 2008 and 2017. The albums represent a broad range of genres, as shown in Table 1. This genre distribution is reflective of that seen in the population of total albums released, with most releases coming from the *Rock*, *Pop*, *Hip-Hop*, *R&B*, *Country*, *Latin*, and *Christian/Gospel* genres.

One aspect of our sample requires extra care: because it is drawn randomly from the entire population of releases in Nielsen's database, not all albums are equivalent. Most are typical "new releases," with the full range of sales and streams across all media. Some of these releases, however, were not sold as digital albums. Still others are "compilation" albums, for which the individual *songs* were not sold separately. To avoid artificially inflating the number of zero counts, we construct different subsets for song, physical album, and digital album sales, respectively. In each case, we include only units with at least one sale of *that medium* in the entire period.

Table 1. *Data Set Albums by Genre*

Genre	Albums
Blues	11
Children	29
Christian/Gospel	104
Classical	35
Comedy	9
Country	105
Electronic	26
Folk	6
Hip-Hop	101
Holiday	34
Jazz	31
Latin	88
New Age	6
Pop	83
R&B	61
Reggae	2
Rock	429
Soundtrack	29
World Music	9

B. Methodology and Empirical Analyses

To estimate the average commercial viability of music, we use Poisson regression, which is a standard econometric tool for the analysis of count data.¹³⁰ Poisson regression is part of a family of extensions of linear regression known as generalized linear models.¹³¹ The model assumes (a) that the dependent variable (in our case, a count of music sales or streams) takes a Poisson distribution with mean λ and (b) a log-linear relationship between the dependent variable and the covariates that we model (that is, the dependent variable is the log of a linear combination of the covariates). As emphasized by several authors, the Poisson model can also be seen as having a quasi-maximum likelihood justification, which means that the second of the above two assumptions is the critical one for point identification.¹³²

For our primary results, we investigate the univariate relationship between commercial viability and time, using four different dependent variables: physical album sales, digital album sales, song streams (aggregated by album), and song sales (again, aggregated by album). Our chief interest is investigating this relationship across all genres, mirroring the uniform nature of copyright law.

Since the release dates of albums are spread throughout our study window, we first generate a new variable—*Weeks Since Album Release* (t)—to standardize our measure of sales over time across albums. Then we regress sales (or streams) on flexible functions of t . Given that we expect to see a nonlinear relationship between sales and time, our specific implementation includes, in addition to time itself, a covariate for the square root of time.¹³³ Our sample includes a wide range of music, including both blockbuster hits and obscure artists. Because of this, there is significant heterogeneity in overall sales volume between albums, leading us to try a fixed-effects specification for our regressions.¹³⁴ However, our results are not sensitive to model choice, and we present the “pooled” results (i.e., without the individual effect) in the text below. In short, we use the parametric approximation

$$\lambda_{it} = \exp(\beta_1 x_{it} + \beta_2 \sqrt{x_{it}}),$$

130. JEFFREY M. WOOLDRIDGE, *ECONOMETRIC ANALYSIS OF CROSS SECTION AND PANEL DATA* 645–46 (1st ed. 2002).

131. Logistic regression, commonly used in empirical legal studies, is another family member.

132. Specifically, the estimator has a robustness to violations of the information matrix equality. See A. COLIN CAMERON & PRAVIN K. TRIVEDI, *REGRESSION ANALYSIS OF COUNT DATA* 63 (Econometric Soc’y Monographs No. 30, 1st ed. 1998); WOOLDRIDGE, *supra* note 130, at 646–56.

133. To account for both within-album correlation over time and over-dispersion of the dependent variables, we use robust standard errors clustered at the album level. See CAMERON & TRIVEDI, *supra* note 132.

134. Formally, the fixed-effect Poisson estimator (FEP) for our model has the form $\lambda_{it} = a_i \exp(\beta_1 x_{it} + \beta_2 \sqrt{x_{it}})$, where a_i is the album-specific effect. See Jerry Hausman, Bronwyn H. Hall & Zvi Griliches, *Econometric Models for Count Data with an Application to the Patents-R & D Relationship*, 52 *ECONOMETRICA* 909 (1984).

where λ_{it} is the number of sales (or streams) of album i at week t and x simply equals t .¹³⁵

1. Sales

Table 2 shows estimates of the pooled regression results across the full sample for each of the three “sales” outcome variables. Poisson coefficients are somewhat more complex to interpret than those of traditional ordinary least square regression because they do not characterize a simple linear relationship. Instead, the coefficients represent semi-elasticities: a one-point change in t is associated with a percentage change in the outcome variable (in our case, average sales volume). For a concrete way to interpret the results, consider song sales. A move from time period $t = 0$ (first week of release) to $t = 1$ (second week of release) is associated with a 0.76 change in predicted sales; in other words, a 22% decrease in the number of songs sold for each album.¹³⁶ Note that the rate changes with increases in t : a move from $t = 2$ to $t = 3$ reduces the average sales count by only 7%. This mild complexity is an unavoidable aspect of dealing with nonlinear models and somewhat increases the task of interpreting results.

Table 2. Pooled Poisson Estimates, Full Sample¹³⁷

	Song Sales, Aggregated by Album	Physical Albums	Digital Albums
t	0.004 (5.09)	0.019 (14.51)	0.015 (13.36)
\sqrt{t}	-0.252 (-12.83)	-0.615 (-20.9)	-0.567 (-27.57)
<i>Cons.</i>	9.29	8.05	8.62
n	1,048	1,088	1,122

135. The specification can be stated equivalently as $\log(\lambda_{it}) = x_{it}'\beta$.

136. To see why, note that $\hat{Y}(t=1) = \exp(9.29 + 0.004 \cdot 1 - 0.252 \cdot \sqrt{1})$ and $\hat{Y}(t=0) = \exp(9.29)$. Then, $\hat{Y}(1)/\hat{Y}(0) = 0.78$, and $1 - 0.78 = 0.22$ or 22%. Of course, this rate decreases as t increases (as the figures below demonstrate visually).

137. Z-statistics are in parentheses.

A more intuitive way to interpret results from a Poisson model is to look at the predicted (fitted) values plotted in Figures 1 through 4. In each case, the black line shows the model prediction. To demonstrate the close fit of the model to the underlying data, we underlay the actual average sales values as points. As the graphs suggest, the model is a close fit to the data for each of our dependent variables.

The results show a striking drop in the average number of sales of new music early in the release window. The average album loses approximately one-third of its initial song sales volume within the first two months of release and falls to half of its initial peak after only four months. By the end of the first year, average sales are only around 20% of the initial volume. There is also a marked difference between the shelf lives of whole albums and their songs. Average physical and digital album sales drop to almost zero after only a year. Clearly, at least some of the albums' constituent songs have a longer commercial life than the entire album.

Figures 1–4. *Pooled Poisson Regressions, Full Sample*

Figure 1. *Physical Whole Album Sales*

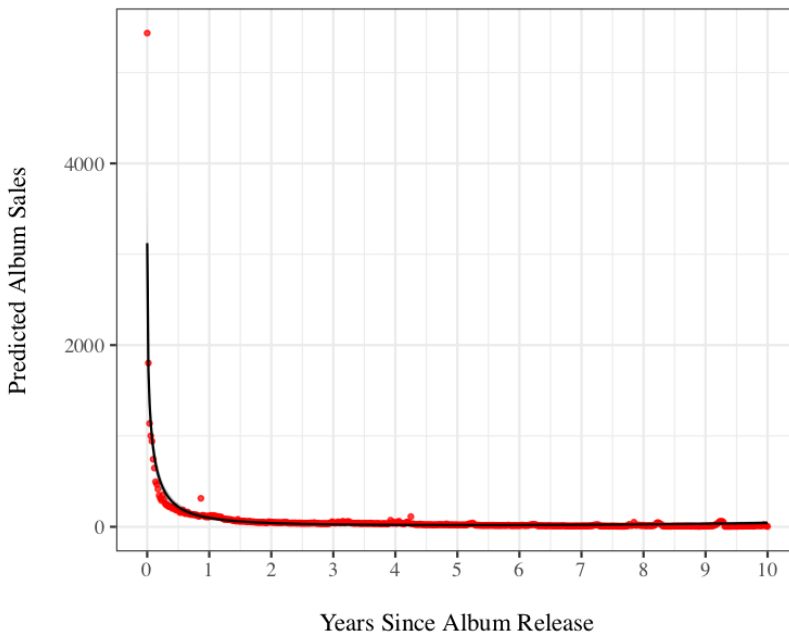


Figure 2. *Digital Whole Album Sales*

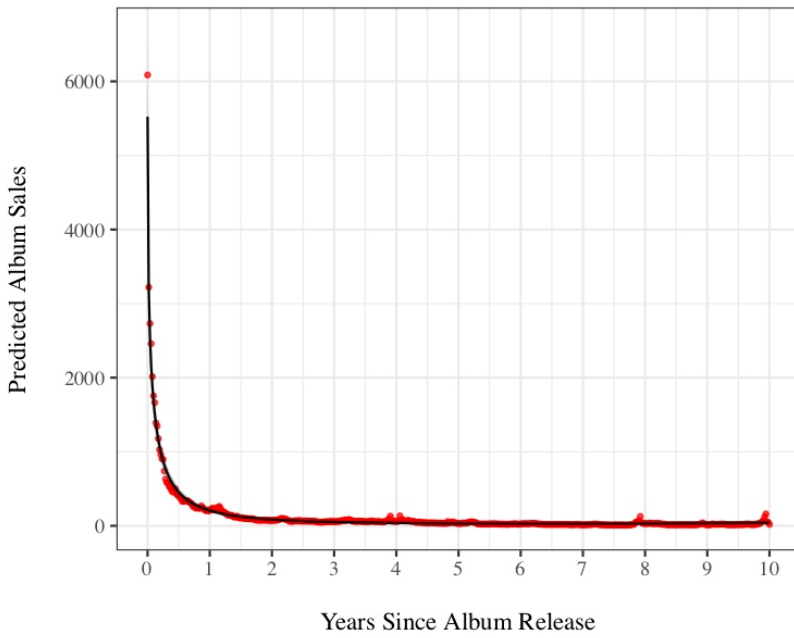


Figure 3. *Track Sales, Aggregated by Album*

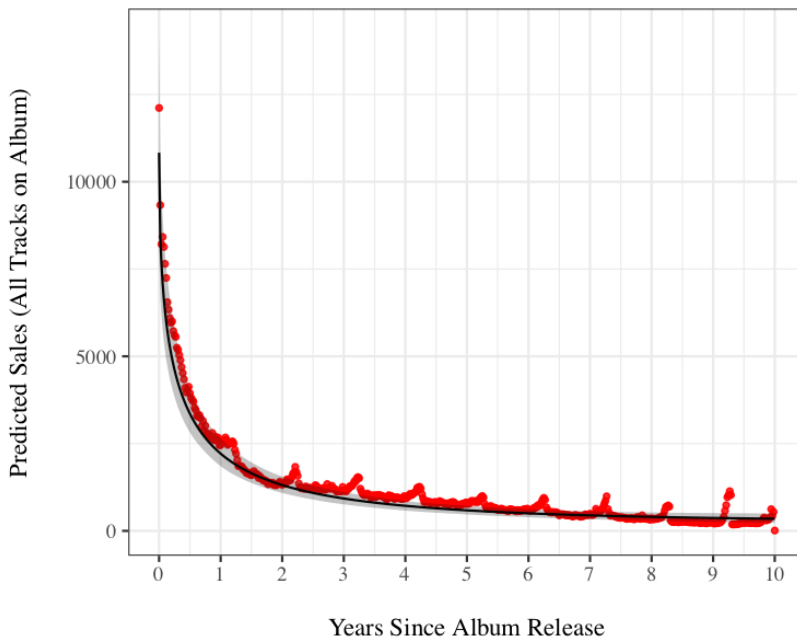
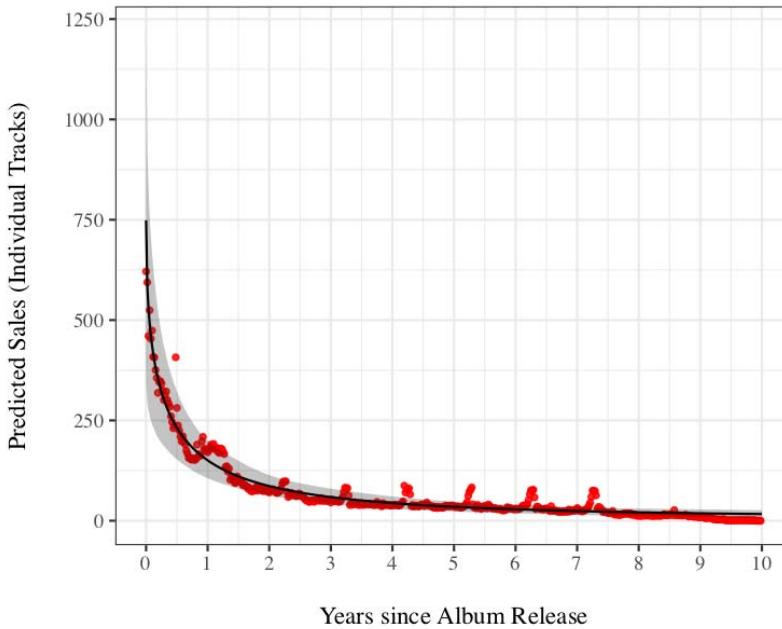


Figure 4. *Track Sales, Song-Level*

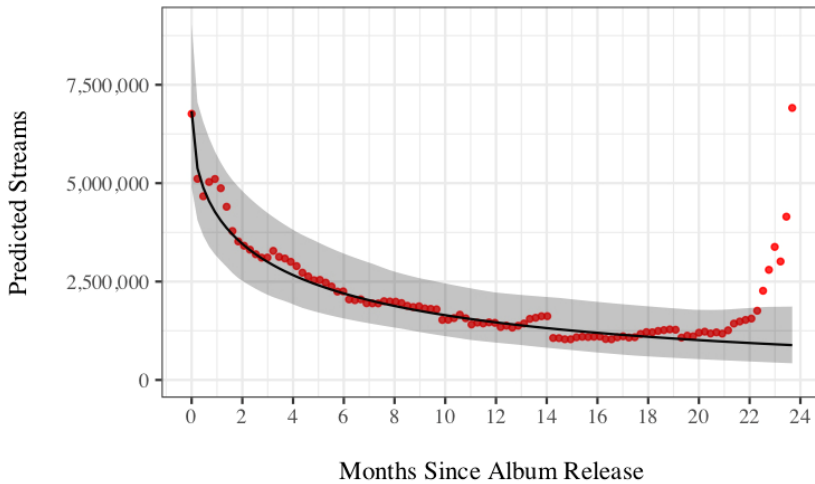
2. *Streaming*

Streaming is an increasingly important platform for music distribution but requires careful handling in our analysis. The major streaming services did not come online until much later in our study window—Apple Music and Google Play in 2015 and Amazon in 2016. Our analysis of song streaming patterns must therefore use a subset of the main data, and so we restrict our analysis in this Subpart to the final two years of our data: 2016 to 2017.

Table 3 and Figure 5 show the main results for streaming volumes. Due to the small sample size, our estimates are only marginally significant (our uncertainty is reflected in the much wider confidence intervals). Nevertheless, we can draw several tentative conclusions. Perhaps unsurprisingly, streaming availability results in far higher overall volume; our underlying data show that songs are streamed many more times than they are purchased. Average streaming volumes also appear to drop less rapidly than sales, suggesting that streaming may prolong the commercial viability of the average record. However, streaming reimbursement rates are so low that the economic benefit of this additional volume is unclear. Of course, these results are only suggestive; the short window of the data limits our ability to extrapolate future trends.

Table 3. Pooled Poisson Estimates, Restricted Sample

	Song Streams, Aggregated by Album
t	0.004 (0.49)
\sqrt{t}	-0.243 (-3.63)
<i>Cons.</i>	15.73
n	231

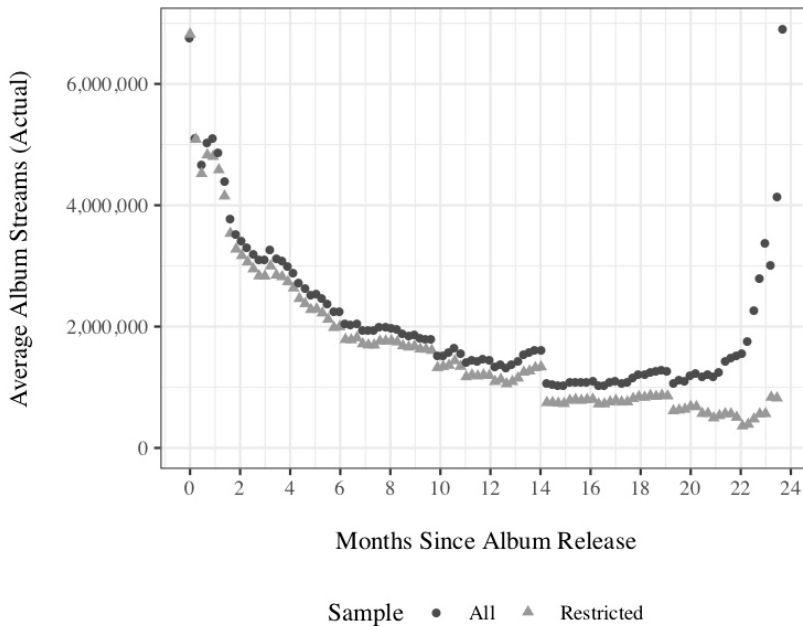
Figure 5. Song Streams (Aggregated by Album), Restricted Sample (2016–2017)

Although the model predictions are broadly similar to those in Figures 1 through 4, the raw data in Figure 5 exhibits an unusual upward tick toward the end. Further exploration shows that this is driven by two albums: Rihanna's *ANTI* and Pink Floyd's *Greatest Hits* album. These albums were released early in the study window (2016–2017) and happen to have atypically high volume of streams.¹³⁸

138. To be clear, both albums have a high number of streams, but their trajectories differ. Rhianna's *ANTI* has a higher-than-normal stream volume but essentially follows the same curve as the average album. Streams of the Pink Floyd album actually grow *over* the study window. While interesting, the full implications of this type of atypical growth exceed the scope of this Article and are reserved for future work.

In Figure 6, we show the average streaming volumes for the entire sample (“All,” as shown in Figure 5 above) and for a restricted sample, which excludes these two albums (“Restricted”). Because we observe only a handful of albums for the full two-year period (that is, albums which were released in early January 2016), these two albums have an outsize effect on the average at $t = 98, 99$, and so on. With those albums excluded, the shape of the curve conforms to our expectations, in line with the earlier results. Unfortunately, this is simply an artifact of our data—in particular, the small sample size created by the short window of observation for streaming.

Figure 6. *Effect of Outliers on Streaming (2016–17)*



Taken together, our results show that most commercial sound recordings earn the majority of their lifetime revenues in the months—not years—following their initial release. This suggests that the current term of copyright protection is excessive by a wide margin. Not only does copyright protection exceeding the period of commercial viability fail to further incentivize creation (which can be fully incentivized, and rewarded, in a much shorter period of time), it also leads to deadweight loss by denying the public use of the work for a term that far exceeds any benefit incurred.

C. Normative Analyses

We start from a normative assumption that the strongest copyright protections are needed when an information good is at its highest commercial viability. The empirical analysis in Part II.B shows that since most information goods earn the majority of all of the revenue that they are ever going to make in the first five to ten years following their release, this is where strong copyright protection makes the most sense.¹³⁹ This Subpart explains how this conclusion is normatively consistent with phenomena commonly observed in the relevant industries and discusses the selection bias that leads to, and perpetrates, over-protection in the space.

1. Commercial Viability

Having empirically demonstrated the excesses of a “life plus” durational standard when viewed through the lens of revenues, this Subpart introduces a new measure—commercial viability—and describes its advantages over the status quo. The period of “commercial viability,” as that term is used herein, refers to the period of time during which the average information good earns the substantial majority of its total revenues.

It is important to note that the vast majority of copyrightable information goods never reach the point of commercial viability at all; in some cases, these works are motivated by something other than financial gain. Copyright is not concerned with the latter. It should also be noted that the commercial viability standard proposed herein is intended for application to commercial information goods only. Some other copyrighted works—such as fine art pieces—have a different earnings trajectory, so this theory is not applicable to those works.

Why the emphasis on commercial viability? We suggest that revenue is the driver behind the decision to produce commercial information goods in the first place and thus lies at the very heart of the incentive theory.¹⁴⁰ Indeed, “copyright law celebrates the profit motive, recognizing that the incentive to profit from the exploitation of copyrights will redound to the public benefit by resulting in the proliferation of knowledge. . . . The profit motive is the engine that

139. To be sure, the exact length of the strong-protection period is debatable but need not be determined with precision here to make the point that it is much shorter than the current uniform term.

140. Cf. Stan J. Liebowitz & Alejandro Zentner, *The Motivations to Create 21* (Sept. 24, 2018) (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3195384 [<https://perma.cc/3M87-VGLT>] (showing that up to 80% of book authors are not primarily motivated by financial gain). Because these authors are likewise not aided by copyright protection, our proposals do not apply to their work product.

ensures the progress of science.”¹⁴¹ In reference to IP protection, James Madison likewise observed that “[t]he public good fully coincides . . . with the claims of individuals.”¹⁴²

While the concept of commercial viability is novel in the context of copyright term, it is well established in the broader context of how the copyright industries work. In support of commercial viability’s suitability for this purpose, the next three Subparts describe real-world applications of the commercial viability principle as recognized and employed by the industries that produce and distribute copyrightable information goods.

a. Versioning

Time-based “versioning,”¹⁴³ as the term is used herein, is a differential pricing strategy that offers different consumers different versions (or qualities, or formats) of an information good at different prices and at different times.¹⁴⁴ For example, most commercial movies are released first in theaters (i.e., “theatrical release,” sometimes simultaneously with an “in theaters now” pay-per-view version); then via regular pay-per-view, other on-demand services, or both; then on home-video formats (DVD/Blu-ray); and finally, they may be licensed for television.¹⁴⁵ These versioning decisions directly reflect commercial viability assessments on the part of copyright owners.

For example, the average movie has a theatrical life span of ten weeks,¹⁴⁶ and that figure itself is decreasing.¹⁴⁷ Within six months following its theatrical release, a typical movie has earned pretty much all of the box-office money that it is ever going to earn over its commercial lifetime.¹⁴⁸ Home-video release typically follows some four to six months after theatrical release. Most revenues from home-video formats are earned in the first year following release, after

141. *Am. Geophysical Union v. Texaco Inc.*, 802 F. Supp. 1, 27 (S.D.N.Y. 1992), *aff’d*, 60 F.3d 913 (2d Cir. 1994).

142. THE FEDERALIST NO. 43, at 288 (James Madison) (Jacob E. Cooke ed., 1961). The veracity of this claim is debatable; regardless, the sentiment expressed supports a financial motivation behind copyright protection.

143. “Versioning” is the economic term of art; the same concept is often called “windowing” in industry speak.

144. Paul Belleflamme, *Versioning in the Information Economy: Theory and Applications*, 51 CESIFO ECON. STUD. 329, 333 n.7 (2005) (“Time-based versioning [is defined as] follow[ing] the tactic of delay. For example, new books often appear first in hardcover and later as less expensive paperbacks. . . . The price of these choices usually declines with the viewing date.” (emphasis omitted)).

145. The versioning schedule for most commercial films also includes foreign theatrical, international on-demand, and multiple foreign-language home-video releases; however, as those formats are not affected by U.S. copyright law, they are excluded from the analysis.

146. Kamel Jedidi et al., *Clustering at the Movies*, 9 MARKETING LETTERS 393, 393 (1998).

147. See Mark Lorenzen, *Creativity in Context: Content, Cost, Chance, and Collection in the Organization of the Film Industry*, in CREATIVITY, INNOVATION AND THE CULTURAL ECONOMY 93, 107 (Andy C. Pratt & Paul Jeffcutt eds., 2009).

148. Soloveichik, *supra* note 119, at 17.

which revenues from DVD and Blu-ray sales drop sharply and continue declining year after year, albeit at a slowing rate of decline.¹⁴⁹ Next, most movies are shown on premium cable channels, typically some nine months or so following their theatrical release.¹⁵⁰ These movies then move to regular cable networks around twenty-four months following initial release.¹⁵¹

In the music industry, technology has shaken up the traditional versioning strategy, namely: hit-single release (radio only), physical-album release, second-single release (radio and physical), deluxe physical-album release, and catalog-compilation release (e.g., *The Best of Salt-n-Pepa*). In contrast, the modern, digital versioning strategy for music typically looks more like this:

Table 4.

Time from Initial Release (In Months)	Format
0	Simultaneous radio and digital download of hit single; release to streaming services (sometimes exclusive to one streaming platform)
.5	Simultaneous physical album release and digital album and tracks available for download
6	Streaming exclusives end; album and all tracks go to all streaming services (if formerly withheld)
18	Active marketing ceases; album moves to catalog ¹⁵²

Conversations with music industry sales executives have revealed a couple of additional interesting recent developments. First, streaming services have begun to offer windowing *within* their platforms. Specifically, premium-tier users—i.e., those who pay—get access to albums sooner than users on the free-mium (or ad-sponsored) tier.¹⁵³ Second, the nature of ongoing discovery via

149. *Id.* at 17–18 (showing a depreciation rate of 14% per year for four to nine years after the date of home-video release and a 5% depreciation rate between years ten and fourteen).

150. HAROLD L. VOGEL, ENTERTAINMENT INDUSTRY ECONOMICS: A GUIDE FOR FINANCIAL ANALYSIS 138–40 (9th ed. 2015).

151. *Id.*

152. Indeed, the industry defines catalog product as works eighteen or more months from the date of release. *See, e.g., Does the Music Industry's Definition of 'Catalogue' Need an Upgrade?*, MUSIC BUS. WORLDWIDE (Dec. 5, 2017), <https://www.musicbusinessworldwide.com/music-industrys-definition-catalogue-need-upgrade/> [<https://perma.cc/VVR2-H5DG>].

153. *See* Press Release, Universal Music Grp., Spotify and Universal Music Group Announce Global, Multi-Year License Agreement (April 4, 2017), <https://www.universalmusic.com/spotify-and-universal-music-group-announce-global-multi-year-license-agreement/> (“Starting today, Universal artists can choose to release new albums on premium only for two weeks, offering subscribers an earlier chance to explore the complete creative work, while the singles are available across Spotify for all our listeners to enjoy.”).

playlists on music-streaming services like Spotify appears to extend some albums' commercial runs from the traditional eighteen months to—on the long end—something approaching thirty-six months.¹⁵⁴

Similarly, particularly successful television programs (i.e., those that make it past a pilot and first season and, ideally, continue on to syndication)—called “long-lived television programs” in industry-speak—begin their lives on either a cable network or on broadcast television and then move to syndication (only when they are no longer producing new episodes), usually on local broadcast or specialty cable channels.¹⁵⁵

b. Winner-Takes-All

For better or worse, the winner-takes-all phenomenon described herein pervades the entertainment industries and serves as another example of commercial viability driving decisions about which content to produce. The cost of a movie ticket or the price of a CD, for example, remains constant to the consumer regardless of how much money its production cost the studio or label to produce. For this reason, one could be forgiven for thinking that those in the business of producing information goods would aim to keep costs as low as possible, thereby maximizing their revenue potential for the work. In fact, the opposite is often the case in the entertainment industries, where movie studios, music labels, and book publishers universally engage in a business strategy that invests huge sums of money into a handful of individual productions—films, albums, books—in hopes of striking it big.¹⁵⁶ Only a few of these works succeed; most incur losses, sometimes very large ones. Books are particularly susceptible to the winner-takes-all phenomenon; a typical book sells only a few copies immediately after publication and then disappears forever.¹⁵⁷

The idea of a world in which superstars rise to fame and fortune while other artists toil in obscurity is as old as the idea of microeconomics itself. Ironically, in his seminal work, economist Alfred Marshall actually used a musician as his example of a professional not prone to the curses of superstardom:

[S]o long as the number of persons who can be reached by a human voice is strictly limited, it is not very likely that any singer will make an advance on the

154. This anecdotal evidence about a delayed catalog period is supported by a recent case study conducted by Spotify. In it, the company analyzed all tracks released during April 2015 and found that 40% of those tracks actually streamed *more* in year two than in year one. See *Does the Music Industry's Definition of 'Catalogue' Need an Upgrade?*, *supra* note 152. This and related streaming-specific phenomenon are reserved for future work.

155. As with some movies, some television programs have a foreign-market strategy, as well, but that versioning aspect is excluded from this analysis as irrelevant to the U.S. copyright question.

156. See, e.g., ANITA ELBERSE, BLOCKBUSTERS: HIT-MAKING, RISK-TAKING, AND THE BIG BUSINESS OF ENTERTAINMENT (2013).

157. See generally ALBERT N. GRECO, THE BOOK PUBLISHING INDUSTRY (2d ed. 2005).

£10,000 said to have been earned in a season by Mrs. Billington at the beginning of the last century, nearly as great as that which the business leaders of the present generation have made on those of the last.¹⁵⁸

Obviously, advances in recording and distribution have proven Marshall wrong.

Economist Sherwin Rosen has put a finer point on these advances; his theoretical model finds superstar effects to be driven by imperfect substitution and scale.¹⁵⁹ “Scale,” in this context, means that an artist (or band, film, or book) can use ever-evolving technology to reach a bigger and bigger audience.¹⁶⁰ “Imperfect substitution” here basically means that people prefer to listen to a single song that they like rather than listen to two dozen songs that they don’t.

The challenge with the blockbuster strategy embraced by big entertainment is that success breeds success; directors of box-office hits are hired to direct other films destined to be box-office hits, resulting in a “positive feedback effect[]” that yields a handful of fortunate creators and a relative dearth of opportunity for everyone else.¹⁶¹ In addition to being inefficient, winner-takes-all markets contribute to income and wealth inequality and raise concerns about distributional justice.¹⁶²

Importantly for our purposes, the winner-takes-all model serves as an exemplar of the commercial-viability assessment. A film studio knows by opening weekend whether it has a hit on its hands—and therefore a product worth investing additional marketing dollars in—or a flop—in which case it can scratch plans for additional marketing and cut its losses.

c. Consumer Behavior

The way in which consumers engage with and consume information goods dictates how, when, and for how much those works are made available and sold. In other words, consumer behavior is a primary factor in determining commercial viability.

When it comes to consumption, there are several constraints that impact which works a consumer will spend money on. First, there are simple time (and attention) constraints and competition for that time and attention. For example, the average consumer sees no more than three to four films in the theater per

158. ALFRED MARSHALL, *PRINCIPLES OF ECONOMICS* 728 (MacMillan 1890).

159. Sherwin Rosen, *The Economics of Superstars*, 71 *AM. ECON. REV.* 845, 845–46 (1981).

160. Ironically, at the same time as technology has greatly expanded the audience for information goods, it has also severely limited revenue given the cheap and easy replication options.

161. See ELBERSE, *supra* note 156, at 130 (describing a “lucrative career for the lucky winner and a dearth of opportunities for the hundreds of other hopefuls”).

162. See, e.g., ROBERT H. FRANK & PHILIP J. COOK, *THE WINNER-TAKE-ALL SOCIETY* 212–17 (1995) (suggesting, among other things, a greater tax burden on society’s biggest “winners” to even the playing field). Some European countries, like France and Spain, compensate for this phenomenon by offering state subsidies to developing artists. Such a subsidy program has never caught on in the United States. For a list of European state-sponsored art grants, see, e.g., *Funding in Europe*, DUTCHCULTURE TRANSARTISTS, <https://www.transartists.org/article/funding-europe> [https://perma.cc/AB9M-87WW] (last updated July 2016).

year.¹⁶³ (And then, most of those moviegoers see the same handful of films as their moviegoer friends.) With hundreds of movies made every year,¹⁶⁴ that is a considerably outsized supply (and one arguably supported by an overly protective copyright regime).

Indeed, today's consumer suffers from an embarrassment of content. In 2016, for example, the film industry released 718 movies.¹⁶⁵ According to Billboard, the number of albums released by the record industry in 2010 went down 22% from the year before to a “mere” 75,000 titles (of which, to the winner-takes-all point above, 60,000 sold fewer than 100 units *total*).¹⁶⁶ The advent of self-publishing—especially on user-friendly platforms like Amazon—has added an additional 700,000 self-published titles to the 300,000 books traditionally published each year.¹⁶⁷ That's one million books per year. All of this means that the average consumer has less time to spend revisiting a favorite film, exploring the catalog of a newly discovered musician, or getting even remotely close to reading this year's hottest young-adult fiction, thereby shrinking still further the potential for revenues too far beyond a work's release date.¹⁶⁸

Consumption patterns, which vary from good to good, also impact commercial viability. For example, under current copyright law, a consumer who purchases a hard-copy book can reread it or pass it on to a friend without having to pay additional monies to the publisher.¹⁶⁹ This process allows the book's publisher only one bite at the apple per consumer, with format and pricing decisions made accordingly. A consumer who pays to download a single song might subsequently download a compilation containing that same track and then might also subscribe to a service like Spotify that allows her to stream the same song from her desktop at work. This phenomenon represents multiple bites at the same apple for the music publisher, record label, songwriter, and recording artist, with differential impact on versioning decisions.

In addition, the inherent social utility of consuming the same content as one's peers leads social media to play an increasingly important role in dictating

163. See, e.g., MOTION PICTURE ASS'N OF AM., THEATRICAL MARKET STATISTICS 16 (2016), https://www.mpa.org/wp-content/uploads/2017/03/MPAA-Theatrical-Market-Statistics-2016_Final.pdf [<https://perma.cc/4H94-M2GW>]; *id.* at 3 (“Audiences between the ages of 18 and 24 attended an average of 6.5 movies over the course of the year—more than any other age group.”).

164. *Id.* at 4, 21 (noting 718 total films released in 2016, up 1% from the total released in 2015).

165. *Id.*

166. Glenn Peoples, *Business Matters: 75,000 Albums Released in U.S. in 2010 – Down 22% from 2009*, BILLBOARD (Feb. 18, 2011), <https://www.billboard.com/articles/business/1179201/business-matters-75000-albums-released-in-us-in-2010-down-22-from-2009> [<https://perma.cc/56TE-QRE2>].

167. BOWKER, SELF-PUBLISHING IN THE UNITED STATES, 2010-2015, at 3 (Sept. 7, 2016), <http://media.bowker.com/documents/bowker-selfpublishing-report2015.pdf> [<https://perma.cc/U73X-JYT7>]; Steven Piersanti, *The 10 Awful Truths About Book Publishing*, BERRETT-KOEHLER PUBLISHERS, <https://www.bkconnection.com/the-10-awful-truths-about-book-publishing> (last updated Sept. 26, 2016).

168. For a thoughtful and poignant perspective on how today's consumer cannot hope to make a dent in the annual cultural offerings, see Linda Holmes, *The Sad, Beautiful Fact That We're All Going to Miss Almost Everything*, NPR (Apr. 18, 2011, 9:55 AM), <http://www.npr.org/blogs/monkeysee/2011/04/21/135508305/the-sad-beautiful-fact-that-were-all-going-to-miss-almost-everything> [<https://perma.cc/L4ZR-YJBK>].

169. See 17 U.S.C. § 109(a) (2012).

consumption. A consumer often derives greater utility from watching the same television show as her coworkers because that viewing decision gives her something to chat about around the watercooler. Book clubs depend upon this same premise, as does the exchange of playlists on services like Spotify (which may also announce to your Facebook “friends” or Twitter “followers” which songs you have listened to so that they can listen to the same songs, further narrowing the field of songs in play commercially).

This social influence is compounded on platforms like Facebook that allow you to “share” something with your network that someone else has shared with you: “To make popular content, it’s not enough to know your friends or your followers It’s about knowing the friends of your friends and the followers of your followers. For something to go big, it has to be interesting . . . beyond your immediate audience—the audience of your audience.”¹⁷⁰ It might also be noted that the sheer volume of content available today may reduce the benefits of network effects for consumers: if two friends each randomly choose one of the 700 original television shows currently available on Netflix,¹⁷¹ they are likely to choose different shows. Fewer options might increase the odds that they would both choose the same show, thereby giving them something to bond over.

Network effects have also been shown to have significant influence on consumer preferences. In a series of experiments, sociologists Matt Salganik and Duncan Watts invited participants to log in to a site offering samples of songs with the opportunity to download some of the songs for free.¹⁷² When logged in and prior to making their download selections, the participants could see how each song ranked in terms of how many times it had been downloaded by prior participants. The first 750 participants saw the actual download tallies. The subsequent 6,000 subjects saw an inverted tally of download rankings (i.e., rankings that put the least popular song at the top and the most popular song at the bottom). In the second group, the least popular song (which they thought was the most popular) did surprisingly well in terms of download counts, and the most popular song (which they thought was least popular) performed dismally, thus demonstrating that the perception that a song is popular has a profound effect on its popularity.¹⁷³

Technological development and concomitant changes in consumer behavior continue to impact versioning decisions, of course, but they do so by *shifting* revenue streams—not by extending them. For example, the advent of e-books

170. DEREK THOMPSON, *HIT MAKERS: THE SCIENCE OF POPULARITY IN AN AGE OF DISTRACTION* 215 (2017).

171. Todd Spangler, *Netflix Eyeing Total of About 700 Original Series in 2018*, VARIETY (Feb. 27, 2018), <https://variety.com/2018/digital/news/netflix-700-original-series-2018-1202711940/> [<https://perma.cc/FR24-GK7L>].

172. Matthew Salganik & Duncan Watts, *Leading the Herd Astray: An Experimental Study of Self-Fulfilling Prophecies in an Artificial Cultural Market*, 71 SOC. PSYCHOL. Q. 338, 340–44 (2008).

173. *Id.*

(which are not so readily shareable as physical volumes) has added a third format choice, and price point, to the binary “hardcover or paperback” decision when it comes to books: a consumer who might have otherwise purchased one of the traditional versions may instead opt to purchase an e-book. This is not a second bite, as that consumer is less likely to *also* purchase a hardback or paperback version (since she can read and reread the e-book without paying additional royalties). That consumer may not be able to pass their e-book version on to a coworker, however, potentially leading to one more additional sale for the publisher than it might have gotten had the consumer initially purchased the book in physical (i.e., readily shareable) format.

In film, pay-per-view movies that run simultaneously with a film’s theatrical run—so-called “in theaters now” movies—may expand a film’s overall viewership, while reducing its box-office take (or even its box-office cut, as some theaters will accordingly pay less for a nonexclusive product). The effect on revenue, then, varies. It does not, however, expand the *duration* over which the film earns revenue.

2. *Selection Bias*

The current copyright laws cover a broad range of subject matter—from registration eligibility to fair-use exceptions for infringement—and many different types of content—from photographs to choreography to cheerleader uniforms. As such, there is a tendency to overprotect large swaths of copyrightable work in an effort to address niche situations that may merit some greater level of protection. In particular, lobbying drives a disproportionate amount of attention toward especially successful content, resulting in selection bias that perpetrates overprotection in the space.

A recent example of this selection bias in favor of atypically successful works is the CPA Act,¹⁷⁴ signed into law in late 2018 as part of the Music Modernization Act of 2018 (MMA).¹⁷⁵ The name of the Act itself is suggestive of its bias: CPA stands for Classics Protection and Access. Which songs qualify as “classics”? And why is it copyright’s role to compensate those songs uniquely from other, nonlegacy artists’ (presumably less important) works?

So what does the CPA Act do? In a nutshell, pre-1972 sound recordings do not enjoy federal copyright protection.¹⁷⁶ Instead, to the extent they are protected at all, it is by a hodgepodge of state and common law.¹⁷⁷ This has always

174. Classics Protection and Access Act, Pub. L. No. 115-264, 132 Stat. 3676, 3728–37 (2018). Title II of the MMA was formerly known as the Compensating Legacy Artists for their Songs, Service, and Important Contributions to Society, or CLASSICS Act.

175. Orrin G. Hatch–Bob Goodlatte Music Modernization Act, Pub. L. No. 115-264, 132 Stat. 3676 (2018).

176. U.S. COPYRIGHT OFFICE, FEDERAL COPYRIGHT PROTECTION FOR PRE-1972 SOUND RECORDINGS, at vii (2011), <https://www.copyright.gov/docs/sound/pre-72-report.pdf>.

177. *Id.*

resulted in differential treatment of these works, and the advent of digital streaming has only served to further exacerbate the issue. The CPA Act aims to bring pre-1972 sound recordings under federal-copyright protection.

Specifically, the CPA Act adds a new chapter—Chapter 14—to Title 17 of the U.S. Code in which it establishes that unauthorized use of a sound recording fixed before February 15, 1972, shall be subject to the same remedies as any other form of copyright infringement.¹⁷⁸

While this law sounds like a step in the right direction, in practice, the CPA Act only benefits sound recordings that are being actively exploited. In other words, the rights holder for a hit oldie recording stands to benefit, while an obscure (i.e., average) jazz artist is unlikely to receive any benefit. The latter's record label, if she has one, is not likely to revive the (commercially valueless) recording or otherwise make it available anew on streaming services. At the same time, others are prevented from doing so. Despite this arguable conflict with both of copyright's policy goals—incitizing creation (because you can't incitize works already created or creators already deceased) and ensuring consumer access (since the Act keeps works out of the public domain for longer than they otherwise would have been)—the CPA Act, as part of the MMA, passed unanimously in the House and the Senate. This demonstrates a high level of selection bias in favor of overprotection.

III. SUMMARY AND POLICY IMPLICATIONS

The impetus behind our analysis herein was a desire to ground the conversation about copyright's term in industry-certified data and robust empirical analysis. We hope that the data set we have developed here will inform not only other academics working in the space but also industry players on both sides of the debate as they work to influence and shape copyright legislation going forward. Part III.A summarizes our empirical findings; Part III.B teases out some possible policy implications of those findings.

A. Summary

Specifically, our analysis shows that for the average musical work, the drop-off in sales of albums and songs is extraordinarily rapid, falling to one-tenth of initial levels well within a year. Notably, our analysis focuses on the overall empirical patterns in a representative sample of music albums and songs. It intentionally does not tease out higher performing genres, blockbuster artists, or "greatest hits" compilations. This is because copyright treats all music, regardless of commercial success, in the same way. Consequently, while we acknowledge a temptation toward subgroup analysis, we resist doing so here

178. 17 U.S.C. § 1401(a)(1) (2012).

due to lack of import from a statutory perspective. Instead, we leave the question of subgroup analysis to future empirical research.

B. *Implications*

The empirical analysis in Part II suggests that a better approach to balancing copyright's benefits is to (i) afford the creator (or copyright owner) the most protection when it will provide the most benefit for the creator, and then (ii) lessen that protection (thereby expanding access for users) when such a shift results in the least burden to the creator. We propose that a duration of somewhere between five to ten years would serve the overwhelming majority of information goods, during which time all uses by a party other than the rights holder (excepting fair uses) would require advance negotiation with, and permission from, the copyright owner.¹⁷⁹ Thereafter, the regime could open up to various compulsory uses.

The estimated duration of five to ten years for the strongest protection is consistent with similar analyses on patents conducted by economist William Nordhaus in the late 1960s and early 1970s. In his work on how much protection patent law should afford inventors and innovators, Nordhaus determined that "once a life of six or ten years has been reached, the level of welfare generated by the patent system is very insensitive to the life of the patent."¹⁸⁰ Our analysis reaches the same general conclusion in the copyright context.

Our analysis offers a few interesting policy insights: Part III.B.1 explores several possible changes to copyright's duration and/or strength that work to reconcile the term and level of protection with the period of time in which the creators and intermediaries have the most to gain. Part III.B.2 considers the potential impact of such changes for both orphan and traditionally marginalized works. Finally, Part III.B.3 considers ways in which the insights presented herein might be useful to lawmakers considering statutory amendments.

179. To be clear, the precise duration does not need to be determined definitively here in order for the hybrid regime to improve upon the status quo; the legislature could hear various perspectives and reach a reasoned time period. It suffices for these purposes to simply note that it should be significantly shorter than the current copyright term.

180. William D. Nordhaus, *The Optimum Life of a Patent: Reply*, 62 AM. ECON. REV., 428, 428 (1972). For more background on the work from which Nordhaus's *Optimum Life of a Patent* article stems, see generally WILLIAM D. NORDHAUS, INVENTION, GROWTH, AND WELFARE (1969).

1. *For Copyright Owners*

- a. *Dynamic Copyright Protection*

First, our analysis suggests that perhaps the strength of copyright protection should change over time. In their work on externalities in IP, Professors Brett Frischmann and Mark Lemley warn that “at some point, there are decreasing returns (in terms of improved incentives) to allowing property owners to capture more of the value from their inventions.”¹⁸¹ Our analysis suggests that an optimal copyright regime might flip to a looser period of protection at precisely this point of decreasing returns.

In other words, we could implement a regime with the strongest protections in period one, lasting five to ten years. A second period could be set to last somewhere from twenty to twenty-five years, a somewhat arbitrary time period intended to bring copyright in line with the protections afforded most patented works. The important thing in this secondary phase is that the owner of the average work has, by this time, reaped a substantial portion of the work's lifetime commercial value. As such, copyright protection beyond the first phase simply affords the rights holder additional time to realize residual income, if any, from ongoing or delayed interest in the work.

Delayed earnings are an undeniable source of income for some works and some artists in some situations. For example, an artist's death, especially if sudden and unexpected, may spark renewed interest in her body of work, both frontline and catalog.¹⁸² As mentioned in Part II.C.1.a, some commentators have observed that the advent of streaming has afforded older artists a chance to be rediscovered by a new generation of fans.¹⁸³ Of course, these effects, when felt, are experienced by a handful of superstar artists only, and so they may not justify the institution of what amounts to a blanket term of overprotection for the average work.

A prescription for differential treatment of copyrighted works at different points in the copyright term finds precedent, ironically, in the CTEA itself. The CTEA amended § 108 of the Copyright Act to provide:

181. Brett M. Frischmann & Mark A. Lemley, *Spillovers*, 107 COLUM. L. REV. 257, 258 (2007).

182. See, e.g., Andrew Gilden, *IP, R.I.P.*, 95 WASH. U. L. REV. 639, 694 (2017) (“[I]t is important not to overlook that mourning can be an incredibly lucrative business opportunity For example, following their deaths, Michael Jackson captured the top ten spots on the Billboard albums chart, Whitney Houston held seven of the top ten spots on Amazon's best seller list, and Prince's sales surged 16,000 percent. Celebrities can sometimes earn substantially more in death than in life, fueled by lucrative, nostalgia-rich ventures like Cirque du Soleil and Graceland, on top of diverse merchandising and advertising opportunities.” (footnotes omitted)).

183. See, e.g., Chris Parker, *Old Vs. Older Catalog: Does Being a Legacy Artist Mean There's More to Love? (Analysis)*, HOLLYWOOD REP. (Aug. 5, 2013), <https://www.hollywoodreporter.com/earshot/old-older-catalog-does-being-599680> [<https://perma.cc/N3B9-K6KK>] (“[T]hanks to digital availability and streaming sites, enduring artists with broad back catalogs have seen resurgent interest in older albums that in the past might have languished out-of-print or without retail distribution.”).

(h) (1) For purposes of this section, *during the last 20 years of any term of copyright of a published work*, a library or archives, including a nonprofit educational institution that functions as such, may reproduce, distribute, display, or perform in facsimile or digital form a copy or phonorecord of such work, or portions thereof, for purposes of preservation, scholarship, or research . . .¹⁸⁴

Here, the legislature acknowledges the call for, and prescribes, differential treatment for late-term copyrighted works. In its own words, the House Judiciary Committee explained that “[t]his exemption would allow library users the benefit of access to published works *that are not commercially exploited or otherwise reasonably available* during the extended term.”¹⁸⁵ In other words, the exemption allows greater access to works that have exhausted their commercial viability and to orphan works.

Termination rights, embodied at § 203 of the Copyright Act, also serve as precedent for differential treatment based on duration of copyright protection:

[a](3) Termination of the grant may be effected at any time *during a period of five years beginning at the end of thirty-five years from the date of execution of the grant*; or, if the grant covers the right of publication of the work, *the period begins at the end of thirty-five years from the date of publication* of the work under the grant or at the end of forty years from the date of execution of the grant, whichever term ends earlier.¹⁸⁶

Both of these limitations on copyright’s protection suggest support for a dynamic copyright system.

Perhaps the biggest challenge for a proposal for dynamic copyright protection comes from the Berne Convention, which requires signatories to adhere to a term of “life of the author and fifty years after his death.”¹⁸⁷ Citing a desire for uniformity and harmonization with EU-member countries that, in 1993, adopted a life-plus-seventy standard,¹⁸⁸ the Committee on the Judiciary noted that:

copyrighted works from nonmember countries will enjoy only the protection granted under the domestic laws of those countries if their respective terms of protection are less than the life-plus-70 standard adopted by the EU. In other words, works copyrighted in the United States would remain protected only for the lifetime of the author plus 50 years.¹⁸⁹

184. Copyright Term Extension Act, S. 505, 105th Cong. (1998) (emphasis added).

185. H.R. REP. NO. 105-452, at 8 (1998) (emphasis added).

186. 17 U.S.C. § 203(a)(3) (2012) (emphasis added). The CTEA amended § 203 by deleting “by his widow or her widower and his or her children or grandchildren” from the first sentence in subsection (2) of subsection (a) and by adding subsection (D) to subsection (2). Copyright Term Extension Act, Pub. L. No. 105-298, § 103, 112 Stat. 2827, 2829 (1998).

187. Berne Convention, *supra* note 4, at art. 7(1).

188. Council Directive 93/98, 1993 O.J. (L 290) 10 (EC).

189. S. REP. NO. 104-315, at 4–5 (1996).

Thus, “[i]n order to safeguard the Nation’s economic interests and those of America’s creators in the protection of copyrighted works abroad,” the Sonny Bono Act was introduced and eventually passed.¹⁹⁰

Our proposal for dynamic copyright protection arguably contravenes this requirement by adjusting downward the level of protection afforded over time, thereby ending “full strength” copyright protection well before Berne’s life-plus period has lapsed. To this, we offer a few possible responses. First, this reaction may be overly determinative. The Convention doesn’t specify that the same level of protection must hold throughout the prescribed term. To the contrary, several articles in the Convention contain language suggesting that the drafters recognized a call for some level of flexibility within and between individual regimes. With regard to fair uses, for example, Article 10(2) says:

It shall be a matter for legislation in the countries of the Union, and for special agreements existing or to be concluded between them, to permit the utilization, to the extent justified by the purpose, of literary or artistic works by way of illustration in publications, broadcasts or sound or visual recordings for teaching, provided such utilization is compatible with fair practice.¹⁹¹

Similarly, Article 10bis(1) begins:

It shall be a matter for legislation in the countries of the Union to permit the reproduction by the press, the broadcasting or the communication to the public by wire of articles published in newspapers or periodicals on current economic, political or religious topics, and of broadcast works of the same character, in cases in which the reproduction, broadcasting or such communication thereof is not expressly reserved.¹⁹²

In adopting a commercial viability standard vis-à-vis commercial information goods, the United States might well be acting consistently with Berne’s recognition of each country’s sovereign legislative authority.

Second, the United States has arguably only partially complied with at least a few other Berne requirements—moral rights and the prohibition on formalities, for example. Article 5(2) of the Convention prohibits formalities, such as formal copyright registration, in order to enjoy copyright protections.¹⁹³ The United States has skirted the edges of this requirement since first signing on in 1989¹⁹⁴: under the Copyright Act, an author doesn’t have to formally register to earn a copyright, but registration is required in order to sue for infringement in hopes of recovering statutory damages or attorneys’ fees.¹⁹⁵ In a recent decision,

190. *Id.* at 5.

191. Berne Convention, *supra* note 4, at art. 10(2). For the avoidance of doubt, the term “fair use” as it is understood in the United States does not exist in Berne; rather, paragraph two of article ten refers to a comparable concept.

192. *Id.* at art. 10bis(1).

193. *Id.* at art. 5(2).

194. *See generally* Berne Convention Implementation Act of 1988, Pub. L. No. 100-568, 102 Stat. 2853.

195. 17 U.S.C. §§ 408(a), 411(a) (2018).

the Supreme Court clarified that such registration occurs “only when the Copyright Office grants registration” and not upon the filing of the application.¹⁹⁶ Regardless, the United States requires registration for infringement recovery but only for United States authors,¹⁹⁷ thereby arguably complying with its obligations under Article 5(2). Our dynamic protection proposal could likewise be limited to U.S. authors.

Alternatively, our proposal for dynamic copyright protection might be similarly implemented via remedies. For example, we might limit copyright owners to actual damages, a standard that would likely deter litigation around all but the smallest percentage of (very successful) works. In his work on copyright formalities, Christopher Sprigman proposes viewing formalities such as registration as a liability rule for unregistered works:

[L]imiting remedies for unauthorized use to actual damages, and eliminating the prospect both of injunctive relief and the award of the defendant’s profits . . . effectively permit[ting] use of a work without authorization, in return for a payment that would be measured by the value of a license had one been negotiated *ex ante* the use.¹⁹⁸

The 1971 Appendix to Berne is another example of the Convention’s flexibility toward remedies. In establishing compulsory licenses for translation and reproduction, for example, the Appendix sets specific time limits after which the licenses may be utilized.¹⁹⁹

In another example of the United States’ partial compliance with Berne, Article 6bis of the Convention describes the moral rights of authors that signatory countries must recognize:

Independently of the author’s economic rights, and even after the transfer of the said rights, the author shall have the right to claim authorship of the work and to object to any distortion, mutilation or other modification of, or other derogatory action in relation to, the said work, which would be prejudicial to his honor or reputation.²⁰⁰

In the United States, only some of these rights have been formally acknowledged and, then, only with regard to visual arts under the Visual Artists Rights Act of 1990 (VARA).²⁰¹ This arguably runs counter to a literal reading of

196. Fourth Estate Pub. Benefit Corp. v. Wall-Street.com, LLC, 139 S. Ct. 881, 888 (2019).

197. 17 U.S.C. § 411(a) (stating “no civil action for infringement of the copyright in *any United States work* shall be instituted until preregistration or registration of the copyright claim has been made” (emphasis added)). *But see* Football Ass’n Premier League Ltd. v. YouTube, Inc., 633 F. Supp. 2d 159, 162 (S.D.N.Y. 2009) (holding that 17 U.S.C. § 412, which prohibits recovery of statutory damages and attorneys’ fees for infringement of unregistered works, does not include an exemption for unregistered foreign works).

198. Christopher Jon Sprigman, *Berne’s Vanishing Ban on Formalities*, 28 BERKELEY TECH. L.J. 1565, 1567 (2013).

199. Berne Convention, *supra* note 4, at art. II, III. For a robust summary of the Appendix’s terms and time limits, see DANIEL J. GERVAIS, (RE)STRUCTURING COPYRIGHT 341–44 (2017).

200. Berne Convention, *supra* note 4, at art. 6bis(1).

201. 17 U.S.C. § 106A.

Berne's requirement. Notwithstanding these potential breaches, the United States continues operating under the Convention, such that the same might be expected with the introduction of a commercial-viability standard for dynamic copyright protection.

The idea of dynamic copyright protection is not entirely without precedent. In addition to the work by Hughes and Liu on fair use over time, discussed in the Introduction, William Patry and Judge Posner have proposed an expansive reading of fair use that might allow it to alleviate concerns stemming from the CTEA's retroactive copyright extension. Referring to works retroactively brought back under copyright by the CTEA, Patry and Posner note that because "the works in question are very old and of very limited commercial value, the cost in time and expense of obtaining a license may exceed the private value of the license even though the social value of publication might be substantial."²⁰² As such, they determine that the doctrine of fair use is "flexible enough to allow the copying of such works without having to obtain a copyright license."²⁰³

Even if it were determined that any form of dynamism in copyright protection violates Berne, our findings are still useful with regard to the broader questions about whether copyright's term should be expanded still further and about whether countries that have not yet adopted a life-plus standard should do so.

b. Differential Copyright Terms

While our analysis focuses on music as a case study, Part II demonstrates that the overarching pattern of commercial depreciation can be extrapolated to other categories of information goods. This suggests that all forms of commercial information goods might benefit from a shorter term than the status quo provides. It does not follow, however, that the shorter term should necessarily be the same across all works. For example, some countries recognize sound recordings as derivative works and so extend to them a shorter term of protection than they do the compositions that those sound recordings embody.²⁰⁴ Recognition of this concept—i.e., differing terms of copyright protection for different types of copyrighted works—was seen in the United States as early as the 1950s, when the Copyright Office offered this guidance on the question of copyright duration:

202. William F. Patry & Richard A. Posner, *Fair Use and Statutory Reform in the Wake of Eldred*, 92 CALIF. L. REV. 1639, 1650 (2004).

203. *Id.* at 1660.

204. *Compare* Duration of Copyright and Rights in Performances Regulations 1995, SI 1995/3297, art. 5 (U.K.) (providing that "copyright in a literary, dramatic, musical or artistic work . . . expires at the end of the period of 70 years from the end of the calendar year in which the author dies"), *with id.* at art. 6 (providing that "copyright in a sound recording . . . expires [either] at the end of the period of 50 years from the end of the calendar year in which it is made, or . . . if during that period it is released, 50 years from the end of the calendar year in which it is released").

In some countries the nature of the work has been used to justify, for some kinds of works, a shorter term than that generally granted in the country in question. . . .

An argument is also made for varying the term according to the nature of the work on the basis of the commercial life of some types of works. . . . It has been introduced in discussions of possible short-term protection in the United States for designs, and for performances as distinguished from the work performed.

. . . .

It can be argued that if commercial value is significant in regard to the length of term, it leads to a conclusion against rather than for, a longer term.

. . . .

. . . If no work in a particular class would have commercial value after ten years, for example, it would certainly not increase the author's incentive to protect the work beyond a ten-year period, and so, perhaps, a shorter term would be justified.²⁰⁵

Unfortunately, these concerns were not well received by industry interests at the time, and a life-plus standard was eventually adopted to replace the previous system of renewals and notice.²⁰⁶

c. Rights Reversion

Our finding of a relatively short term of commercial viability for information goods further suggests that intermediaries—i.e., record labels, film studios, book publishers, etc.—are compensated for their risk rather early on in the term, such that they are unlikely to be negatively impacted by a policy of rights reversion. Like termination rights,²⁰⁷ rights reversion gives the creator a second bite of the apple by reversing an artist's original transfer of copyright ownership, thereby transferring ownership over a work's copyright back from an intermediary to the original artist. In an effort to avoid authorial complacency and to encourage donation to the public domain for works that have passed their commercial prime, legislators might even consider requiring the author to pay a fee—for example, \$100—upon reversion; otherwise, the work could be set to automatically revert to the public domain.²⁰⁸

205. JAMES J. GUINAN, JR., STUDY NO. 30: DURATION OF COPYRIGHT, in S. COMM. ON THE JUDICIARY, 86TH CONG., COPYRIGHT LAW REVISION: STUDIES PREPARED FOR THE SUBCOMM. ON PATENTS, TRADEMARKS & COPYRIGHTS STUDIES 53, 79–80 (Comm. Print 1961).

206. See, e.g., JESSICA LITMAN, DIGITAL COPYRIGHT 22–32 (2001) (discussing the evolution of copyright duration in the United States); Pamela Samuelson, *Notice Failures Arising from Copyright Duration Rules*, 96 B.U. L. REV. 667, 673–77 (2016) (discussing Guinan's *Duration of Copyright* study and its impact).

207. Title 17, Chapter 2, Section 203(a)(3) of the U.S. Code allows an artist who has previously granted her work's copyright to an intermediary (other than via work-made-for-hire) to terminate that grant "at any time during a period of five years beginning at the end of thirty-five years from the date of execution of the grant." 17 U.S.C. § 203(a)(3) (2012).

208. The proposed \$100 reversion fee is intended purely as a placeholder. Should Congress wish to implement such a fee, the authors would strongly encourage a comprehensive study to determine an appropriate amount; a sliding scale may even be appropriate.

Notably, the Berne Convention has no prohibition against rights reversion. A final suggestion for avoiding conflict with Berne is to shift ownership from a publisher or record label back to the creator at the point when commercial viability is exhausted. This would allow the intermediary to reap its financial reward, while also affording the artist a second chance to work or rework the material, to offer it up under a Creative Commons-type license, or to voluntarily donate it to the public domain. This is wholly consistent with the policy behind termination rights²⁰⁹ and is also in line with copyright's dual goals of incentivizing creation and promoting access. Importantly, rights reversion should not have a negative impact on artist income. Like termination rights, rights reversion would kick in at a point for which the present value is zero (or very close to it) for most works.

d. Use It or Lose It

Our analysis further suggests that copyright should only afford protection to actively exploited works. The idea here is that works deemed to have some remaining commercial value will be used, licensed, and built upon (both by the copyright owner and by licensed users), while those that have largely exhausted their earnings potential—or never exhibited earnings potential to begin with—will enter the public domain. In his work responding to Professor Nordhaus's patent scholarship, economist F.M. Scherer proposed a variation of this concept, calling for a patent holder to “show[] why his patent should not expire or be licensed at modest royalties to all applicants three or five years after its issue.”²¹⁰ And Landes and Posner's proposal for a system of indefinite renewals turns precisely on an expectation of use.²¹¹

Information goods deemed to have value enduring beyond the initial five- to ten-year copyright term might signal their continuing commercial potential—and justify continued copyright protection—by filing a continued use extension. This showing of active exploitation would allow for differentiation and reward of particularly successful works. This extension, or renewal, also works to separate valuable from less valuable works early on, thereby avoiding what is sometimes referred to as “copyright clutter”—the use of older, unutilized, and underexploited works to threaten infringement suits against contemporary, highly successful works.²¹²

A recent example of copyright clutter is a suit brought by the trustee for Randy Wolfe's estate alleging infringement of his band's song, *Taurus*, by Led

209. Title 17, Chapter 2, Section 203(a)(3) of the U.S. Code permits an author to terminate the transfer of their copyright thirty-five years from the date of assignment. 17 U.S.C. § 203(a)(3). The termination right was also premised on giving authors a second bite at the apple.

210. F.M. Scherer, *Nordhaus' Theory of Optimal Patent Life: A Geometric Reinterpretation*, 62 AM. ECON. REV. 422, 427 (1972).

211. See Landes & Posner, *supra* note 10, at 517–18.

212. The notion of copyright clutter was exacerbated by the elimination of laches as a defense to copyright claims. See *Petrella v. Metro-Goldwyn-Mayer, Inc.*, 572 U.S. 663, 677 (2014).

Zeppelin's hit *Stairway to Heaven*.²¹³ In that case, Randy Wolfe has passed away and can no longer be personally incentivized to create new music. The suit arguably serves primarily to capitalize on the track's ongoing copyright protection by rent seeking on Led Zeppelin's success. This approach has been roundly rejected. On appeal from a panel opinion finding in favor of Wolfe's estate, an amicus brief filed jointly by the Recording Industry Association of America and the National Music Publishers Association—two notably pro-copyright organizations—warns that “[c]omposers’ intellectual property must be protected, but new songs incorporating new artistic expression influenced by unprotected, pre-existing thematic ideas must also be allowed. The panel opinion badly overprotects. . . .”²¹⁴

Furthermore, the notion of a use requirement is consistent with the approach taken in trademark law. In order to qualify for federal trademark protection, a mark must be shown to be “use[d] in commerce.”²¹⁵ The same must be shown upon renewal of a trademark. The Lanham Act defines “use in commerce” to mean “the bona fide use of a mark in the ordinary course of trade, and not made merely to reserve a right in a mark.”²¹⁶ The rationales behind the use requirement in trademark are as follows: first, use builds public recognition of a mark and works to identify and distinguish the good, thereby justifying trademark protection in order to preserve the public reputation affiliated with the mark (and to avoid confusion with other marks).²¹⁷ Second, requiring not just registration but also use minimizes rent seeking.²¹⁸ Otherwise, for example, a firm might attempt to register all of the names that its competitors might want to use and then simply squat on them. The latter justification is also applicable in the copyright context.

In addition to bringing copyright in line with trademark, a use requirement might also reduce copyright law's hostility toward derivative works, better aligning its protections with those of patent law. Doing so may work in furtherance of copyright's incentivization goals. In his work on the law of improvements, Lemley writes:

Comparing the treatment of improvers under patent and copyright law leads to a rather surprising result: copyright law is significantly more hostile to improvements than is patent law. What is surprising is not so much that the rules differ, but the way in which they differ. Copyright is traditionally thought to afford weaker, not stronger, protection than patent law, in part to compensate for the fact that copyrights are so much easier to obtain than patents and last

213. *Skidmore v. Led Zeppelin*, 905 F.3d 1116, 1121 (9th Cir. 2018).

214. Brief Amici Curiae of the Recording Indus. Ass'n of Am. & the Nat'l Music Publishers Ass'n in Support of Defendants-Appellees on En Banc Rehearing at 2, *Led Zeppelin*, 905 F.3d 1116 (Nos. 16-56057 & 16-56287) (emphasis omitted).

215. Lanham Act § 45, 15 U.S.C. § 1127 (2012).

216. *Id.*

217. See William M. Landes & Richard A. Posner, *Trademark Law: An Economic Perspective*, 30 J.L. & ECON. 265, 282 (1987).

218. *Id.* at 281.

so much longer. But in the context of improvements, the opposite result obtains.²¹⁹

Finally, and as discussed in Part III.B.1.c, where an intermediary copyright owner²²⁰ cannot show continued use of an information good—i.e., where the work is deemed to be past the point of commercial viability—an alternative to copyright termination might be to allow for automatic reversion of the copyright to the author. This would allow the author an opportunity to make further or incremental use of her work, while also avoiding any conflict with the Berne Convention, which takes no issue with reversion to authors.

In fact, most continental European countries' copyright laws include a variation of the “duty to exploit” in exchange for copyright protection. Dutch law, for example, allows an author to “dissolve the contract wholly or in part if the other party to the contract does not sufficiently exploit the copyright to the work within a reasonable period after having concluded the contract, or does not sufficiently exploit the copyright after having initially performed acts of exploitation.”²²¹

France similarly recognizes the importance of ensuring that a work is exploited in order to earn protection. Under the French regime, “[f]ailure to publish the work within a certain time, or to pursue the exploitation of the rights in a consistent manner (*exploitation permanente et suivie*), or to reissue a book that has gone out of print, will result in reversion of print or electronic rights to the author.”²²² German law is similar to that of the Netherlands, imposing a duty to exploit in recognition of the fact that “non-use causes serious injury to the author's legitimate interests and is not due to circumstances that the author can remedy.”²²³

219. Mark A. Lemley, *The Economics of Improvement in Intellectual Property*, 75 TEX. L. REV. 989, 1029 (1997) (footnotes omitted) (citing John Shepard Wiley Jr., *Copyright at the School of Patent*, 58 CHI. L. REV. 119, 180–81 (1991)).

220. I.e., a record label, a book publisher, a film studio, or another third party to whom the creator assigned her original copyright.

221. Wet auteurscontractenrecht van 30 juni 2015 [Copyright Contract Act of June 30, 2015], Stb. 2015, 257, art. 25e translated in *New Copyright Contract Law in the Netherlands*, VISSER SCHAAP & KREIJGER, <http://www.ipmc.nl/en/topics/new-copyright-contract-law-netherlands> [https://perma.cc/U8G6-WU5M] (amending the Dutch Copyright Act of 1912). Translation of Dutch Copyright Act of 1912, as amended, is available at <http://www.hendriks-james.nl/auteurswet/> [https://perma.cc/5VX9-8DVR].

222. Jane C. Ginsburg & Pierre Sirinelli, *Private International Law Aspects of Authors' Contracts: The Dutch and French Examples*, 39 COLUM. J.L. & ARTS 171, 175–76 (2015) (referring to French Code of Intellectual Property arts. L131-2 to -4, L131-6, L132-17-1 *et seq.*).

223. GIUSEPPINA D'AGOSTINO, COPYRIGHT, CONTRACTS, CREATORS: NEW MEDIA, NEW RULES 127–28 (2010) (referencing GCA art. 41(1)); see also Martin Senftleben, *More Money for Creators and More Support for Copyright in Society—Fair Remuneration Rights in Germany and the Netherlands*, 41 COLUM. J.L. & ARTS 413, 422–32 (2018) (describing, among other things, Germany's “right to fair remuneration” statutes).

2. *For Users & Society*

Even where a work appears to have depleted its commercial value, a copyright owner might want to continue its copyright protection just in case—after all, once a work has been produced and registered, continued protection is costless to the rights holder. Unfortunately, this costlessness does not extend to the public.²²⁴

a. *Orphaned and Mismanaged Works*

“Orphan works” are a good example of the cost disparity for lengthy copyright protection as between rights holders and users. An orphan work is a work whose author is unknown and/or unidentifiable. One of the primary concerns with orphan works is that risk-averse users may avoid reworking or borrowing from such works: they don’t know who to approach for a license, and they worry about the consequences of unauthorized use should an author surface in the future with allegations of copyright infringement. From a policy perspective, orphan works signal a failure of the copyright system as they discourage both use and distribution.

The longer a copyright lasts, the more likely a work is to become orphaned (as the rights holder dies, loses interest, etc.). For this reason, extended copyright duration is often associated with an increase in orphan works over time. Again, just because continuing copyright beyond the point of commercial value is costless to, for example, a record label that has stopped earning on a title does not mean it is costless to society as a whole.

The fact that copyright’s term often outlives the author can also lead to prohibitive transaction costs for works that may not be technically orphaned but rather mismanaged by their living stewards. As Eva Subotnik has explained:

Creators often come across earlier works that they would like to use in their own works—uses for which, depending on the circumstances, they would seek authorization and be willing to pay a reasonable license fee. Over time, tracing the chain of copyright title from the author to its present owners can make such an endeavor time-consuming, expensive, and fraught with uncertainty. For example, because of the fundamental distinction between a copyright in the intangible work of authorship and an ownership right in a particular copy of the work, a documentary filmmaker can lawfully purchase a photograph but still not be able to use it in his film because he has not obtained permission from the copyright owner. As search costs become unreasonably high, they may give rise to market failures if the filmmaker forgoes use of what might be a contextually valuable image. Over time, the public may suffer because of such artistic compromises or, at the very least, because of delays in bringing such subsequent uses to market.

224. For a general discussion of the problem, see generally Molly S. Van Houweling, *Disciplining the Dead Hand of Copyright: Durational Limits on Remote Control Property*, 30 HARV. J.L. & TECH. (SPECIAL SYMP.) 53 (2017).

It is possible that the postmortem term raises these costs. While an author is still alive, he may be able to direct the filmmaker to the current rights holder even if the author long ago assigned these rights away. By contrast, upon the author's death, and over the ensuing decades, the availability of information required to trace the chain of title to the copyright often lessens. It therefore may become more difficult for the good-faith user to track down the current owner.²²⁵

The briefs from *Eldred v. Reno* offer additional uses that might benefit from a shorter copyright duration: for example, a choir director with limited funds who relies on public-domain works for her members to perform; a film-restoration company that seeks to preserve and restore old movies with deteriorating physical film and that have been either orphaned or abandoned; and a book publisher that reprints public-domain books that would otherwise be out-of-print and thus accessible to no one.²²⁶ In short, one significant benefit of a shorter copyright duration is greater access to works that might not otherwise be accessible.

b. Disadvantaged Groups & Marginalized Works

Works produced by marginalized or disadvantaged authors offer another example of cost disparity arising from lengthy copyright protection. In the same way that a lengthy term of copyright protection allows time for a larger number of works to become orphaned, it can also lead to a greater number of abandoned and neglected works; rights holders lose interest post-commercialization, while prospective users are nonetheless prohibited from reworking or otherwise utilizing the works. This neglect can lead to works that are “disappeared” for all intents and purposes, a phenomenon that poses a particular threat for marginalized and disadvantaged groups. As explained by Tony Reese:

[W]orks created by authors who belong to marginalized groups may not find a wide audience or commercial success when they are published. But in a later era, these works may be valuable documents for understanding the marginalization and oppression that the authors and others felt, and how they experienced it, survived, and pushed forward. For all these reasons, keeping creative works alive will give future audiences a broad range of authorship from which to choose in their reading, viewing, and listening.²²⁷

A powerful example of this concern lies at the intersection of orphan and marginalized works. In a hearing before the House Subcommittee on Courts, the Internet, and Intellectual Property, counsel for the United States Holocaust

225. Eva E. Subotnik, *Copyright and the Living Dead?: Succession Law and the Postmortem Term*, 29 HARV. J.L. & TECH. 77, 117–18 (2015) (footnotes omitted).

226. See Plaintiffs' Motion for Judgment on the Pleadings or, in the Alternative, for Summary Judgment at 15–18, *Eldred v. Reno*, 74 F. Supp. 2d 1 (D.D.C. 1999) (No. 1:99CV00065 JLG).

227. R. Anthony Reese, *What Copyright Owes the Future*, 50 HOUS. L. REV. 287, 291 (2012).

Memorial Museum testified about, among other things, having recently acquired a diary written by a young Polish girl who did not survive the Holocaust. In order to display the work, the museum had to clear the copyright, but it was unable to locate any surviving family members or heirs.²²⁸ Further, in the music context, many musicians of color were historically excluded from registering with performance-rights organizations²²⁹—the entities that collect royalties on the part of music-composition owners—and so were less likely than white musicians to register their copyrights.

3. *For Legislators*

Finally, our analysis may impact policy makers. An example is the recently passed MMA, signed into law on October 11, 2018.²³⁰ The legislation, which passed unanimously in both the House and the Senate, was actually a compilation of three separate bills, one of which was the CPA Act.²³¹ As discussed, the CPA Act aimed to bring recording artists who released songs prior to 1972 into the digital fold so that they could begin earning digital public-performance royalties on par with artists whose work was released after 1972.

Of the three separate acts that comprised the MMA, the CPA Act faced the most controversy. In addition to an overarching skepticism about the ability of retroactive rights granting to incentivize creation, criticism of the Act focused on three primary concerns. First, by setting the term to end in 2067, the Act introduces protection disparity between sound recordings and musical compositions and between pre- and post-1972 sound recordings. Second, the Act removes pre-1972 sound recordings from the various exemptions applicable to all post-1972 recordings under extant copyright law. And finally, the Act establishes a new federal regime directly in conflict with the common law of several states.²³² Perhaps the most significant critique of the CPA Act focused on its half-baked effort to compensate pre-1972 recording artists, namely, that it introduced a digital royalty requirement for digital and satellite services but

228. See *Promoting the Use of Orphan Works: Balancing the Interests of Copyright Owners and Users: Hearing Before the Subcomm. on Courts, the Internet, and Intellectual Property of the H. Comm. on the Judiciary*, 110th Cong. 64–67 (2008) (statement of Karen Coe, associate legal counsel, United States Holocaust Memorial Museum).

229. Until the 1940s, the American Society of Composers, Authors, and Publishers, for example, routinely excluded jazz, blues, R&B and “hillbilly” (or country) music. See Jonathan Karp, *Blacks, Jews, and the Business of Race Music, 1945–1955*, in *CHOSEN CAPITAL: THE JEWISH ENCOUNTER WITH AMERICAN CAPITALISM* 141, 144–45 (Rebecca Kobrin ed., 2012).

230. Orrin G. Hatch–Bob Goodlatte Music Modernization Act, Pub. L. No. 115-264, 132 Stat. 3676 (2018).

231. See *id.* § 201, 132 Stat. at 3728–37.

232. See Letter from Law Professors to S. Comm. on the Judiciary (May 14, 2018), https://www.publicknowledge.org/wp-content/uploads/2019/09/Classics_Act_IP_Professors_Letter_5.14.18.pdf [<https://perma.cc/7P6Z-GU8R>].

not for terrestrial radio (wherein services still do not pay recording artists from any era).²³³

Our findings regarding the commercial half-life of music—that it is, on average, significantly shorter than the current copyright term—suggest that the critics may have been on to something. Specifically, the CPA Act can only hope to benefit a very small number of superstar works that still exhibit commercial value after many years. For the overwhelming majority of works, the CPA Act does nothing other than impose additional cost on the public domain without conferring equivalent (or, in most cases, any) value on the owners of those works. As stated by Sirius XM's CEO Jim Meyer in defense of the company's rejection of the original version of the Act: "If Congress truly wants to correct an unfairness in the Copyright Act, terrestrial radio should be subject to the [Act] just like satellite and internet radio."²³⁴ Indeed, the CPA Act also denies pre-1972 recording artists the benefit of a termination right available to their contemporary counterparts, raising further questions regarding its purported benefits.

CONCLUSION

The advent of streaming has extended the period of commercial viability for some information goods, perhaps even blurring what used to be a clear line between frontline and catalog.²³⁵ As more data becomes available, we hope to get a clearer picture of what this impact looks like. In the meantime, the strongest implication of our analysis on copyright's utility over time is that (notwithstanding over a century of debate to the contrary) copyright's duration is in fact *not* central to the optimization of copyright's protection for most commercial information goods.

With the average information good earning the substantial portion of its lifetime revenues in the first five to ten years following release (and often far more rapidly than even that), there is often little benefit to the average copyright owner for protection beyond that point. Assuming commercial interest mirrors consumer interest more broadly, there is most likely little benefit to users for access beyond that point.²³⁶ This all suggests that advocates' time and energy

233. See, e.g., Paul Resnikoff, *The Music Modernization Act Faces Brand-New Threats from Sirius XM & Music Choice*, DIGITAL MUSIC NEWS (Aug. 6, 2018), <https://www.digitalmusicnews.com/2018/08/06/music-modernization-act-sirius-xm-music-choice/> [https://perma.cc/T7SH-PNN4].

234. Jim Meyer, *SiriusXM CEO Jim Meyer: The CLASSICS Act is Seriously Flawed (Guest Column)*, BILLBOARD (Feb. 26, 2018), <https://www.billboard.com/articles/business/8219673/siriusxm-ceo-jim-meyer-classics-act-guest-column>.

235. *Does the Music Industry's Definition of 'Catalogue' Need an Upgrade?*, *supra* note 152. A case study of streaming's impact on commerciality demonstrates that: "The industry used to be laser-focused on week one, and while it continues to be important, of greater importance is the long-term focus of reaching benchmarks in weeks 26, 52 and 104. In other words, the marathon is the race you need be running to come out on top." *Id.*

236. The case may differ for orphaned and marginalized works. See *supra* Part III.B.2.

could be more productively spent elsewhere. One possibility for redirection of legislative and scholarly time and energy is on the appropriate strength of copyright protections. These might include introduction of dynamic protection, differential terms, rights reversion, and a use requirement.