

COPYRIGHT AND ATTENTION SCARCITY

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As the costs of creating and sharing information have plummeted, some scholars question the continued utility of copyright protection, which imposes artificial scarcity so that authors can recoup creation and dissemination costs. Scholars have ignored, however, that when information is abundant, attention becomes a scarce resource. Superabundant information can overtax consumer attention.

Reducing copyright protection in this new environment may worsen the costs of attention scarcity on consumers of creative expression. Firms often compete for attention by free riding on the public interest generated by copyrighted works. If copyright protection is narrowed, new entrants have reduced motivation to create works that are clearly distinguishable from existing works. Indeed, a new entrant is more likely to create a close substitute for an existing work already available to consumers than to spend the time necessary to create a distinctly original contribution. Thus, new works are more likely to be wastefully duplicative of available content.

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Calls to diminish copyright protection in response to falling costs of creation and dissemination often target the derivative right as the first mechanism to weaken or excise. But preserving copyright protections—especially the derivative right—may have unexpected benefits for consumers, including keeping attention costs in check. The effort required to create around copyright constrains entry. Compared to entry under weaker copyright protection, new entrants are likely to offer works that are less redundant, and therefore both more valuable to consumers and less likely to distract or divert attention in ways that impose undue costs on consumers. Legislators and judges may wish to exercise caution before sacrificing the attention-assisting aspects of copyright protection based solely on the intuition that creators could survive with weaker incentives.

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INTRODUCTION

Intellectual property rights like copyright protection create resource scarcity by erecting barriers to reproduction and distribution. Copyright makes it possible for an author to subsidize creative effort with exclusive rights to copy, adapt, distribute, display, and perform creative works. The aforementioned revenue streams would be difficult to secure without those rights. But in a world where the costs of producing and disseminating information are falling, some posit society may need less copyright protection to stimulate creativity.¹ If copyrighted works are cheaper to generate and distribute, weaker rights may sufficiently bankroll creative labor. In its focus on production costs, this argument ignores a key factor in determining the socially optimal level of creative content: consumers' increasingly scarce attention.

Calls to narrow copyright protection often start with the derivative right—the right to create new works based on existing expression. But the derivative right serves an underappreciated role in managing attention scarcity. Accounting for attention scarcity, modest controls on market entry may well improve consumer welfare, in part because lowered barriers encourage duplicative entry, where “the marginal work is likely to be similar to existing works,” and thus of comparatively low value.²

¹ See, e.g., Mark A. Lemley, *IP in a World Without Scarcity*, 90 N.Y.U. L. REV. 460, 471–81 (2015) [hereinafter Lemley, *Scarcity*]; see also *id.* at 491–95.

² Michael Abramowicz, *A New Uneasy Case for Copyright*, 79 GEO. WASH. L. REV. 1644, 1665 (2011) [hereinafter Abramowicz, *Uneasy Case*].

These close substitutes may be wastefully duplicative, and more likely than clearly distinguishable works to impose attention costs on consumers. As attention resources are overloaded,³ consumers are more easily distracted, less capable of recognizing distortions in the information they consume, and increasingly vulnerable to deception.⁴ *Ceteris paribus*, the more redundant the work, the more likely the work will tax consumers' scarce attention.

Maintaining copyright protection may curb escalating attention costs in two important ways. First, copyright protection constrains the type of works offered by new entrants.⁵ The access costs imposed by copyright protection may discipline entrants to offer goods more clearly distinguishable from available expression. Second, by maintaining some boundaries between otherwise close competitors, copyright protection might provide important signals to consumers that also reduce attention costs.⁶ Thus, to the extent that copyright protection can alleviate some of the externalities imposed by attention scarcity, calls to reduce copyright protection based on falling costs of producing and sharing information may be premature.

This Article proceeds in three Parts. Part I briefly reviews the standard economic account for intellectual property protection. Part II explains why attention is the scarce resource in this new economy and identifies the costs attention scarcity imposes on information consumers. Part III reviews case law addressing the attention diverting effects of copyright infringement.⁷ It then explains how copyright protection may help moderate the effects of attention scarcity and thus play a previously unrecognized role in helping consumers manage their scarce attention resources in this era of information abundance.

³ See 1 WILLIAM JAMES, *THE PRINCIPLES OF PSYCHOLOGY* 402 (1890).

⁴ See *infra* Section II.C.

⁵ Joseph P. Fishman, *Creating Around Copyright*, 128 HARV. L. REV. 1333, 1336–37 (2015).

⁶ On the importance of signaling in property regimes generally, see Carol M. Rose, *Possession as the Origin of Property*, 52 U. CHI. L. REV. 73, 77–79 (1985). Copyright protection also has an underappreciated signaling effect. See, e.g., Olufunmilayo B. Arewa, *Strategic Behavior and Sources of Value: Some Implications of the Intangibles Paradigm*, in 2 NEW DIRECTIONS IN COPYRIGHT LAW 272, 272–75 (Fiona Macmillan ed., 2006).

⁷ See, e.g., *Fonovisa, Inc. v. Cherry Auction, Inc.*, 76 F.3d 259, 263 (9th Cir. 1996); see also *infra* Section III.A.

I. COPYRIGHT AT THE TWILIGHT OF SCARCITY

Under the modern neoclassical economic justification, the Copyright Act aims to incentivize creation by creating artificial scarcity,⁸ providing a set of rules that allow the author to “realize whatever exchange value (if any) their works of authorship are capable of commanding”⁹ The scope of the rights secured by federal copyright laws therefore requires careful calibration. If rights are too weak, authors will be underincentivized to create because they cannot secure sufficient profits from distributing the work to justify the costs.¹⁰ In such a circumstance, creative works may be underproduced—we run the risk that we won’t get a critical mass of works sufficient to promote the progress of science and useful arts.¹¹ The profits an owner can secure are shaped by the scope and duration of the rights extended and the cost of enforcing rights against infringers. If the scope is too narrow, the duration too short, or the right not matched to a remedy, free riders can duplicate the work, paying only the costs of reproduction and distribution, not the costs of creation. So long as the market price is higher than the reproduction and distribution costs, free riders will copy, and the owner will not recognize a return on their investment.¹²

⁸ See Raymond Shih Ray Ku, *The Creative Destruction of Copyright: Napster and the New Economics of Digital Technology*, 69 U. CHI. L. REV. 263, 293 (2002) (summarizing the incentive rationale for copyright protection).

⁹ Christopher M. Newman, *Transformation in Property and Copyright*, 56 VILL. L. REV. 251, 301–02 (2011).

¹⁰ PAUL GOLDSTEIN, *INTELLECTUAL PROPERTY: THE TOUGH NEW REALITIES THAT COULD MAKE OR BREAK YOUR BUSINESS* 16–17 (2007) (“Intellectual assets will only produce healthy margins—indeed, in most cases, will only produce *any* margins—if and to the extent that property rights protect them.”).

¹¹ Some scholars express skepticism of the incentive account for copyright protection. See Pamela Samuelson, *The Quest for a Sound Conception of Copyright’s Derivative Work Right*, 101 GEO. L.J. 1505, 1530 (2013) (“The incentives-to-invest rationale for granting exclusive rights to induce authors to create is, of course, often overstated.”); Julie E. Cohen, *Creativity and Culture in Copyright Theory*, 40 U.C. DAVIS L. REV. 1151, 1152 (2007); Diane Leenheer Zimmerman, *Copyrights as Incentives: Did We Just Imagine That?*, 12 THEORETICAL INQUIRIES L. 29, 30–31 (2011); Lydia Pallas Loren, *The Pope’s Copyright? Aligning Incentives with Reality by Using Creative Motivation to Shape Copyright Protection*, 69 LA. L. REV. 1, 8 (2008); David A. Simon, *Culture, Creativity, & Copyright*, 29 CARDOZO ARTS & ENT. L.J. 279, 281 (2011); Rebecca Tushnet, *Economies of Desire: Fair Use and Marketplace Assumptions*, 51 WM. & MARY L. REV. 513, 526–27 (2009).

¹² Stewart E. Sterk, *Rhetoric and Reality in Copyright Law*, 94 MICH. L. REV. 1197, 1204 (1996).

If, on the other hand, the scope of the work is too broad, it will prevent subsequent authors from building on earlier works. Costs of creating around a preexisting work will escalate as the number of rights protecting the work increases, as the scope of those rights are broadened, or as the duration of protection increases. From the perspective of many scholars, copyright protection is therefore at best a necessary evil, justifiable only so far as necessary to encourage the creation and distribution of new works.¹³

A. *The Current Scope of Copyright Protection*

Congress is empowered to “promote the progress of science and useful arts, by securing for limited times to authors . . . the exclusive right to their respective writings”¹⁴ This language is often interpreted as empowering Congress to set incentives for copyright owners sufficient to encourage creation of writings, but not incentives that overcompensate creators.¹⁵

The Copyright Act offers the author a bundle of exclusive rights in their writings.¹⁶ That bundle includes the (relatively) exclusive right to engage in or authorize the following activities with regard to the copyrighted work:¹⁷ reproduce the work,¹⁸ prepare derivative works based on the work,¹⁹ distribute copies or phonorecords of the work,²⁰ and publicly perform or publicly display the work.²¹ All these rights are subject to limitations, most importantly the right of a new entrant to

¹³ Lord Thomas Babington Macaulay, A Speech Delivered in the House of Commons on Copyright (Feb. 5, 1841), in 4 THE MISCELLANEOUS WRITINGS AND SPEECHES OF LORD MACAULAY (Mike Alder, Sue Asscher & David Widger eds., 2008) (referring to the copyright monopoly as an evil to be tolerated and urging a limited duration for same).

¹⁴ U.S. CONST. art. I, § 8, cl. 8.

¹⁵ GOLDSTEIN, *supra* note 10, at 18 (“[L]egal inducements beyond [those sufficient to incentivize creation] should be avoided as unnecessary to the law’s central object.”).

¹⁶ Harper & Row Publishers, Inc. v. Nation Enters., 471 U.S. 539, 546 (1985).

¹⁷ The rights enumerated are subject to a series of exceptions, 17 U.S.C. §§ 107–122, the most sweeping of which is the fair use exception. *Id.* § 107.

¹⁸ *Id.* § 106(1).

¹⁹ *Id.* § 106(2).

²⁰ *Id.* § 106(3).

²¹ *Id.* § 106(4–6).

encroach on one or more of these rights without liability if the use is a fair use.²²

The Copyright Act recognizes a non-exclusive list of protected works, including literary works; musical works and sound recordings; dramatic works; pantomimes and choreographic works; pictorial, graphic, and sculptural works; motion pictures and other audiovisual works; and architectural works.²³ Protection does not extend to ideas embodied in otherwise protectable expression.²⁴

Copyright owners are granted the exclusive right to reproduce the work. That reproduction right is at the core of Anglo-American copyright protection. Indeed, at its origin, reproduction was the only right extended to copyright owners and only to a narrow category of works.²⁵ To oversimplify, the reproduction right protects the owner from competing with copies of the work sold at a market clearing price. Creating unauthorized copies, including those substantially similar to the owner's protected work, violates the exclusive reproduction right and triggers liability.²⁶ Potential remedies include actual and statutory damages and injunctive relief.²⁷

²² *Id.* § 107. But there is a confusing overlap between the copyright owner's exclusive right to prepare derivative works, which the statute defines as a new work that may be "recast, transformed, or adapted" from the original, 17 U.S.C. § 101 (emphasis added) (defining derivative works), and the fair use standard which is dominated by questions of transformativeness. See Pierre N. Leval, *Commentary: Toward A Fair Use Standard*, 103 HARV. L. REV. 1105, 1111 (1990) (arguing that the persuasiveness of a defendant's assertion of fair use "turns primarily on whether, and to what extent, the challenged use is transformative").

²³ 17 U.S.C. § 102(a).

²⁴ *Id.* § 102(b); *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 344–45 (1991) (stating that facts and ideas are not copyrightable).

²⁵ The first federal copyright act in the United States extended protection only to books, maps, and charts. See Act of May 31, 1790, ch. 15, § 1, 1 Stat. 124, 124 (repealed 1834). Copyright protection in the United States extended over time to reach broader swaths of protectable works, offering a wider menu of exclusive rights. See, e.g., Act of Aug. 18, 1856, ch. 169, 11 Stat. 138, 139 (granting an exclusive public performance right to authors of dramatic compositions); Copyright Act of 1909, Pub. L. No. 60-349, ch. 320, 35 Stat. 1075, 1075 (current version codified at 17 U.S.C. § 106 (2006)) (first exclusive right to adapt or translate); 17 U.S.C. § 106(2) (1976) (first derivative work right); *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 58 (1884) (holding that Congress was empowered to extend copyright protection to photographs).

²⁶ See, e.g., *Kamar Int'l, Inc. v. Russ Berrie & Co.*, 657 F.2d 1059, 1062 (9th Cir. 1981); *Durham Indus., Inc. v. Tomy Corp.*, 630 F.2d 905, 911 (2d Cir. 1980); *Arnstein v. Porter*, 154 F.2d 464 (2d Cir. 1946).

²⁷ 17 U.S.C. §§ 501–506.

Copyright owners also possess an exclusive right to create or authorize the creation of new derivative works.²⁸ The derivative right protects the owner's right to decide if, when, and how to release sequels and adaptations of the original by preventing competitors from creating derivative works without permission.²⁹ Copyright protects only those aspects of a derivative work contributed by and original to the derivative author.³⁰ Derivative works adapted from a protected work without permission or in violation of the law are unprotectable,³¹ unless the creator qualifies for an exception to copyright protection like fair use.³² The reproduction and adaptation rights work together to secure a level of differentiation between incumbent works and new works.

B. *Economic Justifications for the Derivative Right*

As discussed above, neoclassical economics provides the dominant incentive justification for copyright protection. In a regime with no derivative right but with a reproduction right, that reproduction right should be sufficiently broad to allow the author to recover fixed costs.³³ The derivative right allows the author to spread the risk over time, recouping some fixed costs from the exclusive right to adapt the work

²⁸ 17 U.S.C. § 106(2). Courts struggle to clearly delineate the boundary between the reproduction and derivative rights. *See, e.g., Warner Bros. Ent., Inc. v. RDR Books*, 575 F. Supp. 2d 513, 538-39 (S.D.N.Y. 2008). As one court framed it, in a derivative rights case, "the key inquiry is whether there is sufficient nontrivial expressive variation in the derivative work to make it distinguishable from the underlying work in some meaningful way." *Shrock v. Learning Curve Int'l, Inc.*, 586 F.3d 513, 521 (7th Cir. 2009); *see also* H.R. REP. NO. 94-1476, at 62 (1976); S. REP. NO. 94-473, at 58 (1975) ("To be an infringement the 'derivative work' must be 'based upon the copyrighted work' . . . [and] must incorporate a portion of the copyrighted work in some form . . ."); *infra* Section III.B.

²⁹ Jake Linford, *A Second Look at the Right of First Publication*, 58 J. COPYRIGHT SOC'Y U.S.A. 585, 587-88 (2011) [hereinafter Linford, *Second Look*] (explaining how copyright protects the right of the owner or author to decide how, when, and with whom to bring the work to market).

³⁰ 17 U.S.C. § 103(b). Those distinguishable contributions must also be lawful. *Id.* § 103(a).

³¹ *Id.* § 103.

³² *See, e.g., Keeling v. Hars*, 809 F.3d 43, 50 (2d Cir. 2015) ("[W]hen a derivative work's unauthorized use of preexisting material is fair use and the work contains sufficient originality, its author may claim copyright protection under § 103 for her original creative contributions.").

³³ William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL STUD. 325, 354 (1989).

into sequels or new formats.³⁴ Derivative markets thus provide some insurance for creators,³⁵ and historically encouraged entities like publishers and record labels to subsidize the development of a variety of artists.³⁶ Some critics express skepticism that derivative rights (like toy merchandising) necessarily mitigate investment risk in all industries,³⁷ but for some works, like blockbuster movies, the licensing market can be as big as the box office take.³⁸

Some scholars who concede the validity of the incentive justification nevertheless question whether the derivative right is justified by the incentive effect. In some cases, the additional incentive for derivative rights may be small.³⁹ Shyamkrishna Balganesh expands on that intuition in arguing that the copyright owner's rights should only extend to those derivative markets that are foreseeable at the time of creation, because only those foreseeable rights could have influenced investment decisions at the time of creation.⁴⁰

³⁴ 1 PAUL GOLDSTEIN, *COPYRIGHT* § 5.3, at 5:79 (2d ed. 1996) (“Derivative rights enable prospective copyright owners to proportion their investment to the returns they hope to receive not only from the market in which their work will first be published, but from other, derivative, markets as well.”); *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 593 (1994) (“[T]he licensing of derivatives is an important economic incentive to the creation of originals.”).

³⁵ Harold Demsetz, *Information and Efficiency: Another Viewpoint*, 12 J.L. & ECON. 1, 6–9 (1969).

³⁶ WILLIAM W. FISHER III, *PROMISES TO KEEP: TECHNOLOGY, LAW, AND THE FUTURE OF ENTERTAINMENT* 38–81 (2004); WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW* 56 (2003); Derek E. Bambauer, *Faulty Math: The Economics of Legalizing The Grey Album*, 59 ALA. L. REV. 345, 377 (2008) (reviewing literature). See also generally ALBERT N. GRECO, JIM MILLIOT & ROBERT M. WHARTON, *THE BOOK PUBLISHING INDUSTRY* (1997).

³⁷ Bambauer, *supra* note 36, at 379 (describing mismatches between works like romantic comedies and derivative rights to license action figures).

³⁸ See, e.g., Kevin Melrose, *Nickelodeon's 'Turtles' Products Rake in \$475 Million in Retail Sales*, CBR (Oct. 18, 2013), <https://www.cbr.com/nickelodeons-turtles-products-rake-in-475-million-in-retail-sales> [<https://perma.cc/JZ6Y-ELHY>].

³⁹ Roger D. Blair & Thomas F. Cotter, *An Economic Analysis of Damages Rules in Intellectual Property Law*, 39 WM. & MARY L. REV. 1585, 1607 (1998) (“Providing the copyright owner with an exclusive right to prepare derivative works, for example, is difficult to justify based on an incentive theory, because in most cases the additional creative incentive attributable to this right will be small.”).

⁴⁰ Shyamkrishna Balganesh, *Foreseeability and Copyright Incentives*, 122 HARV. L. REV. 1569, 1613–14 (2009).

But the prospect theory, first posited by Edmund W. Kitch as a rationale for patent protection,⁴¹ provides what some see as a better justification for the derivative work right.⁴² Under the prospect theory, a properly calibrated regime may reduce or prevent rivalry in order to enable the efficient management of property.⁴³ The prospect theory has been criticized for an overly simplistic view of patent law that ignores multiple potential rewards for innovators aimed at a single prize,⁴⁴ or as providing cover for personality or labor-desert theories.⁴⁵

A product differentiation or rent dissipation account of copyright protection, advanced independently by Christopher S. Yoo and Michael Abramowicz,⁴⁶ builds on the prospect theory. As with the prospect theory, the product differentiation account justifies the derivative right as a means to avoid wasteful rent dissipating races.⁴⁷ Under a product differentiation account, modest controls on market entry may well improve consumer welfare.⁴⁸ The derivative right allows the copyright owner to create adaptations of reasonably high quality, without racing

⁴¹ Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265 (1977).

⁴² Blair & Cotter, *supra* note 39, at 1607 (“From the standpoint of prospect theory, on the other hand, the adaptation right may seem desirable because it facilitates the copyright owner’s ability to efficiently coordinate investment in specific derivative works for which consumers are willing to pay.”).

⁴³ John F. Duffy, *Rethinking the Prospect Theory of Patents*, 71 U. CHI. L. REV. 439 (2004).

⁴⁴ F. Scott Kieff, *Coordination, Property, and Intellectual Property: An Unconventional Approach to Anticompetitive Effects and Downstream Access*, 56 EMORY L.J. 327, 405–06 (2006).

⁴⁵ Bambauer, *supra* note 36, at 347–48. Some scholars also present evidence challenging the efficient management thesis. Mark A. Lemley, *Ex Ante Versus Ex Post Justifications for Intellectual Property*, 71 U. CHI. L. REV. 129, 140 n.36 (2004).

⁴⁶ Christopher S. Yoo, *Copyright and Product Differentiation*, 79 N.Y.U. L. REV. 212 (2004); Michael Abramowicz, *An Industrial Organization Approach to Copyright Law*, 46 WM. & MARY L. REV. 33 (2004); Michael Abramowicz, *A Theory of Copyright’s Derivative Right and Related Doctrines*, 90 MINN. L. REV. 317, 343 (2005) [hereinafter Abramowicz, *Derivative Right*].

⁴⁷ Abramowicz, *Derivative Right*, *supra* note 46, at 355–56.

⁴⁸ Abramowicz, *Derivative Right*, *supra* note 46, at 321; *see also* Abramowicz, *Uneasy Case*, *supra* note 2, at 1665 (“Rent dissipation theory . . . recognizes that the more works that exist, the more the marginal work is likely to be similar to existing works, and thus the lower the value of the marginal work.”). *But see* Oren Bracha & Talha Syed, *Beyond Efficiency: Consequence-Sensitive Theories of Copyright*, 29 BERKELEY TECH. L.J. 229, 268–69, 271–73 (2014) (arguing that the low incentive benefit from an entitlement to secondary markets will be outweighed by higher access costs, particularly for heterodox derivatives); Bambauer, *supra* note 36, at 391–92 (calling for an end to the derivative work right); *but see also* Samuelson, *supra* note 11, at 1518–20, 1527–33 (arguing that the derivative work right should be limited to activities similar to nine enumerated derivative works, which she groups into “shorter versions,” “faithful renditions,” and “transformations of expressions from one medium or genre to another.”).

against subsequent entrants who would rush to obtain first-mover advantages and, *ceteris paribus*, bring lower quality adaptations to market.⁴⁹ This Article returns to the interaction between the product differentiation justification for derivative works and the reality of attention scarcity in Part III.

C. Critiques of the Derivative Right

Intellectual property scholarship is replete with calls to reform copyright laws by narrowing the protections extended to copyright owners,⁵⁰ or expanding defenses and exceptions,⁵¹ especially fair use.⁵² Critics also advocate for a shorter copyright term,⁵³ reduced damages,⁵⁴ narrower remedies,⁵⁵ revised approaches to compulsory licenses,⁵⁶ reinvigorated use of formalities,⁵⁷ or narrower and less frequent grants of

⁴⁹ Abramowicz, *Derivative Right*, *supra* note 46, at 319–20.

⁵⁰ GIANCARLO FROSIO, RECONCILING COPYRIGHT WITH CUMULATIVE CREATIVITY: THE THIRD PARADIGM 6 (2018) (proposing that copyright law should be rebalanced to account for “the complexity of the creative process” allowing law to embrace “the emergence of a new digital creative infrastructure and ethics”).

⁵¹ Doug Lichtman & Benjamin Nyblade, *Naughty Bits: An Empirical Study of What Consumers Would Mute and Excise from Hollywood Fare If Only They Could*, 66 J. COPYRIGHT SOC’Y U.S.A. 227 (2019) (arguing in light of data of what viewers choose to mute or avoid that the copyright regime should provide sufficient freedom to filter films).

⁵² See generally JESSICA SILBEY, THE EUREKA MYTH: CREATORS, INNOVATORS, AND EVERYDAY INTELLECTUAL PROPERTY (2015).

⁵³ See, e.g., Kristelia A. García & Justin McCrary, *A Reconsideration of Copyright’s Term*, 71 ALA. L. REV. 351 (2019) (arguing in light of music industry sales that the copyright term might be overlong for most musical works).

⁵⁴ Pamela Samuelson & Tara Wheatland, *Statutory Damages in Copyright Law: A Remedy in Need of Reform*, 51 WM. & MARY L. REV. 439 (2009); Jessica Silbey, *Fairer Uses*, 96 B.U. L. REV. 857, 861 (2016) (reporting interviews where creators report they “often seek[] fair remuneration (not maximum potential damages), reasonable profit sharing, and sometimes a nominal or dignitary fee . . .”).

⁵⁵ Jacqueline D. Lipton, *Cyberspace, Exceptionalism, and Innocent Copyright Infringement*, 13 VAND. J. ENT. & TECH. L.J. 767, 797 (2011) (describing strict liability as a trap for the unwary); cf. Ned Snow, *Copytraps*, 84 IND. L.J. 285, 286 (2009) (cautioning against strict punishment).

⁵⁶ Jacob Victor, *Reconceptualizing Compulsory Copyright Licenses*, 72 STAN. L. REV. 915 (2020) (arguing that recent compulsory license rates are set too high, making it “more difficult for new disseminators, such as streaming services, to facilitate access to music”).

⁵⁷ James Gibson, *Once and Future Copyright*, 81 NOTRE DAME L. REV. 167 (2005); Christopher Sprigman, *Reform(aliz)ing Copyright*, 57 STAN. L. REV. 485 (2004).

injunctive relief.⁵⁸ Some calls for reform focus on particular subject matters, like software;⁵⁹ rights that arise for creators in certain industries, like the music industry;⁶⁰ or certain loci of use, like the internet.⁶¹ Many of these calls are grounded in a challenge to the economic justification for copyright protection.⁶²

While scholars call for reforms to all of the rights in the copyright owners' bundle of sticks, many proposals target the derivative work right. The derivative work right is often challenged on efficiency grounds.⁶³ Scholars have argued that the scope of protection for derivative works may encourage the creation of too many derivatives by the author, or the

⁵⁸ Paul Goldstein, *Derivative Rights and Derivative Works in Copyright*, 30 J. COPYRIGHT SOC'Y U.S.A. 209, 238 (1983) (arguing against granting an injunction to prohibit the distribution of capital-intensive derivative works for which the infringed works "play only a small and unintended part").

⁵⁹ Michael Risch & Jack Russo, *Virtual Copyright*, in RESEARCH HANDBOOK ON THE LAW OF VIRTUAL AND AUGMENTED REALITY 154 (Woodrow Barfield & Marc Jonathan Blitz eds, 2018); Clark D. Asay, *Software's Copyright Anticommons*, 66 EMORY L.J. 265 (2017) (arguing that copyright poses significant anticommons problems in the software context because of the interoperable, collaborative nature of software development in today's world); Pamela Samuelson & Clark D. Asay, *Saving Software's Fair Use Future*, 31 HARV. J.L. & TECH. 535 (2018) (arguing that cases such as the Federal Circuit's *Oracle v. Google* decision imperil the future of the fair use doctrine in the software context); Clark D. Asay, *Transformative Use in Software*, 70 STAN. L. REV. ONLINE 9 (2017) (arguing that the decision in *Oracle v. Google* threatens to disrupt copyright's protectability balance).

⁶⁰ See generally GLYNN LUNNEY, COPYRIGHT'S EXCESS: MONEY AND MUSIC IN THE U.S. RECORDING INDUSTRY (2018).

⁶¹ See, e.g., Amanda Reid, *Considering Fair Use: DMCA's Take Down & Repeat Infringers Policies*, 24 COMM. L. & POL'Y 101 (2019) (arguing that the current notice and takedown framework set by the Digital Millennium Copyright Act tips too far in favor of copyright holders, in part because they need not make a sufficient fair use inquiry before sending a takedown notice).

⁶² Lemley, *Scarcity*, *supra* note 1, at 492–93 n.160–63; Zimmerman, *supra* note 11, at 30–31 (reexamining the incentive justification).

⁶³ See, e.g., Bambauer, *supra* note 36, at 372–75. The derivative work right has also been challenged on grounds other than efficiency. See, e.g., Cohen, *supra* note 11, at 1204 ("A copyright regime concerned more directly with the balance between economic fixity and cultural progress would seek to replace broad, all-encompassing statutory provisions and generous judicially created tests for infringement with narrower, more clearly delimited formulations covering different kinds of derivations."); Madhavi Sunder, *Intellectual Property in Experience*, 117 MICH. L. REV. 197 (2018); Christina Bohannan, *Taming the Derivative Works Right: A Modest Proposal for Reducing Overbreadth and Vagueness in Copyright*, 12 VAND. J. ENT. & TECH. L. 669, 692–94 (2010) (proposing First Amendment limits on the derivative work right); Naomi Abe Voegtli, *Rethinking Derivative Rights*, 63 BROOK. L. REV. 1213, 1242–44 (1997) (arguing that broad derivative rights might be redundant with first-mover advantage, reduce the production of expressive works by adding licensing or inventing around costs, encourage rent seeking by incumbents, and especially burden the production of appropriation art).

overenthusiastic grant of licenses to create new derivative works.⁶⁴ For example, Shubha Ghosh argues that the derivative work right as currently constituted may lead to too many licensed works of “superfluous variety.”⁶⁵

Other scholars suspect that the standard incentive story may be flawed, militating against a strong derivative work right. For example, Diane Leenheer Zimmerman posits that intrinsic motivation may account for much creative activity, and that if courts focused less on authors’ economic motivations, they might properly tailor a narrower derivative work right.⁶⁶ Bracha and Syed argue instead that copyright should provide broader space for the creation and dissemination of fan fiction, arguing from a human flourishing perspective that copyright law should ignore the benefits of product differentiation and instead focus on the flourishing values claimed by creators of fan fiction.⁶⁷ Some scholars instead ground critiques in constitutional precommitments.⁶⁸

The presumption of scholars advocating for a narrower derivative work right (or none at all) is that while narrowing the right may harm authors’ incentives, it would clearly be a boon to the public. Critics of the derivative right, or the current scope of copyright protection more generally, presume that an increase in the creation and dissemination of unlicensed works will “advance the progress of science.”⁶⁹ Creators who are not required to create around the derivative rights of other owners

⁶⁴ See, e.g., Shubha Ghosh, *Market Entry and the Proper Scope of Copyright*, 12 INT’L J. ECON. BUS. 347, 358 (2005).

⁶⁵ *Id.* at 358, cf. Loren, *supra* note 11, at 40.

⁶⁶ Zimmerman, *supra* note 11, at 56–57 (inviting the reader to “entertain the possibility that the first author’s control should actually extend only to works that come very close to the original, and not to those that depart from it in significant ways”).

⁶⁷ Bracha & Syed, *supra* note 48, at 278–79 (“If, however, one is willing to affirm that commitments to human flourishing require placing a greater value on access to meaningful activities and social interaction than what many of the beneficiaries of that access may place on it, an obvious gap opens up vis-a-vis efficiency analysis.”); cf. Cohen, *supra* note 11, at 1203–04 (arguing the derivative right should be narrowed to exclude non-commercial fan fiction).

⁶⁸ See, e.g., C. Edwin Baker, *First Amendment Limits on Copyright*, 55 VAND. L. REV. 891, 941 (2002); Guy Pessach, *Copyright Law as a Silencing Restriction on Noninfringing Materials: Unveiling the Scope of Copyright’s Diversity Externalities*, 76 S. CAL. L. REV. 1067, 1104 n.116 (2003); Jed Rubenfeld, *The Freedom of Imagination: Copyright’s Constitutionality*, 112 YALE L.J. 1, 5, 48, 53 (2002); Rebecca Tushnet, *Copyright as a Model for Free Speech Law: What Copyright Has in Common with Anti-Pornography Laws, Campaign Finance Reform, and Telecommunications Regulation*, 42 B.C. L. REV. 1, 78 (2000).

⁶⁹ Samuelson, *supra* note 11, at 1530.

can more cheaply create and disseminate new expression.⁷⁰ The oft-unstated belief underlying this analysis is that holding other things constant, a larger number of works created without accounting for the preferences of rights holders necessarily leads to more progress.

D. *Falling Fixed Costs and Calls for Reform*

The first draft of Anglo-American copyright law followed hot on the heels of the printing press.⁷¹ Copying technology in 1710 was both world-transforming and quite cumbersome. Dissemination of printed works was no easier than any other eighteenth-century logistic challenge. Even as recently as 1976, when federal copyright laws received their last major overhaul,⁷² mass-copying technologies were quite limited, and mass-distribution media were limited as to available bandwidth.⁷³

Modern technologies transform the average citizen's access to copying and distribution tools. In the United States, nearly ninety percent of the population has access to the internet.⁷⁴ Many consumers own a phone that combines unprecedented processing power, cutting-edge photo and video capabilities, and internet connectivity. Personal computers are often sold with image, video, and audio editing software included.⁷⁵ An individual at home with a good eye and a good ear can

⁷⁰ See, e.g., Simon, *supra* note 11, at 342–43 (“[M]ore creative works may result if people (or movie studio executives) know that movies can be made about a book without worrying about dealing with the author Such a model would encourage more risk-taking and, thus, more diversity in creative products.”).

⁷¹ John Shepard Wiley Jr., *Copyright at the School of Patent*, 58 U. CHI. L. REV. 119, 181 (1991).

⁷² Laura G. Lape, *Transforming Fair Use: The Productive Use Factor in Fair Use Doctrine*, 58 ALB. L. REV. 677, 691 (1995) (describing a 1941 fair use case considering reproduction using photostatic copies).

⁷³ Mark Green & Ralph Nader, *Economic Regulation vs. Competition: Uncle Sam the Monopoly Man*, 82 YALE L.J. 871, 873 (1973) (describing at the beginning of the 1970s how recent “cable and satellite advances have antiquated the concept of spectrum scarcity”).

⁷⁴ *Internet Users by Country* (2016), INTERNET LIVE STATS, <http://www.internetlivestats.com/internet-users-by-country> [<https://perma.cc/UEZ2-TTJ8>].

⁷⁵ See, e.g., Terry Sullivan & Donna Tapellini, *5 Best Laptops for Photographers*, CONSUMER REPS. (last updated Sept. 3, 2015), <https://www.consumerreports.org/cro/laptops/best-laptops-for-photographers> [<https://perma.cc/8KD2-HRHL>].

create at least quasi-professional music or video.⁷⁶ All these technologies combine to enable an unprecedented level of information generation and distribution.⁷⁷ This technology appears to be democratizing the creation and sharing of information.⁷⁸ Indeed, we may have what Carol Rose calls a “comedy of the commons,” where more information in the hands of more users begets more information.⁷⁹

The utilitarian justification for copyright protection requires an incentive sufficient to encourage creation and distribution, but no greater.⁸⁰ In light of falling creation and distribution costs, scholars have argued that the protections extended to copyrighted works should be narrowed proportionally. For example, Mark Lemley has argued that the development of cost-reducing technologies, which enable cheaper copying of information (and even cheaper production of tangible things through technology like 3D printing) “may actually mean we have less, not more, need for IP” because authors may require fewer incentives to recoup lower creation and distribution costs.⁸¹

Indeed, as the argument goes, in cases where volunteers generate an abundance of intellectual goods like copyrighted expression, society may

⁷⁶ See, e.g., Serdar Yegulalp, *4 Video Editors: Pro Results for Ambitious Amateurs*, COMPUT. WORLD (Apr. 26, 2013, 6:00 AM), <https://www.computerworld.com/article/2496351/4-video-editors--pro-results-for-ambitious-amateurs.html> [<https://perma.cc/4PTY-2J2A>].

⁷⁷ Gregory P. Magarian, *Market Triumphalism, Electoral Pathologies, and the Abiding Wisdom of First Amendment Access Rights*, 35 HOFSTRA L. REV. 1373, 1386 (2007) (describing the world we live in as one of “virtually limitless information”); Frank Pasquale, *Copyright in an Era of Information Overload: Toward the Privileging of Categorizers*, 60 VAND. L. REV. 135, 135 (2007) (“Over 100,000 books are published in the United States each year, thousands of movies and CDs are released, and the amount of textual, musical, and visual works on the internet continues to rise exponentially.”).

⁷⁸ Peter K. Yu, *Of Monks, Medieval Scribes, and Middlemen*, 2006 MICH. ST. L. REV. 1, 24 (2006) (“Through online distribution and peer-to-peer technologies, consumers can now freely transmit information without the intervention of a third party.”); Erwin Chemerinsky, *Tucker Lecture, Law and Media Symposium*, 66 WASH. & LEE L. REV. 1449, 1455 (2009) (“We have access to more different sources at the stroke of a key than people have ever had before.”).

⁷⁹ Carol Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 U. CHI. L. REV. 711 (1986).

⁸⁰ Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 TEX. L. REV. 989, 996–97 (1997) (arguing that because of the costs intellectual property laws impose on the public and on downstream innovators, such laws can be justified only if, on balance, they encourage the creation and dissemination of new works).

⁸¹ Lemley, *Scarcity*, *supra* note 1, at 464; see also Jonathan Zittrain, *Law in a Networked World: Privacy 2.0*, 2008 U. CHI. LEGAL F. 65, 113 (2008) (“[T]he digital copyright problem could be solved if publishers could find a way to profit from abundance rather than scarcity . . .”).

benefit from no protection at all.⁸² For example, if users are willing to post videos to YouTube and images to Pinterest with no thought of payment, then perhaps intrinsic motivation will lead to sufficient levels of creation. In such a world, society can rely on volunteers to provide the public with enough expression to consume, learn from, and interact with to meet the constitutional goal of promoting the progress of science and useful arts.⁸³ As Carol Rose notes, “Nobody bothers to create property for some resource that lies around in abundance.”⁸⁴

The presumption that cheap and easily reproducible information reduces the need for intellectual property assumes there are no costs associated with costless duplication and dissemination. Indeed, if attention were an unlimited resource, then more information would always be a net good.⁸⁵ Unfortunately, while information is abundant, the attention required to deal with it is scarce. And scarcity of attention complicates the comedic tale told about a world with low or no information costs.⁸⁶ The remainder of this Article argues that

⁸² See, e.g., Eric E. Johnson, *Intellectual Property and the Incentive Fallacy*, 39 FLA. ST. U. L. REV. 623 (2012); Eric Schlachter, *The Intellectual Property Renaissance in Cyberspace: Why Copyright Law Could Be Unimportant on the Internet*, 12 BERKLEY TECH. L.J. 15 (1997) (analyzing potential business models that might cross-subsidize free intellectual property shared online).

⁸³ Johnson, *supra* note 82, at 656 (“[I]t certainly seems possible that, going forward, the value of citizen-produced media will come to overshadow the value of traditional Hollywood copyright-model-produced content. Indeed, more of an increase can be expected as newer generations, comprising people with less of an ingrained preference for older forms of media, form larger and larger portions of the media-consuming population.”).

⁸⁴ Carol M. Rose, *The Several Futures of Property: Of Cyberspace and Folk Tales, Emission Trades and Ecosystems*, 83 MINN. L. REV. 129, 134 (1998).

⁸⁵ Petra Persson, *Attention Manipulation and Information Overload* 5 (Nat’l Bureau of Econ. Research, Working Paper No. 23823, 2017).

⁸⁶ A few scholars have considered the failure of standard copyright critiques to sufficiently account for platform capitalism and free content. See, e.g., Guy Pessach, *Beyond IP—The Cost of Free: Information Capitalism in a Post-IP Era*, 54 OSGOODE HALL L.J. 225, 232 (2016) [hereinafter Pessach, *Beyond IP*] (“[T]here is hardly any reference to the linkage between networked informational capitalism and components, both legal and ideological, that are derived from and associated with free distribution of content in cultural and informational zones in which intellectual property’s governance is less salient. I argue that informational capitalism is linked not only to elements of proprietary control, but also to elements of free flow and non-proprietary modes of content circulation.”); see also John M. Newman, *Antitrust in Zero-Price Markets: Foundations*, 164 U. PA. L. REV. 149, 152 (2015) [hereinafter Newman, *Antitrust in Zero-Price Markets*] (arguing that in a market for zero-price products, like broadcast television programming, consumers “pay for those products, primarily by exchanging their attention, information, or both,” and that zero-price markets can reasonably be subject to antitrust scrutiny). *But see* Mark A. Lemley, *Is the Sky Falling on the Content Industries?*, 9 J. ON TELECOMM. & HIGH TECH. L. 125 (2011) (documenting times when content industries overstated

understanding the cost of attention scarcity on consumers calls into question the presumption that more and more easily created derivative works improves upon the status quo. This Article provides a justification on attention conservation grounds for preserving the current scope of the derivative work right. Accounting for attention costs suffered by consumers suggests unrecognized virtues of a derivative right that may appear too broad and too strong only because attention costs are too often discounted.

II. ATTENTION SCARCITY

Intellectual property rules are designed to impose scarcity on intangible information goods like copyrighted expression, trademarks, and patented inventions—to make them rivalrous and excludable so the creator, owner, or inventor can make some money from sale or licensing.⁸⁷ Modern analysis about the problems of managing scarce *physical* resources often starts with Harold Demsetz’s “Toward a Theory of Property Rights,” which posits that compared to common resources, which might be subject to overuse, private ownership will internalize external costs, allowing an owner who can exclude others to secure rewards for their land stewardship, and thus incentivize efficient use of resources.⁸⁸

threats from new technologies and identifying measures some firms take to successfully compete with free “pirated” offerings); John Perry Barlow, *Selling Wine Without Bottles: The Economy of Mind on the Global Net*, 18 DUKE L. & TECH. REV. 8, 11 (2019) (“Generally, the issue of consumer payment for broadcast products was irrelevant. The consumers themselves were the product. Broadcast media were supported either by selling the attention of their audience to advertisers, using government to assess payment through taxes, or the whining mendicancy of annual donor drives.”).

⁸⁷ See, e.g., Dan L. Burk, *Law and Economics of Intellectual Property: In Search of First Principles*, 8 ANN. REV. L. & SOC. SCI. 397, 399–401 (2012) (summarizing arguments supporting exclusive rights in creative works); Neil Weinstock Netanel, *Copyright and a Democratic Civil Society*, 106 YALE L.J. 283, 308–09 (1996) (summarizing although not advocating for the incentive rationale for intellectual property protection); Arnold Plant, *The Economic Theory Concerning Patents for Inventions*, 1 ECONOMICA 30, 31 (1934) (“[P]roperty rights in patents and copyright make possible the *creation* of a scarcity of the products appropriated which could not otherwise be maintained.”).

⁸⁸ Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. 347, 354–56 (1967); see also Alina Ng, *The Author’s Rights in Literary and Artistic Works*, 9 J. MARSHALL REV. INTEL. PROP. L. 453, 455 (2009) (describing Demsetz’s work as one that “provide[s] neoclassicists with the economic foundation to support the privatization of intellectual property

The conventional wisdom suggests that information is not scarce in the same way as physical resources precisely because it is typically neither rivalrous nor excludable.⁸⁹ Indeed, information isn't really scarce at all. The amount of data generated is rapidly expanding,⁹⁰ and nearly everyone has effectively uncountable quantities of information to process. If there is not a glut of information, it seems there is at least an abundance.

But there is some limit on “human creativity, time, and attention.”⁹¹ So while information itself might be abundant, the inputs necessary to create it—human creativity and time—might not be.⁹² More importantly, the attention resources required to process ever-expanding volumes of information are not infinite. In fact, information is so abundant that some could conclude it is “overproduced.”⁹³

Optimistic perspectives on the benefit of the information economy overlook the main cost of information abundance. While the cost of generating and transmitting information has fallen,⁹⁴ the cost of finding the information one wants increases as the cost on new speakers entering

and the expansion of property-type rights in information and knowledge”); Thomas W. Merrill, *The Demsetz Thesis and the Evolution of Property Rights*, 31 J. LEGAL STUD. 331, 331 (2002) (“The point of departure for virtually all efforts to explain changes in property rights is Harold Demsetz’s path-breaking article [It] is still widely cited and reproduced . . .”).

⁸⁹ Yochai Benkler, *Coase’s Penguin, or, Linux and the Nature of the Firm*, 112 YALE L.J. 369, 422 (2002) (“[T]he use of a rival resource excludes the use by others in a way that is not true for a purely nonrival good like information.”). *But see* Kristen Osenga, *Information May Want to Be Free, but Information Products Do Not: Protecting and Facilitating Transactions in Information Products*, 30 CARDOZO L. REV. 2099, 2101 (2009) (summarizing arguments in favor of extending protection to information products like databases to facilitate information flow).

⁹⁰ IBM MARKETING CLOUD, 10 KEY MARKETING TRENDS FOR 2017 AND IDEAS FOR EXCEEDING CUSTOMER EXPECTATIONS 3 (estimating that “[e]very day, [humanity] create[s] 2.5 quintillion bytes of data”), <https://paulwriter.com/wp-content/uploads/2017/10/10-Key-Marketing-Trends-for-2017.pdf> [<https://perma.cc/JL8U-CK79>].

⁹¹ YOCHAI BENKLER, *THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION TRANSFORMS MARKETS AND FREEDOM* 107 (2006).

⁹² Henry E. Smith, *Intellectual Property as Property: Delineating Entitlements in Information*, 116 YALE L.J. 1742, 1744 (2007) (explaining that while information is non-rival and non-excludable, creating the information and making it useful requires inputs from the creator, which are rival and “susceptible to efforts to exclude”).

⁹³ Robert P. Merges, *The Concept of Property in the Digital Era*, 45 HOUS. L. REV. 1239, 1241 (2008) (“Digital technologies have eased the mechanical, repetitive aspects of creative work, but they have not, in my opinion, fundamentally made *creativity* any easier.”) (emphasis added); Monroe E. Price, *The Newness of New Technology*, 22 CARDOZO L. REV. 1885, 1911 (2001); *see also* J.M. Balkin, *Media Filters, the V-Chip, and the Foundations of Broadcast Regulation*, 45 DUKE L.J. 1131, 1148 (1996) (“All communications media produce too much information.”).

⁹⁴ Chris Jay Hoofnagle & Jan Whittington, *Free: Accounting for the Costs of the Internet’s Most Popular Price*, 61 UCLA L. REV. 606, 621 (2014).

the market decreases.⁹⁵ Congestion of attention resources will increase as the number of firms demanding attention increases, and holding other things constant, the number of firms demanding attention will increase as the costs of communication decrease.⁹⁶

Consumers and creators thus no longer face scarcity of information. The scarce resource is attention. As the Nobel Prize Laureate economist Herbert Simon put it, “a wealth of information creates a poverty of attention”⁹⁷ Attention scarcity can impose real costs on members of the public as consumers of information.⁹⁸ Indeed, unlike information, attention is a scarce resource, both rivalrous and excludable. When scarce attention resources are overtaxed, information consumers are prone to distraction. It also becomes difficult to acquire sufficient depth in important topics. Attention scarcity further distorts the marketplace for ideas and expression. Finally, attention scarcity can make consumers vulnerable to deception.

A. *The Nature of Attention*

Some 120 years ago, the psychologist William James defined attention as “the taking possession by the mind, in clear and vivid form, of one out of what seem several simultaneously possible objects or trains of thought,”⁹⁹ something akin to the processing capacity of a human mind. Attention is subject, at least in part, to our individual control. We can focus our attention, selecting where and for how long to actively

⁹⁵ Andreas Hefti & Steve Heinke, *On the Economics of Superabundant Information and Scarce Attention*, 5 *ECONOMIA* 37, 48 (2015).

⁹⁶ Simon P. Anderson & André de Palma, *Competition for Attention in the Information (Overload) Age*, 43 *RAND J. ECON.* 1 (2012).

⁹⁷ Herbert A. Simon, *Designing Organizations for an Information-Rich World*, in *COMPUTERS, COMMUNICATIONS, AND THE PUBLIC INTEREST* 38, 40–41 (M. Greenberger ed., 1971).

⁹⁸ Hefti & Heinke, *supra* note 95, at 41 (defining attention scarcity as the circumstance where an individual’s *attention set*, the subset of items perceived, i.e., the individual’s “psychologically feasible set,” is less than the individual’s *information set*, the amount of information available to be perceived).

⁹⁹ JAMES, *supra* note 3, at 403–04; *see also id.* at 404 (“Focalization, concentration, of consciousness are of [attention’s] essence. It implies withdrawal from some things in order to deal effectively with others, and is a condition which has a real opposite in the confused, dazed, scatter-brained state which in French is called *distraction*, and *Zerstreuung* in German.”).

direct our senses.¹⁰⁰ Psychologists recognize that attention is a finite resource, one that we constantly spend but cannot stockpile.¹⁰¹ Directing and redirecting attention requires effort.¹⁰² The total amount of effort we humans can expend is limited,¹⁰³ and our control over our effort is likewise limited.¹⁰⁴ When our attention is focused in one place, we cannot focus it elsewhere.¹⁰⁵ Thus, attention entails opportunity costs.

Concurrent activities that require attention thus interfere with one another. For instance, in one famous experiment, viewers asked to focus on the number of passes between basketball players in a video overlooked the presence of a moonwalking person wearing a gorilla suit.¹⁰⁶ Naturally, in a world with few barriers to information creation and distribution, attention is a resource that can be strained and drained.¹⁰⁷ But so long as information sources are passive, the rational attention consumer can direct their limited attention with little interference.¹⁰⁸

Current research also indicates that consumers don't have perfect control over their attention: it is a resource that can be "directed or grabbed without any voluntary choice having taken place, even against strong wishes to the contrary . . ."¹⁰⁹ Attention scarcity means individuals can't focus on everything, which incentivizes firms to seek to manipulate attention resources, to redirect them in a direction that favors

¹⁰⁰ ADAM GAZZALEY & LARRY D. ROSEN, *THE DISTRACTED MIND: ANCIENT BRAINS IN A HIGH-TECH WORLD* 30–35 (2016); *see also id.* at 70–72 (describing mechanisms for distributing attention and sustaining focus).

¹⁰¹ MATTHEW B. CRAWFORD, *THE WORLD BEYOND YOUR HEAD: ON BECOMING AN INDIVIDUAL IN AN AGE OF DISTRACTION* 11 (2015) ("In the main currents of psychological research, attention is treated as a resource—a person has only so much of it."); Tim Wu, *Blind Spot: The Attention Economy and the Law*, 82 *ANTITRUST L.J.* 771 (2019).

¹⁰² DANIEL KAHNEMAN, *ATTENTION AND EFFORT* 12 (1973).

¹⁰³ *Id.*

¹⁰⁴ *Id.* at 27.

¹⁰⁵ GAZZALEY & ROSEN, *supra* note 100, at 56–58 (describing how selecting a focus requires ignoring other information).

¹⁰⁶ KAHNEMAN, *supra* note 102, at 12; *see also* CHRISTOPHER CHABRIS & DANIEL SIMONS, *THE INVISIBLE GORILLA: AND OTHER WAYS OUR INTUITIONS DECEIVE US* (2010) (focusing on some objects in an environment makes other objects effectively invisible).

¹⁰⁷ Jack M. Balkin, *Digital Speech and Democratic Culture: A Theory of Freedom of Expression for the Information Society*, 79 *N.Y.U. L. REV.* 1, 7 (2004) ("The digital revolution" made salient "scarcity of audience attention.").

¹⁰⁸ Christopher A. Sims, *Implications of Rational Inattention*, 50 *J. MONETARY ECON.* 665 (2003); Mirko Wiederholt, *Rational Inattention*, in *THE NEW PALGRAVE DICTIONARY OF ECONOMICS* (Palgrave Macmillan ed., 2010).

¹⁰⁹ HAROLD E. PASHLER, *THE PSYCHOLOGY OF ATTENTION* 3 (1998).

the manipulator.¹¹⁰ Attention can be “captured” and successfully doing so allows the attention hunter to divert attention in the direction of a desired transaction.¹¹¹ As Eric Goldman explains, “Marketing consumes this scarce resource when consumers evaluate and sort it. Because the attention consumed in the evaluation-sort process has an opportunity cost, the process generates negative utility for consumers.”¹¹²

B. *The Attention Economy*

What has been called the “information” economy is actually an “attention” economy.¹¹³ As William James noted, attention must be directed, implying “withdrawal from some things [is necessary] in order to deal effectively with others.”¹¹⁴ Attention is “mental capital,”¹¹⁵ critical currency in the modern marketplace.¹¹⁶ Attention is thus a valuable commodity for which companies compete,¹¹⁷ and which they strive to manipulate.

¹¹⁰ Persson, *supra* note 85, at 1.

¹¹¹ TIM WU, *THE ATTENTION MERCHANTS* 9 (2016).

¹¹² Eric Goldman, *A Coasean Analysis of Marketing*, 2006 WIS. L. REV. 1151, 1163 (2006); *see also id.* at n.59 (citing THOMAS H. DAVENPORT & JOHN C. BECK, *THE ATTENTION ECONOMY* 78 (2001)) (noting that “[t]ime is a rough proxy for measuring attention consumption, but they are not equivalent because consumers can multi-task”).

¹¹³ Compare Michael H. Goldhaber, *The Attention Economy and the Net*, 2 FIRST MONDAY, no. 4 (1997), with CALVIN H. P. PAVA, *MANAGING NEW OFFICE TECHNOLOGY: AN ORGANIZATIONAL STRATEGY* 137 (1983) (describing “[t]he prevailing view . . . that a new ‘information age’ will dawn, based on an ‘information economy’ and peopled with ‘information workers’”).

¹¹⁴ JAMES, *supra* note 3, at 403–04.

¹¹⁵ Warren Thorngate, *The Economy of Attention and the Development of Psychology*, 31 CANADIAN PSYCHOL./PSYCHOLOGIE CANADIENNE 262, 263 (1990).

¹¹⁶ Elizabeth L. Rosenblatt, *A Theory of IP’s Negative Space*, 34 COLUM. J.L. & ARTS 317, 343–44 (2011) (positing that “[i]n a society in which ‘cognitive surplus’ often creates a much greater supply of works than demand for them, many creators would prefer to be noticed than to be paid”); James G. Webster, *User Information Regimes: How Social Media Shape Patterns of Consumption*, 104 NW. U. L. REV. 593, 594 (2010) [hereinafter Webster, *User Information Regimes*] (“Attention might thus be thought of as the currency of a new economy.”).

¹¹⁷ Deven R. Desai, *Property, Persona, and Preservation*, 81 TEMP. L. REV. 67, 79–81 (2008) (examining the growth of attention economics as a way to explain how online creation generates value but not in a pure monetary manner); *id.* at 82 (“[C]ultural assets or norms that make up the attention economy become part of the property system.”); *see also* Margaret Jane Radin, *Property Evolving in Cyberspace*, 15 J.L. & COM. 509, 515 (1996) (“Cultural norms can substitute for legal property rights as an incentive for production.”).

This competition is in many ways a zero-sum game.¹¹⁸ For example, one recent study of household internet use comparing 2008 to 2013 concluded that households spend the same amount of time on the internet generally, and the same amount of time on various websites, in terms of both breadth (how many websites are sampled) and depth (how deeply they are sampled). But those households redirected attention from chat and news sites to social network and video streaming sites in 2013.¹¹⁹ As part of this shift, Facebook, perhaps the world's largest intermediated social network,¹²⁰ has become a key interface between its users and news organizations.¹²¹

In this competitive marketplace, one can more easily draw attention by incorporating cultural artifacts.¹²² Some of those cultural artifacts are copyrighted works.¹²³ In an attention economy, the use of copyrighted

¹¹⁸ Oren Bracha & Frank Pasquale, *Federal Search Commission? Access, Fairness, and Accountability in the Law of Search*, 93 CORNELL L. REV. 1149, 1164–65 (2008) (arguing that internet sites compete fiercely for attention in a “zero-sum competition for recognition” where “a high ranking is critical to success” and being ranked later than the first page of search results “is almost as bad as not being indexed at all”); Seth F. Kreimer, *Censorship By Proxy: The First Amendment, Internet Intermediaries, and the Problem of the Weakest Link*, 155 U. PA. L. REV. 11, 40 n.84 (2006) (describing how, if consumers are satisfied with the first link they see, then search engine ordering has a winner take all effect); Greg Lastowka, *The Trademark Function of Authorship*, 85 B.U. L. REV. 1171, 1240 (2005) (competition among authors for shelf space is also a zero-sum game); Michael R. Baye, J. Rupert J. Gatti, Paul Kattuman & John Morgan, *Clicks, Discontinuities, and Firm Demand Online*, 18 JOURNAL ECON. MGMT. STRATEGY 935 (2009) (“[A] firm receives about 17% fewer clicks for every competitor listed above it on the screen.”); Hefti & Heinke, *supra* note 95, at 46 n.10 (reporting that “[t]he first three positions get about 75% out of all clicks of the first ten on-screen positions, while positions with rank larger than three do not differ substantially from each other”).

¹¹⁹ Andre Boik, Shane Greenstein & Jeffrey Prince, *The Empirical Economics of Online Attention* (Nat'l Bureau of Econ. Research, Working Paper No. 22427, 2016).

¹²⁰ Facebook is the leading social network in 129 out of 137 countries in a recent study, with nearly 1.6 billion monthly active users. *World Map of Social Networks*, VINCOSBLOG, <http://vincos.it/world-map-of-social-networks> [<https://perma.cc/ER35-FSKQ>].

¹²¹ Many consumers use Facebook as a primary source of news. Julia Greenberg, *Facebook Has Seized the Media, and That's Bad News for Everyone but Facebook*, WIRED, (Apr. 13, 2016, 3:04 PM), <https://www.wired.com/2016/04/facebook-seized-media-thats-bad-news-everyone-facebook> [<https://perma.cc/5H4R-MU5R>]; Zeynep Tufekci, *Mark Zuckerberg Is in Denial*, N.Y. TIMES, (Nov. 15, 2016), <https://www.nytimes.com/2016/11/15/opinion/mark-zuckerberg-is-in-denial.html> [<https://perma.cc/E67B-WMFC>].

¹²² See also Hannibal Travis, *Of Blogs, eBooks, and Broadband: Access to Digital Media as a First Amendment Right*, 35 HOFSTRA L. REV. 1519, 1531 (2007) (“The sheer number and obscurity of many blogs means that only those blogs that discuss prominent public officials, celebrities, controversial issues, or pop culture conventions get any attention.”).

¹²³ James G. Webster, *Structuring a Marketplace of Attention*, in THE HYPERLINKED SOCIETY: QUESTIONING CONNECTIONS IN THE DIGITAL AGE 23, 30 (Joseph Turow & Lokman Tsui eds.,

expression, licensed or not, gives the user a leg up on the competition. This advantage can be secured by an individual author, hoping to free ride on the attention successfully garnered by an available work.¹²⁴ Firms will likewise license the use of copyrighted expression: books and comic book series become movies which become television series which become action figures.¹²⁵ Attention can also be secured by platforms like Facebook and YouTube, which are capable of commercializing and proprietizing traffic drawn in by content and information that users can find for zero cost.¹²⁶ Free content becomes the draw, attracting attention that platforms can sell to advertisers.¹²⁷

Indeed, information has become so abundant that it is often compared to pollution or smog.¹²⁸ One consumer's treasure is trash for many multitudes.¹²⁹ For copyright owners hoping to "extract direct revenue from selling content,"¹³⁰ the challenge is somewhat daunting.

2008) [hereinafter Webster, *Marketplace of Attention*] (citing BENKLER, *supra* note 91; HENRY JENKINS, *CONVERGENCE CULTURE: WHERE OLD AND NEW MEDIA COLLIDE* (2006); LAWRENCE LESSIG, *FREE CULTURE: HOW BIG MEDIA USES TECHNOLOGY AND THE LAW TO LOCK DOWN CULTURE AND CONTROL CREATIVITY* (2004)) ("[C]onsumer-generated production makes liberal use of the most popular (often copyrighted) output of culture industries."). Thus, "[i]f new outlets are simply repurposing existing content and if petty producers are simply playing with the culture's most salient themes and products, fragmentation may be more apparent than real." Webster, *supra* note 123, at 30. *But see* Brett M. Frischmann & Mark A. Lemley, Essay, *Spillovers*, 107 COLUM. L. REV. 257, 269 (2007) (describing firms in spillover-heavy industries as "part of a virtuous circle because they are in turn creating new knowledge spillovers that support still more entrepreneurial activity").

¹²⁴ Cf. Michael J. Meurer, *Copyright Law and Price Discrimination*, 23 CARDOZO L. REV. 55, 97 (2001) (describing how a producer incapable of attracting new buyers to a saturated market may nonetheless enter if the producer can divert custom from current sellers, netting the producer a large profit, but creating no new consumer surplus).

¹²⁵ Bambauer, *supra* note 36, at 380–81 (summarizing and challenging the standard account that movies are dependent on broad copyright entitlements to obtain licenses for derivative merchandise).

¹²⁶ Pessach, *Beyond IP*, *supra* note 86, at 241, 245 (2016) (citing inter alia Yochai Benkler, *Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain*, 74 N.Y.U. L. REV. 354 (1999)).

¹²⁷ Pessach, *Beyond IP*, *supra* note 86, at 231.

¹²⁸ Pasquale, *supra* note 77, at 140 ("analogizing information overload in the cultural environment to pollution of the physical environment"); DAVID SHENK, *DATA SMOG: SURVIVING THE INFORMATION GLUT* 30–31 (1997) (describing declining "signal-to-noise ratio" in contemporary communication).

¹²⁹ Pasquale, *supra* note 77, at 165 ("[A]ny bit of expression that signals something to one who wants exposure to it may constitute noise to thousands of others.").

¹³⁰ Pessach, *Beyond IP*, *supra* note 86, at 244 ("[C]ompetition against 'zero pricing' models is all but impossible. 'Free,' as a predatory pricing mechanism, leaves limited market share for creative and informational works that extract direct revenue from selling content.").

Competing for attention requires competing with a greater number of works.¹³¹ More importantly, as the next Section explains, the drag on consumer attention is a costly externality imposed on consumers that increases search and processing costs.¹³²

C. *Costs of Attention Scarcity for Consumers*

Allocating scarce resources is a key theme in economic analysis, and in an environment with superabundant information, attention is a scarce resource.¹³³ Economists generally presume that rational actors can deal with the pressures created by superabundant information through rational inattention.¹³⁴ But evidence from psychological, marketing, and internet research suggests that attention can be shaped, swamped, or manipulated despite the best efforts of information consumers.¹³⁵ Antitrust and contract theorists posit that consumers benefit from the broadest possible range of choices,¹³⁶ but behavioral economists

¹³¹ The same dynamic would suggest that a rational individual would prefer a freely-provided infringing copy of an album over an authorized copy for sale, given reasonable assumptions about the cost of detection and the settlement typically requested by RIAA-affiliated plaintiffs. See John M. Newman, *Copyright Freeconomics*, 66 VAND. L. REV. 1409, 1435–36 (2013) (“[T]he purely rational and perfectly informed (and also therefore necessarily hypothetical) digital-album consumer would choose to infringe [under relatively reasonable assumptions].”).

¹³² Indeed, this drag on attention resources may explain in part why optimistic forecasts about how the expansion of “frictionless commerce” on the internet has not done away with price dispersion for apparently homogenous goods, high profit margins, and pricing models designed to increase the impression of economic scarcity. See generally Glenn Ellison & Sara Fisher Ellison, *Search, Obfuscation and Price Elasticities on the Internet*, 77 ECONOMETRICA 427 (2009) (providing an overview of these phenomena).

¹³³ Hefti & Heinke, *supra* note 95, at 72.

¹³⁴ See, e.g., Christopher A. Sims, *Rational Inattention: A Research Agenda* (Bundesbank, Discussion Paper No. 2005,34, 2005).

¹³⁵ Hefti & Heinke, *supra* note 95, at 45 (citing Josef Falkinger, *Attention Economies*, 133 J. ECON. THEORY 266 (2007); Josef Falkinger, *Limited Attention as a Scarce Resource in Information-Rich Economies*, 118 ECON. J. 1596 (2008); Kfir Eliaz & Ran Spiegler, *Consideration Sets and Competitive Marketing*, 78 REV. ECON. STUDIES 235 (2011); Kfir Eliaz & Ran Spiegler, *On the Strategic Use of Attention Grabbers*, 6 THEORETICAL ECON. 127 (2011); Andreas Hefti, *Attention Competition* (Univ. Zurich Econ. Dep’t, Working Paper No. 28, 2012)).

¹³⁶ John M. Newman, *Attention Markets and the Law*, 8, 25 (2020) (unpublished manuscript) (on file with author) (summarizing the literature).

recognize that increasing consumer choice does not necessarily increase consumer welfare.¹³⁷

There are at least four types of deficiencies facing consumers dealing with attention scarcity. Limited attention resources leave us prone to distraction, consuming ever-narrowing bands of information deeply or a wider selection shallowly. That effect increases the likelihood that consumers make an inferior choice, selecting a good that does not suit their preferences, compared to a circumstance with fewer entrants and lower diversity of sources.¹³⁸ When attention resources are scarce, this inferiority effect dominates the matching effect we might expect when increased diversity makes it more likely that the consumer finds the product that best suits her.¹³⁹ Attention intermediaries often curate or even distort selection of sources, intentionally or in response to perceived consumer preferences. Likewise, consumption is distorted by reactions to superabundance, leading consumers to partake of fewer, more popular options as the number of options increases. Even worse, attention scarcity leaves consumers more susceptible to intentional deception.¹⁴⁰

One cannot cleanly solve these problems with search technologies because freely offered search technologies create their own distortions. There is often a mismatch between the business interests of the firm offering the free product and the curation interest of consumers, not to mention their privacy interests.¹⁴¹ Firms offer “free” products in exchange for consumer information, but due to bounded rationality and information asymmetry, consumers may underestimate the cost of that transaction.¹⁴² Moreover, even the best technology cannot overcome limitations on an individual’s ability to process the choices presented, unless the technology winnows down options to no more than exactly the

¹³⁷ *Id.* at 24 (citing, inter alia, BARRY SCHWARTZ, *THE PARADOX OF CHOICE: WHY MORE IS LESS* (2004); Simona Botti & Sheena S. Iyengar, *The Dark Side of Choice: When Choice Impairs Social Welfare*, 25 J. PUB. POL’Y & MARKETING, 24, 26 (2006); Alexander Chernev, *When More Is Less and Less Is More: The Role of Ideal Point Availability and Assortment in Consumer Choice*, 30 J. CONSUMER RES. 170 (2003)).

¹³⁸ Gene M. Grossman & Carl Shapiro, *Informative Advertising with Differentiated Products*, 51 REV. ECON. STUD. 63 (1984).

¹³⁹ Hefti & Heinke, *supra* note 95, at 56.

¹⁴⁰ See *infra* Section II.C.F.

¹⁴¹ Hoofnagle & Whittington, *supra* note 94, at 614 (“[D]igital firms face the same incentive to behave opportunistically as firms selling physical products.”).

¹⁴² *Id.* at 625–48 (cataloguing the hidden costs of free goods online).

number of options a consumer can reasonably process, at which point the consumer loses much of the benefit of those bounteous offerings.¹⁴³

1. Distraction

Information is a double-edged sword under the constraint of attention scarcity. Information can crowd our field of vision, and “attention economists[,] . . . those who help filter and categorize information,”¹⁴⁴ obtain value by persuading those who rely on them that the next interruption, the next email, the next Twitter follow, or the next Facebook like, is critically important.¹⁴⁵ Information then becomes “an expensive luxury, for it may turn our attention from what is important to what is unimportant.”¹⁴⁶

Moreover, firms will sometimes directly monetize their plea for consumer attention. For example, firms like Netflix will make micro payments to viewers of videos. Some clever consumers then respond by running “phone farms,” using a bank of cheap phones to simulate viewer engagement and collect cash payments or credits toward purchases from advertisers.¹⁴⁷ In the last two years, Amazon Prime has offered purchase credits to consumers who added the Amazon Assistant app to their

¹⁴³ Hefti & Heinke, *supra* note 95, at 42.

¹⁴⁴ Desai, *supra* note 117, at 83 (summarizing RICHARD A. LANHAM, *THE ECONOMICS OF ATTENTION: STYLE AND SUBSTANCES IN THE AGE OF INFORMATION* 13–18 (2006)).

¹⁴⁵ Eben Moglen, *The Invisible Barbecue*, 97 COLUM. L. REV. 945, 952–53 (1997) (blaming commodification of human attention for generating “media designed to force images and information at us, rather than to respond to our requests”); Tristan Harris, *How Technology is Hijacking Your Mind—From a Magician and Google Design Ethicist*, MEDIUM (May 18, 2016), <https://medium.com/thrive-global/how-technology-hijacks-peoples-minds-from-a-magician-and-google-s-design-ethicist-56d62ef5edf3> [<https://perma.cc/7WLX-ZW66>].

¹⁴⁶ Herbert A. Simon, *Rationality as Process and as Product of Thought*, 68 AM. ECON. REV. 1, 13 (1978).

¹⁴⁷ Joseph Cox, *America’s DIY Phone Farmers*, VICE: MOTHERBOARD (Aug. 1, 2019, 10:00 AM), https://www.vice.com/en_us/article/d3naek/how-to-make-a-phone-farm [<https://perma.cc/YQD3-8S6V>].

phones,¹⁴⁸ allowing Amazon to more directly monitor purchases and obtain data from browsing and purchasing habits.¹⁴⁹

2. Depth

When information is abundant, it becomes impossible to know all there is to know about a subject of interest. The interested are then left with two equally unsatisfying options: become knowledgeable in an ever-narrowing tranche, or keep an ever-shallower finger on the pulse of a broad number of topics.¹⁵⁰ Well-intended attention intermediaries can help consumers choose between those two options but cannot spare consumers that choice.

More importantly, many intermediaries are not motivated to present consumers with balanced options.¹⁵¹ For instance, social networking platforms like Twitter and Facebook seek to encourage engagement, and informative takes don't necessarily drive engagement. In fact, posts that trigger strong negative responses are more engaging than more thoughtful or moderate posts.¹⁵²

¹⁴⁸ Sidney Fussell, *What Amazon Thinks You're Worth*, ATLANTIC (July 18, 2019), <https://www.theatlantic.com/technology/archive/2019/07/amazon-pays-users-access-browser-data/594199/> [<https://perma.cc/BT3R-LGL6>].

¹⁴⁹ Karen Weise, *Amazon Knows What You Buy. And It's Building a Big Ad Business from It*, N.Y. TIMES (Jan. 20, 2019), <https://www.nytimes.com/2019/01/20/technology/amazon-ads-advertising.html> [<https://perma.cc/AB5S-ZRE6>].

¹⁵⁰ See, e.g., Thorngate, *supra* note 115, at 265.

¹⁵¹ WU, *supra* note 111, at 318–19 (describing BuzzFeed's success in optimizing web content to pique curiosity and increase viral sharing, not to maximize viewer satisfaction).

¹⁵² Jonah Berger & Katherine L. Milkman, *What Makes Online Content Viral?*, 49 J. MARKETING. RES. 192 (2012) (reporting that the strongest forecaster of virality is how much anger or anxiety a message evokes); cf. Katie Notopoulos, *How I Cracked Facebook's New Algorithm and Tortured My Friends*, BUZZFEEDNEWS, (Feb. 15, 2018, 11:56 AM), <https://www.buzzfeednews.com/article/katienotopoulos/how-i-cracked-facebooks-new-algorithm-and-tortured-my> [<https://perma.cc/6BX9-LEPQ>] (“Facebook is rewarding me for pissing my friends off, and its new thirst for comments seems to have driven itself into a loop that won't let my friends free from the grasp of a piece of content that they actually hate.”); cf. Roger McNamee, *How to Fix Facebook—Before It Fixes Us*, WASH. MONTHLY, (Jan./Feb./Mar. 2018), <https://washingtonmonthly.com/magazine/january-february-march-2018/how-to-fix-facebook-before-it-fixes-us> [<https://perma.cc/Z858-6PXM>] (describing how platforms encourage consumption of sensational content that increases self-segregating into filter bubbles).

3. Distortion

Enthusiasts argue that excellent algorithmic search tools can offset the attention costs inherent in conditions of information superabundance. That enthusiasm should be tempered by the realities of how search engines have developed in ways that alter but do not solve problems of attention scarcity.¹⁵³

A search engine cannot present all options to an interested consumer. Filtering is unavoidable, and the filter changes the subset of options presented. Information gluts increase reliance on search engines and their filters. The filtering choices certainly shape and may even distort the information that consumers can perceive. For example, the decision of a search engine to optimize authorized or unlicensed copyrighted expression in search results influences the behavior of users.¹⁵⁴ Similarly, Facebook filters a user's feeds based on whom the user has friended and which stories the user has liked in the past.¹⁵⁵ This can lead to a feedback loop where the user hears only what she is comfortable hearing, and little of what challenges her.¹⁵⁶ Moreover, users might see dramatically different presentations of the news and important events due to this self-selection effect.¹⁵⁷ In addition, Facebook's algorithm

¹⁵³ WU, *supra* note 111, at 262–63 (describing the efforts by Page and Brin at Google to create advertisement driven search tools that add value for consumers); Paul Hemp, Death by Information Overload, Harv. Bus. Rev. (Sept. 2009), <https://hbr.org/2009/09/death-by-information-overload> [<https://perma.cc/M9A6-QNXG>] (“Innovative tools and techniques promise relief for those of us struggling with information inundation. Some are technological solutions—software that automatically sorts and prioritizes incoming e-mail, for instance—designed to regulate or divert the deluge.”).

¹⁵⁴ Liron Sivan, Michael D. Smith & Rahul Telang, *Do Search Engines Influence Media Piracy? Evidence from a Randomized Field Study* (Sept. 12, 2014), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2495591 [<https://perma.cc/Z6UM-48JP>].

¹⁵⁵ Eytan Bakshy, Solomon Messing & Lada A. Adamic, *Exposure to Ideologically Diverse News and Opinion on Facebook*, 348 SCIENCE 1130 (2015) (social network users choose to limit exposure to cross-cutting content); Mike Isaac & Sydney Ember, *Facebook to Change News Feed to Focus on Friends and Family*, N.Y. TIMES (June 29, 2016), <https://www.nytimes.com/2016/06/30/technology/facebook-to-change-news-feed-to-focus-on-friends-and-family.html> [<https://perma.cc/NE8S-TKP3>].

¹⁵⁶ Brian Stelter, *Is Facebook an Echo Chamber? If So, They're OK with That*, CNNMONEY (June 30, 2016, 3:46 PM), <http://money.cnn.com/2016/06/30/media/facebook-echo-chamber-news-feed-interview> [<https://perma.cc/EHR3-9A7Q>]; cf. CASS R. SUNSTEIN, REPUBLIC.COM 2.0 (2007).

¹⁵⁷ *Blue Feed, Red Feed: See Liberal Facebook and Conservative Facebook, Side by Side*, WALL STREET J. (last updated Aug. 19, 2019), <https://graphics.wsj.com/blue-feed-red-feed> [<https://perma.cc/NE8S-TKP3>].

purports to identify trending stories based on what has become popular, and that popularity itself can create a feedback loop,¹⁵⁸ exacerbating or at least feeding the user's desire for confirmation of existing biases.¹⁵⁹ Another consequence of relying on search engines to handle information costs is revealing reading habits to search engines, which information intermediaries can use to drive purchasing decisions, and which are potentially subject to further privacy-stripping disclosure.¹⁶⁰ And sometimes, the filters make determinations that are difficult to justify.¹⁶¹

"Free" content also creates distortions.¹⁶² When the content is free, attention is the product. The content is used to attract attention, which is then sold to advertisers.¹⁶³ Of course, content that advertisers dislike is less likely to be produced.¹⁶⁴ Consumers are likely to undervalue the costs or overvalue the benefit because they cannot determine the value of the

perma.cc/A3TB-PWEX] (demonstrating how different Facebook might look to users when their news feeds are full of either "very conservative" or "very liberal" sources).

¹⁵⁸ A recent shift in Facebook's policy regarding trending stories further clarifies how little authentic interest it takes for a story to trend. See, e.g., Dave Gershgorin & Mike Murphy, *A Glimpse into Facebook's Notoriously Opaque—and Potentially Vulnerable—Trending Algorithm*, QUARTZ, (Aug. 31, 2016), <https://qz.com/769413/heres-how-facebooks-automated-trending-bar-probably-works> [<https://perma.cc/QW5K-WNZZ>].

¹⁵⁹ Scott Bixby, *The End of Trump: How Facebook Deepens Millennials' Confirmation Bias*, GUARDIAN, (Oct. 1, 2016, 8:00 AM), <https://www.theguardian.com/us-news/2016/oct/01/millennials-facebook-politics-bias-social-media> [<https://perma.cc/CM3B-8GSS>] ("Unlike Twitter—or real life—where interaction with those who disagree with you on political matters is an inevitability, Facebook users can block, mute and unfriend any outlet or person that will not further bolster their current worldview.").

¹⁶⁰ NEIL RICHARDS, *INTELLECTUAL PRIVACY: RETHINKING CIVIL LIBERTIES IN THE DIGITAL AGE* 130, 183 (2015); Paul M. Schwartz, *Privacy and Democracy in Cyberspace*, 52 VAND. L. REV. 1607, 1610–11 (1999) (arguing that the collection of personal information will discourage civic participation and stunt individual self-determination); cf. Julie E. Cohen, *A Right to Read Anonymously: A Closer Look at "Copyright Management" in Cyberspace*, 28 CONN. L. REV. 981, 985–87 (1996) (warning about threats to a right to read anonymously posed by data management tools that Cohen considered most likely implemented by copyright owners).

¹⁶¹ Adrienne Jeffries, Leon Yin & Surya Mattu, *Swinging the Vote?*, MARKUP, (Feb. 26, 2020, 6:00 AM), <https://themarkup.org/google-the-giant/2020/02/26/wheres-my-email> [<https://perma.cc/2Z84-R8JM>] (reporting that Google's mail algorithm sorted advertisements from some presidential candidates predominately into recipients' primary mail folder, and other candidates' advertisements primarily into promotions or spam folders).

¹⁶² Hoofnagle & Whittington, *supra* note 94, at 608–09 (describing the hidden privacy costs of a "free" pricing model).

¹⁶³ RANDAL C. PICKER, *ONLINE ADVERTISING, IDENTITY AND PRIVACY* 16 (2009) ("When consumers pay for content, they are the patrons served by content producers. If consumers don't pay for content, the advertisers are the patrons and it is their interests that will be served."). See also generally Newman, *Antitrust in Zero-Price Markets*, *supra* note 86.

¹⁶⁴ PICKER, *supra* note 163, at 17.

personal information disclosed.¹⁶⁵ Indeed, consumers are likely to take free offers “without serious consideration.”¹⁶⁶

The history of media production and media consumption provides some warnings about taking at face value the assumption that there are no costs to the costless provision of information. Television programming in the sixties and seventies was defined by non-excludability and non-rivalry.¹⁶⁷ Programmers lacked direct access to consumer eyeballs, so they sold the programs to networks, who then sold the audience to advertisers. This business model creates distortions in the programming available—a programmer might produce a niche program that 500,000 viewers will love if it can sell the program directly to them. If it cannot, the producer will instead produce a program that has a modest or weak appeal to five million viewers and sell five million pairs of eyes to advertisers.¹⁶⁸

Newer business models and improving technologies generate different distortions. Many internet platforms, YouTube first among them, provide access to a broad selection of content for free. The zero-price model draws in the consumer.¹⁶⁹ Algorithms match consumers to advertisers, who would reasonably favor a targeted advertising model in which the audience is much more likely to be interested in the product advertised.

The old free television model was probabilistic. As retailer John Wanamaker allegedly observed, “Half the money I spend on advertising

¹⁶⁵ Hoofnagle & Whittington, *supra* note 94, at 610.

¹⁶⁶ *Id.* at 611, 613–14 (describing how Disney’s Club Penguin offers a free service that entices users to purchase entertaining upgrades and also tracks consumer activity to sharpen its sales pitches).

¹⁶⁷ For a discussion of the classical media market for consumer attention, see C. EDWIN BAKER, *MEDIA, MARKETS, AND DEMOCRACY* 24–30, 182–83 (2001); C. Edwin Baker, *Advertising and a Democratic Press*, 140 U. PA. L. REV. 2097 (1992); Robert W. McChesney, *The Political Economy of Global Communication*, in *CAPITALISM AND THE INFORMATION AGE: THE POLITICAL ECONOMY OF THE GLOBAL COMMUNICATION REVOLUTION* 1, 19 (Ellen Meiksins Wood, John Bellamy Foster & Robert W. McChesney eds., 1998).

¹⁶⁸ Newman, *Antitrust in Zero-Price Markets*, *supra* note 86, at 173.

¹⁶⁹ Hoofnagle & Whittington, *supra* note 94, at 609; Kristina Shampanier, Nina Mazar & Dan Ariely, *Zero as a Special Price: The True Value of Free Products*, 26 *MARKETING SCI.* 742, 745–48 (2007) (describing the “zero price effect,” in which consumer demand increases when product price is reduced from one cent to free, but decreases for an inexpensive but higher-quality alternative when its price is also reduced by one cent); *cf.* Newman, *supra* note 136, at 25 (discussing the failure of antitrust regulators to recognize market power acquired through offering free products in attention markets).

is wasted; the trouble is I don't know which half."¹⁷⁰ The new model is more deterministic. A platform with consumption data is more likely able to promise a specific composition of eyeballs to sell to advertisers. Moreover, some firms now use this data to generate new content matched to the detected preferences of users.¹⁷¹

4. Deception

Finally, the ability to distinguish truth from error, or to correctly identify the lowest price product, or the product with the correct combination of desired features, depends in part on available attention resources.¹⁷² When those resources are taxed, one is less capable of successfully completing the search, and perhaps of distinguishing fact from fiction.¹⁷³ Thus, attention scarcity increases vulnerability to deception. Advertisers may well benefit from pushing aggressively on the boundary between truth and error and may even use user-generated "advertising" to do so.¹⁷⁴

Indeed, demands on consumer attention are sufficiently high that some scholars have raised the possibility of property or constitutional rights in attention.¹⁷⁵ Recent research suggests that news consumers are vulnerable to deception and distortion and more likely to believe news that confirms biases. Many media outlets uncritically reproduce

¹⁷⁰ Goldman, *supra* note 112, at 1173 n.104.

¹⁷¹ Kal Raustiala & Christopher Jon Sprigman, *The Second Digital Disruption: Streaming and the Dawn of Data-Driven Creativity*, 94 N.Y.U. L. REV. 1555, 1592 (2019) (describing the use by MindGeek, parent company of Pornhub and other online porn purveyors, of accumulated data to generate new content designed to attract consumers).

¹⁷² See, e.g., Andrew E. Taslitz, *Bullshitting the People: The Criminal Procedure Implications of a Scatalogical Term*, 39 TEX. TECH L. REV. 1383, 1389 (2007).

¹⁷³ See, e.g., Persson, *supra* note 85, at 15 (quoting Simon, *supra* note 97, at 40-41) ("The idea of information overload is that a wealth of information not only 'creates . . . a need to allocate that attention' . . . but actually impairs the ability to do so efficiently.").

¹⁷⁴ See, e.g., Rebecca Tushnet, *Attention Must Be Paid: Commercial Speech, User-Generated Ads, and the Challenge of Regulation*, 58 BUFF. L. REV. 721, 743-44 (2010) (noting that advertisers might benefit from aggressive or potentially untrue ads generated by users and that effective advertising regulation might require reconsidering the immunity offered to internet services providers through the Communications Decency Act).

¹⁷⁵ Radin, *supra* note 117, at 517 (commenting on the possibility of propertizing attention); Jasper L. Tran, *The Right to Attention*, 91 IND. L.J. 1023, 1051 (2016) ("[T]he right to attention can be interpreted as part of the 'right to privacy[s]'' 'bundle of rights' as guaranteed by the First, Third, Fourth, Fifth, Ninth, and Fourteenth Amendments and their penumbrae.").

information generated on extreme sites with little adherence to ethical standards regarding news reporting, in part because more extreme content increases engagement.¹⁷⁶

In addition, in the copyright infringement context, demands on attention could reach the level where consumers struggle to identify and choose between authorized copies of copyrighted works and infringing substitutes, even if they would prefer the former to the latter.¹⁷⁷ Perhaps surprisingly, the public generally presumes that the primary goal of copyright protection is to prevent plagiarism and allow for accurate attribution.¹⁷⁸ As a corollary, unauthorized distributors of unauthorized reproductions of copyrighted expression online often attempt to “pay” for their use,¹⁷⁹ or forestall a claim of infringement, by attributing the work to the author (as accurately as the distributor can guess) and disclaiming any authorship.¹⁸⁰

The recent revelation that Facebook and Twitter, among other platforms, allowed sellers to distribute Russian propaganda to users disguised as political commentary from American interests hints at the potential scope of the attribution problem.¹⁸¹ Free sources have also suffered from a bit of an authenticity problem. In the early 2000s,

¹⁷⁶ See YOCHAI BENKLER, ROBERT FARIS & HAL ROBERTS, *NETWORK PROPAGANDA: MANIPULATION, DISINFORMATION, AND RADICALIZATION IN AMERICAN POLITICS* (2018).

¹⁷⁷ Laura R. Bradford, *Parody and Perception: Using Cognitive Research to Expand Fair Use in Copyright*, 46 B.C. L. REV. 705, 711 (2005) (noting that there is a threshold beyond which “[secondary] uses distort consumers’ ability to identify and choose between [copyrighted] works”).

¹⁷⁸ Gregory N. Mandel, Anne A. Fast & Kristina R. Olson, *Intellectual Property Law’s Plagiarism Fallacy*, 2015 BYU L. REV. 915, 933 (2015) (reporting on an experiment that shows “the public tends to view intellectual property law as designed to protect against plagiarism”); cf. Brian L. Frye, *Plagiarism Is Not a Crime*, 54 DUQ. L. REV. 133, 157 (2016) (rejecting an economic account for academic plagiarism norms and concluding that copyright law enables authors to exert an attribution right over original expression by granting exclusive rights that empower the author to refuse permission to copy, distribute, adapt, perform, or display that expression).

¹⁷⁹ Greg Lastowka, *Digital Attribution: Copyright and the Right to Credit*, 87 B.U. L. REV. 41, 62 (2007).

¹⁸⁰ Rebecca Tushnet, *Payment in Credit: Copyright Law and Subcultural Creativity*, 70 LAW & CONTEMP. PROBS. 135, 137 (2007) (“Fan concepts of proper credit for the underlying source, as distinct from whatever variations the fans create, suggest that attribution is an important and valuable tool for giving authors their just due, but no more than their just due.”).

¹⁸¹ See, e.g., Tony Romm & Kurt Wagner, *Facebook Says 126 Million People in the U.S. May Have Seen Posts Produced by Russian-Government-Backed Agents*, VOX (Oct. 30, 2017 6:00 PM), <https://www.vox.com/2017/10/30/16571598/read-full-testimony-facebook-twitter-google-congress-russia-election-fake-news> [<https://perma.cc/G5KY-9MRQ>].

musicians frustrated with Napster and other P2P file sharing programs seeded networks with fake or corrupted files to undermine user trust.¹⁸² More recently, YouTube has been rocked by scandals where pedophiles tagged otherwise innocuous videos as a potential source for stimulating content.¹⁸³ YouTube trolls have also raised concerns by splicing jokes about self-harm into children's videos.¹⁸⁴

According to a *Wired* study, one could follow YouTube's own recommendations and move from a popular children's alphabet video to a "snuff" film featuring Minnie Mouse in fourteen steps.¹⁸⁵ The problem

¹⁸² Lior Jacob Strahilevitz, *Charismatic Code, Social Norms, and the Emergence of Cooperation on the File-Swapping Networks*, 89 VA. L. REV. 505, 531 (2003) ("[T]he existence of large numbers of flawed copies would quickly erode the trust that has developed on the file-swapping networks."); Peter K. Yu, *P2P and the Future of Private Copying*, 76 U. COLO. L. REV. 653, 726 (2005) (citing Paul Bond, *Mercenaries in P2P Tech War*, HOLLYWOOD REP, Oct. 22, 2003 (reporting that spoofing "appears to be gaining traction in the entertainment industry as a leading technology employed in the war on digital piracy"))).

¹⁸³ Daisuke Wakabayashi & Sapna Maheshwari, *Advertisers Boycott YouTube After Pedophiles Swarm Comments on Videos of Children*, N.Y. TIMES (Feb. 20, 2019), <https://www.nytimes.com/2019/02/20/technology/youtube-pedophiles.html> [<https://perma.cc/DD32-NZ7K>]; James Bridle, *How Peppa Pig Became a Video Nightmare for Children*, GUARDIAN (June 17, 2018, 3:00 AM), <https://www.theguardian.com/technology/2018/jun/17/peppa-pig-youtube-weird-algorithms-automated-content> [<https://perma.cc/3LBJ-QL7N>] (reporting that his investigation revealed a system that "seemed to reproduce and exacerbate their most unsavoury excesses, preying on children's worst fears and bundling them up into nightmare playlists, while blindly rewarding their creators for increasing their view counts even as the videos themselves descended into meaningless parodies and nonsensical stories"); Sapna Maheshwari, *On YouTube Kids, Startling Videos Slip Past Filters*, N.Y. TIMES (Nov. 4, 2017), <https://www.nytimes.com/2017/11/04/business/media/youtube-kids-paw-patrol.html> [<https://perma.cc/3GMX-Q9Q2>] (reporting violent and startling videos created using Marvel Comics, Nickelodeon, and Disney characters). Maheshwari reports some of these videos are "independently animated, presumably to avoid copyright violations and detection." *Id.*

¹⁸⁴ Tanya Chen, *Trolls Are Reuploading YouTube Kids Shows with a Clip That Encourages Self-Harm*, BUZZFEED NEWS (Feb. 19, 2019, 6:56 PM), <https://www.buzzfeednews.com/article/tanyachen/trolls-youtube-kids-shows-self-harm-clip> [<https://perma.cc/P8T4-5BWL>]; Sarah Harvard, *YouTube Trolls Target Children by Uploading Animated Shows with Spliced-in Clips Promoting Self-Harm*, INDEPENDENT (Feb. 20, 2019, 7:55 PM), <https://www.independent.co.uk/news/world/americas/youtube-kids-self-harm-trolls-children-splatoon-cartoon-channel-a8788951.html> (trolls targeted *Splatoon* game gameplay videos, which "earn millions of views" on YouTube); cf. Matthew Field, *YouTube Recommended Self-Harm Videos to Children as Young as 13*, TELEGRAPH (Feb. 8, 2019, 8:11 AM), <https://www.telegraph.co.uk/technology/2019/02/04/youtube-recommends-self-harm-videos-children-young-13> [<https://perma.cc/U4J6-EHJ7>].

¹⁸⁵ K.G. Orphanides, *Children's YouTube Is Still Churning Out Blood, Suicide and Cannibalism*, WIRED (Mar. 23, 2018), <https://www.wired.co.uk/article/youtube-for-kids-videos-problems-algorithm-recommend> [<https://perma.cc/LD89-SVKB>]; Bridle, *supra* note 183.

is in part algorithmically driven.¹⁸⁶ Typically, successfully viral offerings on YouTube Kids include references to well-known copyrighted characters and promises of educational value.¹⁸⁷ As one reporter cautioned, “[S]ystems of algorithmic governance, rather than leading us towards the sunny uplands of equality and empowerment, continually re-enact and reinforce our existing prejudices, while oppressing those with the least understanding of, and thus power over, the systems they’re enmeshed in.”¹⁸⁸ YouTube Kids trained children to take the next suggested video that comes along, which is a similar mechanism to how older viewers get led to more extreme content.¹⁸⁹ Thankfully, YouTube gave up on algorithmic moderation of YouTube Kids in April 2018,¹⁹⁰ but other algorithmic problems persist.¹⁹¹

In addition, offers for free content provide opportunities to deceive consumers.¹⁹² A free offer creates “deceptive framing” as service providers proffer an “incomplete and biased representation of a decision problem that misleads [customers’] perception and analysis of that problem, and

¹⁸⁶ One former YouTube engineer explained, “Recommendations are designed to optimize watch time, there is no reason that it shows content that is actually good for kids. It might sometimes, but if it does it is coincidence.” Orphanides, *supra* note 185 (quoting a “former YouTube engineer Guillaume Chaslot, who founded AlgoTransparency, a project that aims to highlight and explain the impact of algorithms in determining what we see online”); *see also id.* (reporting testimony in a Parliamentary inquiry on fake news, during which YouTube’s global head of public policy explained algorithmic decision making by noting, “Watch time is obviously an important metric for us, because it demonstrates that we are providing a service that users love, where they want to spend time on the product or they are enjoying the experience of YouTube and finding it valuable.”).

¹⁸⁷ *Id.* (Generally, videos likely to go viral “use popular franchises and the promise of education to target searches that parents and children are likely to carry out.”).

¹⁸⁸ Bridle, *supra* note 183.

¹⁸⁹ *See, e.g.,* Kevin Roose, *The Making of a YouTube Radical*, N.Y. TIMES (June 8, 2019), <https://www.nytimes.com/interactive/2019/06/08/technology/youtube-radical.html> [https://perma.cc/T2HT-FKBB] (reporting that the combination of YouTube’s “business model that rewards provocative videos with exposure and advertising dollars, and [its] algorithm that guides users down personalized paths meant to keep them glued to their screens” is creating “a dangerous on-ramp to extremism”).

¹⁹⁰ Bridle, *supra* note 183.

¹⁹¹ Max Fisher & Amanda Taub, *How YouTube Radicalized Brazil*, N.Y. TIMES (Aug. 11, 2019), <https://www.nytimes.com/2019/08/11/world/americas/youtube-brazil.html> [https://perma.cc/9ZAT-FEME]; Jonas Kaiser & Yasodara Córdova, *On YouTube’s Digital Playground: YouTube’s Recommendation Algorithm Is Under Scrutiny for Surfacing Harmful Content*, BERKMAN KLEIN CTR. (June 3, 2019), <https://cyber.harvard.edu/story/2019-06/youtubes-digital-playground> [https://perma.cc/L42M-9SUQ].

¹⁹² David Adam Friedman, *Free Offers: A New Look*, 38 N.M. L. REV. 49, 68–69 (2008).

thereby misleads their entire decision-making process.”¹⁹³ Sellers can more easily hide the transaction and privacy costs in free products.¹⁹⁴ Dominant search intermediaries can also benefit from information asymmetry to provide results based not on a best match with consumer preferences but instead a best match with advertiser interests, degrading the quality of search results in a manner not readily apparent to consumers.¹⁹⁵

D. *Attention Costs in Action*

The promise of the internet was access to abundant information with attention costs mediated by search technology. That promise, like so many others, may have been overstated. Ellison and Wolitzky model how search firms impede consumer search with obfuscation. The ability of firms to engage in low or no cost obfuscation in a low information cost world reduces consumer advantage from low search costs.¹⁹⁶ This could include not only obfuscating price, but also obfuscating characteristics of the goods.¹⁹⁷

The costs of attention scarcity provide openings for firms to take advantage by manipulating, massaging, and magnifying problems of distraction, depth, distortion, and deception. The use of confusingly

¹⁹³ DAVID M. BOUSH, MARIAN FRIESTAD & PETER WRIGHT, DECEPTION IN THE MARKETPLACE: THE PSYCHOLOGY OF DECEPTIVE PERSUASION AND CONSUMER SELF PROTECTION 62–64 (2009); Hoofnagle & Whittington, *supra* note 94, at 649–50 (“Our analysis shows, however, that the tables are often turned in the online world—free offers in fact mean that *the firm* can enjoy something for nothing.”) (emphasis in original); JARON LANIER, WHO OWNS THE FUTURE? 15 (2013) (“It is all too easy to forget that ‘free’ inevitably means that someone else will be deciding how you live.”).

¹⁹⁴ Hoofnagle & Whittington, *supra* note 94, at 609.

¹⁹⁵ ARIEL EZRACHI & MAURICE E. STUCKE, VIRTUAL COMPETITION: THE PROMISE AND PERILS OF THE ALGORITHM-DRIVEN ECONOMY 136–139 (2016). The asymmetry may apply to the advertisers as well. For example, TikTok has recently experimented with advertising, but it refuses to quantify for buyers what counts as a view. Sarah Frier & Kurt Wagner, *TikTok Marketers Chase Billions of Views in Uncharted Terrain*, BLOOMBERG (Feb. 27, 2020, 4:00 AM), <https://www.bloomberg.com/news/articles/2020-02-27/tiktok-marketers-chase-billions-of-views-in-uncharted-terrain> [<https://perma.cc/LE6U-B8E9>].

¹⁹⁶ Glenn Ellison & Alexander Wolitzky, *A Search Cost Model of Obfuscation*, 43 RAND J. ECON. 417 (2012). Ellison & Wolitzky build on Dale Stahl’s sequential search model. Dale O. Stahl II, *Oligopolistic Pricing with Sequential Consumer Search*, 79 AMER. ECON. REV. 700 (1989).

¹⁹⁷ Ellison & Wolitzky, *supra* note 196.

similar trademarks presents the prototypical case.¹⁹⁸ Attention scarcity can exacerbate the effect of confusion on consumers and cut into consumer surplus.¹⁹⁹ For example, a study led by Jacob Jacoby measured the effect of information load on brand differentiation. The experiment demonstrated consumers' ability to pick the best product dropped off at high levels of information load.²⁰⁰

Information overload can likewise push decision makers to a default choice in a number of different arenas. For example, in a study by Cronqvist and Thaler,²⁰¹ when a new retirement plan with 456 options was introduced in Sweden, one-third of eligible recipients selected no plan. Recipients instead accepted the default, perhaps due to the difficulty in managing the information load.²⁰²

Hefti and Heinke propose that if attention is the scarce resource, due to information congestion, "then the social optimum involves *reducing* the measure of active [information] senders (by a sender tax) and *increasing* individual attention spans by a receiver subsidy."²⁰³ Consumers of any number of goods may well benefit from a smaller choice set.²⁰⁴ Perhaps this is also true of copyrighted works. Indeed, as the next Part argues, in conditions of superabundance and low protection, we should expect to see copying or adapting of protected expression that

¹⁹⁸ Paul Ohm, *Branding Privacy*, 97 MINN. L. REV. 907, 953 (2013).

¹⁹⁹ Mark A. Lemley, *The Modern Lanham Act and the Death of Common Sense*, 108 YALE L.J. 1687, 1695 (1999) [hereinafter Lemley, *Lanham Act*] (explaining how trademark law prevents consumer surplus from being diminished by fraud); cf. Rebecca Tushnet, *Gone in Sixty Milliseconds: Trademark Law and Cognitive Science*, 86 TEX. L. REV. 507, 559 (2008) ("[A] change in taste is not a decrease in consumer surplus, at least absent deception or some other resulting social harm."). *But see* ERIK BRYNJOLFSSON & JOO HEE OH, *THE ATTENTION ECONOMY: MEASURING THE VALUE OF FREE GOODS ON THE INTERNET* (2012) (inferring the value of free internet services by calculating opportunity costs, and presuming that people "freely give[] their attention in order to access a free service).

²⁰⁰ Jacob Jacoby, Donald E. Speller & Carol Kohn Berning, *Brand Choice Behavior as a Function of Information Load: Replication and Extension*, 1 J. CONSUMER RES. 33 (1974) (cited by Persson, *supra* note 85, at 15). A companion study reported that increasing information load reduced the total time spent on processing information. Jacob Jacoby, Carol A. Kohn & Donald E. Speller, *Time Spent Acquiring Product Information as a Function of Information Load and Organization* (Proceedings of the Annual Convention of the American Psychological Association, 817–18, 1973).

²⁰¹ Henrik Cronqvist & Richard H. Thaler, *Design Choices in Privatized Social-Security Systems: Learning from the Swedish Experience*, 94 AM. ECON. REV. 424 (2004).

²⁰² Persson, *supra* note 85, at 16.

²⁰³ Hefti & Heinke, *supra* note 95, at 58.

²⁰⁴ Persson, *supra* note 85, at 16.

exacerbates attention costs. Maintaining a higher level of protection may ameliorate those effects.

III. COPYRIGHT AND ATTENTION SCARCITY

Intellectual property rights curate the development and use of information, and thus may modify the costs of attention scarcity. That possibility is clear enough in the trademark context. A trademark is an “attention getting symbol’ used . . . to make clear to the customer the origin of the goods or the service.”²⁰⁵ Trademark law protects a source-signifying trademark because the mark has a key role in helpfully channeling—and preventing costly imposition on—consumer attention. Indeed, the multifactor test used to determine whether alleged trademark infringement is likely to confuse consumers often directly considers the attention of consumers in a given purchasing context.²⁰⁶ In addition, the frequently criticized cause of action for initial interest confusion regards diversion of consumer attention as a significant harm,²⁰⁷ even if the consumer overcomes the confusion before a purchase is made.²⁰⁸

This Part provides a theoretical framework for how copyright protection may assist in moderating the effect of attention scarcity.²⁰⁹

²⁰⁵ *WCVB-TV v. Bos. Athletic Ass’n*, 926 F.2d 42, 44 (1st Cir. 1991) (citing 1 J. MCCARTHY, TRADEMARKS AND UNFAIR COMPETITION § 11.17 at 476 (2d ed. 1984)).

²⁰⁶ See, e.g., *Nikon, Inc. v. Ikon Corp.*, 803 F. Supp. 910, 920 (S.D.N.Y. 1992) (citing, inter alia, *Plus Prods. v. Plus Discount Foods, Inc.*, 722 F.2d 999, 1007 (2d Cir. 1983)) (“Consumer sophistication refers to the care and attention a consumer takes in making a purchase.”); *Am. Home Prods. Corp. v. Barr Labs., Inc.*, 656 F. Supp. 1058, 1068 (D.N.J.), *aff’d*, 834 F.2d 368 (3d Cir. 1987) (in determining likelihood of confusion, courts are to consider “the price of the goods and other factors indicative of the care and attention expected of consumers when making a purchase.”).

²⁰⁷ See, e.g., Stacey L. Dogan & Mark A. Lemley, *Trademarks and Consumer Search Costs on the Internet*, 41 HOUS. L. REV. 777, 825 (2004); see also *infra* notes 372–76 and accompanying text.

²⁰⁸ *Nissan Motor Co. v. Nissan Comput. Corp.*, 378 F.3d 1002, 1018 (9th Cir. 2004) (quoting *Interstellar Starship Servs., Ltd. v. EPIX, Inc.*, 304 F.3d 936, 943–44 (9th Cir. 2002)) (“Initial interest confusion occurs when the defendant uses the plaintiff’s trademark ‘in a manner calculated to capture initial consumer attention, even though no actual sale is finally completed as a result of the confusion.’”).

²⁰⁹ I leave for another day the question of whether this analysis would hold in a world with a properly functioning attention market subject to antitrust enforcement, but that is not the world in which consumers face attention scarcity. See, e.g., Newman, *Antitrust in Zero-Price Markets*, *supra* note 86; Pessach, *Beyond IP*, *supra* note 86.

Indeed, maintaining the current balance between the derivative and fair use rights may have two salutary effects on the type of new entry, compared to a new regime with a narrower derivative right or broader fair use: less redundant entry, and clearer differentiation between in-genre competitors. That effect is achieved through two mechanisms. First, copyright protection imposes access costs,²¹⁰ and those costs can constrain new entrants to provide works that impose relatively lower attention costs on consumers.²¹¹ Second, copyright protection can provide signals that consumers value in part because those signals lower attention costs. Policy makers might therefore properly preserve the current scope of copyright protection, even as the costs of creating and distributing expressive works fall. But if policy makers are persuaded that the reproduction and derivative rights should be weakened, some adjustments better fit an attention economy than others.

A. *Attention and Copyright*

The copyright owner's reward—the chance to internalize spillovers from her expression—depends on the ability to successfully compete for consumer attention.²¹² Courts understand that alleged infringers of copyrighted works can draw consumer attention by using the copyrighted expression of others.²¹³ Thus, as with trademark law, courts recognize diversion of attention as a remediable harm in copyright cases.

²¹⁰ Dan L. Burk, *The "Creating Around" Paradox: Responding to Joseph P. Fishman*, *Creating Around Copyright*, 128 HARV. L. REV. 133 (2015), 128 HARV. L. REV. F. 118, 120 (2015) [hereinafter Burk, "Creating Around"] (citing Dan L. Burk & Brett H. McDonnell, *The Goldilocks Hypothesis: Balancing Intellectual Property Rights at the Boundary of the Firm*, 2007 U. ILL. L. REV. 575, 583–90 (2007)) (arguing that a new entrant faces a decision whether to "make or buy" the creative work—to invest in creative effort to create the vehicle for its expression, or to license it).

²¹¹ Persson, *supra* note 85, at 15–16 (summarizing literature that shows reducing the set of possible choices can benefit decision makers). For a useful visualization of proximity costs in trademark law that could also model attention costs imposed by redundant works, see Daniel J. Hemel & Lisa Larrimore Ouellette, *Trademark Law Pluralism*, U. CHI. L. REV., draft at 21 (forthcoming 2021) (draft on file with author).

²¹² See Newman, *supra* note 9, at 301–02.

²¹³ As noted by David Ladd, former Register of Copyrights, "Copyright also is intended to support a system, a macrocosm, in which authors and publishers compete for the attention and favor of the public, independent of the political will of the majority, the powerful, and above all the government, no matter how unorthodox, disturbing, or revolutionary their experience, views,

For example, Justice Holmes famously concluded that consumers need not be directly charged for music performed in dining halls and restaurants for copyright liability to lie. “If the music did not pay,” he noted, “it would be given up. If it pays, it pays out of the public’s pocket.”²¹⁴ In dancehall and flea market cases, where the owner of the venue faces a claim of secondary liability, courts take note that the use of copyrighted works, like music, “attracts attention” to the venue, and the venue therefore directly benefits from its use.²¹⁵ The use of copyrighted expression is often the centerpiece of the subsequent work by a licensee or an unauthorized user.²¹⁶ Websites full of bootleg videos or songs draw clientele seeking free copies or free enjoyment of that content.²¹⁷ Appropriating copyrighted software can even improve the efficiency of a website, helping the site retain consumer attention for longer than it otherwise might.²¹⁸ Moreover, the use of a copyrighted character (or a reasonable imitation of that character) in an advertisement can help draw

or visions.” David Ladd, *The Harm of the Concept of Harm in Copyright: The Thirteenth Donald C. Brace Memorial Lecture*, 30 J. COPYRIGHT SOC’Y U.S.A. 421, 427 (1983).

²¹⁴ *Herbert v. Shanley Co.*, 242 U.S. 591, 595 (1917).

²¹⁵ See, e.g., *Fonovisa, Inc. v. Cherry Auction, Inc.*, 76 F.3d 259, 263 (9th Cir. 1996) (holding swap meet operators “reap[ed] substantial financial benefits from admission fees, concession stand sales and parking fees, all of which flow[ed] directly from customers who want[ed] to buy the counterfeit recordings” available at the swap meets). *Fonovisa* follows a line of cases imposing vicarious liability on dance hall operators “where infringing performances enhance[d] the attractiveness of the venue[s] to potential customers.” *Id.*; see also *Arista Records, Inc. v. Flea World, Inc.*, No. 03-2670, 2006 WL 14988, at *12 (D.N.J. Mar. 31, 2006) (same); *UMG Recordings, Inc. v. Sinnott*, 300 F. Supp. 2d 993, 1003 (E.D. Cal. 2004) (same, with regard to the unauthorized use of copyrighted works in exhibition halls); *Polygram Int’l Publ’g., Inc. v. Nevada/TIG, Inc.*, 855 F. Supp. 1314, 1333 (D. Mass. 1994) (same).

²¹⁶ See, e.g., *Psihoyos v. Nat’l Exam’r*, No. 97 Civ. 7624(JSM), 1998 WL 336655, at *3 (S.D.N.Y. June 22, 1998) (defendant newspaper “commercially exploited the Psihoyos’ photo to create news—a centerfold consisting of ‘car-azy hot rods.’ Specifically, the Psihoyos’ photo was placed prominently in the center of the centerfold page to attract readers’ attentions to what it depicts. The mere fact the photo depicts a newsworthy item does not justify commercial exploitation of it.”).

²¹⁷ *MGM Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913 (2005); *Columbia Pictures Indus., Inc. v. Fung*, 710 F.3d 1020, 1045 (9th Cir. 2013); *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004, 1010 (9th Cir. 2001), as amended (Apr. 3, 2001), *aff’d*, *A&M Records, Inc. v. Napster, Inc.*, 284 F.3d 1091 (9th Cir. 2002).

²¹⁸ *Adobe Sys. Inc. v. Canus Prods., Inc.*, 173 F. Supp. 2d 1044, 1052–53 (C.D. Cal. 2001).

consumers in,²¹⁹ just as the likeness of a copyrighted character on a T-shirt can help sell the T-shirt,²²⁰ or an automobile.²²¹

The standard economic account for copyright protection addresses a related commons problem—the problem of underinvestment. Due to the public goods character of knowledge, in the absence of legal intervention, information goods are free for the taking. Authors may not be compensated for creative efforts, and we might reasonably expect too little knowledge generation.²²² In addition, sellers who use a copyrighted work to draw in consumers run the risk of exhausting the ability of that work to attract attention. The lower the innovation cost,²²³ the closer the follow-on creator can duplicate the existing work.²²⁴

An intent to garner attention does not always equate to an actionable claim of copyright infringement. Fair uses are deemed not to infringe rights in the copied work,²²⁵ and many forms of parody or commentary gain attention by bringing the target of the parody or commentary to mind.²²⁶ And of course, audiences are heterogenous. Some (subsets of) consumers are more sophisticated than others and can more readily sort through the avalanche of available content than others. Protecting the easily confused could thwart the consumption interests of the

²¹⁹ *Metro-Goldwyn-Mayer, Inc. v. Am. Honda Motor Co.*, 900 F. Supp. 1287 (C.D. Cal. 1995) (holding that defendant's commercial infringed the copyright in plaintiff's James Bond character, and noting that characters like Bond are copyrightable as distinguished from stories in which they appear because they attract an audience not to see the story as such but to see the characters at work); ROBERT A. GORMAN, JANE C. GINSBURG & R. ANTHONY REESE, *COPYRIGHT: CASES AND MATERIALS* 268 (8th ed. 2011) (summarizing *MGM*).

²²⁰ *Eden Toys, Inc. v. Florelee Undergarment Co.*, 697 F.2d 27, 35 (2d Cir. 1982), *superseded by rule on other grounds as stated in Urbont v. Sony Music Entm't*, 831 F.3d 80 (2d Cir. 2016).

²²¹ *DC Comics v. Towle*, 802 F.3d 1012 (9th Cir. 2015) (finding infringement of DC Comics's copyright in its Batmobile, and noting that defendant custom car seller "advertised that the replicas included such features as 'custom bat insignias, wheel bats, [and a] bat steering wheel,' and would attract attention due to the fame of the Batmobile").

²²² Michael J. Madison, Brett M. Frischmann & Katherine J. Strandburg, *The University as Constructed Cultural Commons*, 30 WASH. U. J.L. & POL'Y 365, 368 (2009) (summarizing the standard economic account).

²²³ See generally Christopher Buccafusco, Stefan Bechtold & Christopher Jon Sprigman, *The Nature of Sequential Information*, 59 WM. & MARY L. REV. 1 (2017).

²²⁴ Lee Anne Fennell, *Common Interest Tragedies*, 98 NW. U. L. REV. 907, 918–19 (2004).

²²⁵ See 17 U.S.C. § 107; *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 575 (1994).

²²⁶ *Mattel, Inc. v. MCA Records, Inc.*, 28 F. Supp. 2d 1120, 1145 (C.D. Cal. 1998), *aff'd*, 296 F.3d 894 (9th Cir. 2002) ("Even if [the alleged infringers] knew that parodying a popular product would attract favorable attention, this knowledge alone cannot erase their First Amendment interests in commenting on Barbie: if it did, then no unknown group could criticize popular products because the accusation of trying to gain attention would always exist.").

sophisticates. Indeed, some have posited that there is educative value in forcing consumers to confront and process similar trademarks on competing goods.²²⁷

Perhaps the same is true of plowing through attention scarcity. But even in relatively sophisticated markets for derivative works, like a fan fiction community, congestion leads to cacophony and can oversaturate the attention resources of its members.²²⁸ Moreover, as the Supreme Court has noted, using the original “merely . . . to get attention or to avoid the drudgery in working up something fresh” is less likely to be fair use and more likely to constitute copyright infringement.²²⁹

Scholars have also noted that creative expression can be subject to overuse that dissipates its power to draw attention.²³⁰ Costs imposed by each attention seeker are borne directly by the consumer, and indirectly, if at all, by the seller. In this way, the attention that an appropriator can pull with a given copyrighted work is a potential site for a commons tragedy. In a commons, each member with access to a resource can transfer common resources to herself, and may do so frequently enough to exhaust the resource, like too many hunters overhunting a common hunting ground.²³¹

²²⁷ See, e.g., Alfred C. Yen, *The Constructive Role of Confusion in Trademark*, 93 N.C. L. REV. 77, 128 (2014) (“[C]onfusion actually increases the value of the [trademark] system by helping consumers develop cognitive skills that support the transmission of subtle messages through trademarks.”).

²²⁸ See, e.g., James Grimmelman, *The Virtues of Moderation*, 17 YALE J.L. & TECH. 42, 72 (2015) (describing how fan fiction communities reach a point where there are too many stories to manage without moderation tools like tags or a search function).

²²⁹ *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 580 (1994).

²³⁰ Fennell, *supra* note 224, at 918–19; William M. Landes & Richard A. Posner, *Indefinitely Renewable Copyright*, 70 U. CHI. L. REV. 471, 485–86 (2003) (discussing forms of “overgrazing” possible in the case of intellectual property, including the chance that overuse of a particular image might generate “confusion, the tarnishing of the image, or sheer boredom on the part of the consuming public”); Michael J. Meurer, *Copyright Law and Price Discrimination*, 23 CARDOZO L. REV. 55, 96–97 (2001) (observing that limited consumer attention is a common pool resource that producers of works will tend to overharvest); Bradford, *supra* note 177, at 765 (“To avoid this aspect of ‘overgrazing,’ secondary uses most likely to distort audience perception should remain subject to property remedies like an injunction.”). *But see* Mark A. Lemley, *Property, Intellectual Property, and Free Riding*, 83 TEX. L. REV. 1031, 1050–52 (2005) (arguing that “there is no tragedy of the commons in intellectual property” because works of intellectual property are nonrivalrous).

²³¹ Demsetz, *supra* note 88, at 351. *But see generally* ELINOR OSTROM, *GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION* (1990) (outlining principles for efficient commons governance).

Copyright owners carefully manage risk to mitigate the dissipation of a work's ability to garner attention. For example, the Walt Disney Company historically scheduled the availability of its stable of characters and collection of movies in staged releases.²³² Attempting to run the movies continually in theatres, or in steady rotation on television, would risk dissipating the market for the films.

This is a concern not only for Disney, but also for the audience of its films in two ways. First, the saturation of a given Disney character in the market may rapidly tire the public of its charms.²³³ Second, there is a dynamic effect of exhausting the interest in the copyrighted work that can discourage first order creation because as it dissipates the value of the work, it reduces the award the owner can expect over the life of the work, which reduces the number of works available, and their distinctness one from another.²³⁴ Justin Hughes posits that in some cases, "if a cultural image may be used freely by non-owners, it may be exploited excessively, become exhausted as it loses its ability to attract attention, and disappear from the cultural discourse."²³⁵

The attention costs of copyright infringement may be easy to overlook because they do not arise in every case. But in some cases, the harm of copyright infringement is the harm of demand diversion. Patrick Goold has characterized this harm as a type of unfair competition.²³⁶ Wendy Gordon similarly notes that in some cases, the harm from infringing the derivative right occurs when the infringing derivative might divert the copyright owner's sale or exploitation to other

²³² Landes & Posner, *supra* note 230, at 486 (quoting Bill Britt, *Disney's Global Goals*, *MARKETING* 26 (May 17, 1990)); *see also* Linford, *Second Look*, *supra* note 29, at 621 (citing, *inter alia*, Bruce Orwall, *Disney Plans Strategic Shifts in Home Videos*, *WALL ST. J.* (Aug. 17, 1999) (referring to Disney's "longtime strategy of rotating its animated films in stores, keeping each title off the market for a period of seven to [ten] years" to maintain demand for the films)).

²³³ Landes & Posner, *supra* note 230, at 486–87.

²³⁴ *Id.*

²³⁵ Justin Hughes, "Recoding" *Intellectual Property and Overlooked Audience Interests*, 77 *TEX. L. REV.* 923, 960 (1999).

²³⁶ Patrick R. Goold, *Unbundling the "Tort" of Copyright Infringement*, 102 *VA. L. REV.* 1833, 1861–62 (2016). In Goold's subset of unfair competition-style copyright infringement cases, competitor copying is actionable only "if the copying leads to consumer demand being diverted away from the owner and towards the copyist." *Id.*

customers.²³⁷ The next Section considers more directly the interaction between copyright protection and attention scarcity.

B. *Constraining Entry to Manage Attention Overload*

Copyright protection incentivizes creation by rewarding incumbent owners with rights to penalize copying or adapting that too closely imitates the protected work. That protection imposes a cost on new entrants that requires them to invent around the original.²³⁸ The right to copy reaches not only verbatim copies but also substantially similar copies.²³⁹ The right to create derivative works reaches works that are not copies, but that use protectable elements from the original without necessarily infringing the exclusive right to copy. As mentioned above, courts struggle to disentangle infringing derivatives from substantially similar copies.²⁴⁰ This Article adopts a definition from Michael Abramowicz, that a new work infringes the reproduction right if it would cause significant demand diversion from the original, but infringes the derivative right if it would cause significant demand diversion from “actual or hypothetical” adaptations that the owner might plausibly bring to market.²⁴¹

Derivative right skeptics argue for reducing that right, especially in light of falling costs of creation and dissemination.²⁴² Holding other variables constant, if it costs less to create and disseminate a song or a novel, less protection is necessary to incentivize that creation and dissemination, because the author can recoup her investment at a lower price point. In such conditions, policy makers could safely narrow the derivative right without reducing the amount of valuable creative output.

²³⁷ Wendy J. Gordon, *Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and Its Predecessors*, 82 COLUM. L. REV. 1600, 1640 n.221 (1982) (discussing *Loew's, Inc. v. CBS*, 131 F. Supp. 165 (S.D. Cal. 1955), *aff'd sub nom. Benny v. Loew's, Inc.*, 239 F.2d 532 (9th Cir. 1956), *aff'd per curiam by an equally divided Court sub nom. CBS v. Loew's, Inc.*, 356 U.S. 43 (1958) (affirming a finding of infringement against Jack Benny's parody of the film *Gaslight*)).

²³⁸ Buccafusco, Bechtold & Sprigman, *supra* note 223; Dan L. Burk, Essay, *Inventing Around Copyright*, 109 NW. U. L. REV. ONLINE 547, 558 (2015) [hereinafter Burk, *Inventing Around*].

²³⁹ Burk, *Inventing Around*, *supra* note 238, at 558.

²⁴⁰ See *supra* notes 28–32 and accompanying text.

²⁴¹ Abramowicz, *Derivative Right*, *supra* note 46, at 372–373.

²⁴² See *supra* Sections II.B–D.

One could also accomplish this result by broadening the fair use exception.²⁴³

In conditions of information glut and excessive entry, the prescription, under the standard account, is weaker copyright protection. If copyright protection is too strong, it might over-encourage initial entry.²⁴⁴ If protection is weakened, then some potential creators will be less likely to enter and will instead pursue other endeavors.²⁴⁵ If that condition holds, fewer copyrighted works will enter the market. One proposed salutary effect of reduced entry would be a reduction in the amount of available expression, commensurately reducing the costs of attention scarcity.²⁴⁶

Perhaps, in light of current information superabundance, we should therefore prefer lower entry, even if we lose some valuable copyrighted expression. For example, Shubha Ghosh argues that in some cases consumers care about the quantity of a given work, e.g., a Stephen King novel “as well as the number of different varieties of thriller

²⁴³ See *supra* note 22 and accompanying text.

²⁴⁴ See, e.g., Abramowicz, *Uneasy Case*, *supra* note 2, at 1647 (“It is possible that we would be better off with copyright law that is somewhat weaker, not in spite of the fact that this would lead to the production of fewer works, but because it would do so . . .”).

²⁴⁵ Glynn S. Lunney, Jr., *Reexamining Copyright's Incentives-Access Paradigm*, 49 VAND. L. REV. 483, 488 (1996) (“As a result, broadening copyright imposes a second critical cost: the lost value society would have associated with the alternative investments to which these resources would otherwise have been devoted.”); *Cake: Flying High After a Record Low*, NPR (Mar. 3, 2011, 4:59 PM), <http://www.npr.org/2011/03/03/134233768> [<https://perma.cc/RV2D-NBWU>] (Cake front man John McCrea observed, after the band's 2011 album debuted at number one on the Billboard 200 after selling just 44,000 copies, “I see music as a really great hobby for most people in five or 10 years. I see everybody I know, some of them really important artists, studying how to do other jobs.”).

²⁴⁶ I assume here that the risk profile of each entrant is consistent. This is a contested empirical point, and the answer to the empirical question complicates the analysis. James Gibson argues that many key players in certain copyright industries are risk averse, leading to a preference for licensing over creating without a license, and perhaps chilling creation entirely if a license cannot be secured. James Gibson, *Risk Aversion and Rights Accretion in Intellectual Property Law*, 116 YALE L.J. 882, 884 (2007). More recent scholarship from Andres Sawicki suggests instead that creators on average might be risk seeking. Andres Sawicki, *Risky IP*, 48 LOY. U. CHI. L.J. 81 (2016). To the extent the average creator is more risk-seeking than the general population, the willingness to play the copyright lottery and the willingness to discount punitive sanctions and eschew the cost of creating around copyright will both be magnified. If the median creator is risk seeking, then we will see a higher level of entry irrespective of regime. See Mark A. Lemley & R. Anthony Reese, *Reducing Digital Copyright Infringement Without Restricting Innovation*, 56 STAN. L. REV. 1345, 1391 n.183 (2004) (“The deterrence effect of punitive sanctions is magnified to the extent that the targets are risk-averse, as most people are, and reduced to the extent they actually prefer risk.”).

novels . . . produced.” Thus, in light of this “quantity-variety trade-off,” there may be too many novels; “[c]onsumers would be better off if there were more of a particular type of work available as opposed to superfluous variety.”²⁴⁷ Ghosh argues that the derivative right leads to more spurious variety that can be reduced by increasing the ex ante cost of acquiring rights in and reducing the ex post protection offered by the derivative right.²⁴⁸ Pamela Samuelson similarly argues that rationales justifying the grant of the derivative right might be overstated, particularly “because it gives rights holders power to inhibit the creation of follow-on works that, if allowed, would advance the progress of science.”²⁴⁹

The unstated presumption is that authorized derivatives are of spurious variety, but many or most unlicensed follow-on works would advance the progress of science.²⁵⁰ In a way, this is another version of Clayton M. Christensen’s “Innovator’s Dilemma.” Incumbents miss things and prioritize profits from existing technologies and markets instead of seeking new technologies and markets.²⁵¹ This phenomenon has been discussed by scholars analyzing the interaction of technologists and copyright owners.²⁵² It may also be true of derivative works. Perhaps,

²⁴⁷ Ghosh, *supra* note 64, at 358.

²⁴⁸ *Id.*

²⁴⁹ Samuelson, *supra* note 11, at 1530.

²⁵⁰ See, e.g., Cohen, *supra* note 11, at 1193 (“Critics of copyright maximalism have long argued that overly rigid control of access to and manipulation of cultural goods stifles artistic and cultural innovation, and a growing body of anecdotal evidence suggests that copyright’s ‘permission culture’ does exert a substantial constraining influence on creative practice.”). *But see* Ladd, *supra* note 213, at 428–29 (“The glory of copyright is that it sustains not only independent, idiosyncratic, and iconoclastic authors, but also fosters daring, innovative, and risk-taking publishers.”).

²⁵¹ See, e.g., CLAYTON M. CHRISTENSEN, *THE INNOVATOR’S DILEMMA: WHEN NEW TECHNOLOGIES CAUSE GREAT FIRMS TO FAIL* (1997) (positing that established firms often fail to capitalize on innovations that might revolutionize a market but lack the profit margins the firm has come to expect).

²⁵² Michael A. Carrier, *Copyright and Innovation: The Untold Story*, 2012 WIS. L. REV. 891 (2012) (explaining that record labels failed to recognize the benefits of digital music distribution, due in part to, “and consistent with [Clayton Christensen’s] ‘Innovator’s Dilemma,’ an emphasis on the short term and preservation of existing business models”); Fred von Lohmann, *Fair Use As Innovation Policy*, 23 BERKELEY TECH. L.J. 829, 860 (2008) (“[I]f copyright law were to give rightsholders exclusive control over private copying, Professor Christensen’s research suggests that the rightsholders themselves would not be able to realize the full social value of the disruptive innovations that private copying could support.”); Tim Wu, Essay, *Intellectual Property, Innovation, and Decentralized Decisions*, 92 VA. L. REV. 123, 140–41 (2006) (citing Christensen’s research in concluding that firms may sometimes pursue inefficient licensing strategies); Edward Lee, *Copyright-Exempt Nonprofits: A Simple Proposal to Spur Innovation*, 45 ARIZ. ST. L.J. 1433,

despite the occasional firm-shepherded innovation, like Academy Award winner *Spider-Man: Into the Spider-Verse*,²⁵³ truly innovative derivative work cannot be generated from within, whether the copyright owner is a singular author or a corporate entity.²⁵⁴

That presumption overlooks attention costs in the copyright ecosystem. Proposals built on the presumption do not account for the type of entry most likely to occur in an attention economy with narrower copyright protection. In this economy, attention is the scarce resource, and a successful copyrighted work is a tool to harvest attention.²⁵⁵ When copyright protection is narrower, a new entrant is more likely to create a close substitute for an existing work already available to consumers, because the costs of working around the original are lower.²⁵⁶ Economic accounts of product differentiation and rent dissipation suggest that if those substitutes are too close, such entry will be wasteful,²⁵⁷ not only reducing revenues to copyright owners, but also adding to attention costs confronted by consumers. Failing to account for attention scarcity thus leads one to overestimate consumer surplus. Under conditions of information scarcity, reducing or eliminating the derivative right will reduce consumer welfare.

Compared to status quo ante, reducing the scope of copyright protection also reduces entry cost. The copyright owner expects to receive a smaller reward for the work, but has fewer costs to create around preexisting expression. The reduced costs may come from having fewer works to compete with, if works are falling more quickly into the public domain; from reducing the scope of an incumbent's derivative right; from

1435–1442 (2013) (“[T]he more innovative or different a speech technology is in terms of utilizing content, the more likely the technology will face a copyright lawsuit or challenge.”).

²⁵³ See, for example, *Spider-Man: Into the Spider-Verse* (2018), which received an Academy Award for Best Animated Feature, and was heralded by critics like Emily Yoshida at Vulture as “a bit of a conceptual dare.” Emily Yoshida, *Spider-Man: Into the Spider-Verse Is an Infectiously Fun Take on Comic Bookishness*, VULTURE (Dec. 7, 2018), <https://www.vulture.com/2018/12/spider-man-into-the-spider-verse-review.html> [<https://perma.cc/99GV-4DVU>].

²⁵⁴ *But see* Terry Hart, *License to Remix*, 23 GEO. MASON L. REV. 837, 862–870 (2016) (cataloguing examples of licensed creativity).

²⁵⁵ Hefti & Heinke, *supra* note 95, at 39–40 (“[A]ttention becomes a scarce resource, meaning binding capacity constraints, if more information senders find it attractive to enter a market, e.g. because spendable consumer income has increased or broadcasting costs have decreased.”).

²⁵⁶ See generally Buccafusco, Bechtold & Sprigman, *supra* note 223 (describing the cost of licensing versus creating around preexisting expression).

²⁵⁷ See *supra* Section II.B; *infra* Section III.B.

courts construing more narrowly the works that are substantially similar to the incumbent's protected work; or from broadening the entrant's fair use right. The sum of the changes in reduced costs to create around and reduced incentive might be negative—the hopeful author loses more from the reduced incentive than she saves from the reduced cost of entry. That result would reduce the likelihood of entry because of the reduced reward.

However, if the savings from the lower cost of entry are greater than the reduction in the incentive, then the net reward increases, even though the incentive is smaller. Thus, as Gibson and Cotropia observe, those who wish to suppress a disfavored content industry should not be so quick to assume that withholding intellectual property rights will further their objective. Instead, if the industry in question “operates well at a low-IP equilibrium”—true of attention merchants in the modern economy—“the introduction of strong entitlements might be bad for the industry—and thus good for society.”²⁵⁸ In that condition, we may see the same level of entry, or perhaps even increased entry if protection is narrowed.

The attention scarcity account further complicates the presumption that reducing the incentive will reduce entry. Lower levels of copyright protection may lead to lower numbers of new copyrighted works because there are fewer incentives to create.²⁵⁹ But the works that enter may well be redundant, rent-dissipating works because that copying will be valuable as a means to attract attention.²⁶⁰

²⁵⁸ Christopher A. Cotropia & James Gibson, *The Upside of Intellectual Property's Downside*, 57 UCLA L. REV. 921, 938 (2010).

²⁵⁹ See, e.g., Abramowicz, *Uneasy Case*, *supra* note 2, at 1647.

²⁶⁰ *Id.* at 1648. Abramowicz argues that rent seeking by new entrants whose offerings are close substitutes for one another is more likely to reduce social welfare, because rent seekers would at a minimum dissipate all the rents for unauthorized derivatives, as well as a portion of the rent the author would otherwise obtain from the derivative right. Abramowicz, *Derivative Right*, *supra* note 46, at 348, 358–59 (2005); see also *id.* at 350–51 (describing how property rights can reduce or entirely avoid rent-dissipating races). Pursuant to Abramowicz's analysis, the derivative right can prevent rent dissipating demand diversion, as well as “the suboptimal[] early release of adaptations.” *Id.* at 359–60 (“A derivative right greatly reduces the possibility of inefficient races after the initial creation of copyrighted expression.”). Yoo on the other hand argues that strong copyright protection may not harm access because increased entry will lead more competitors to enter the market with close substitutes, and describes that effect as access increasing. Yoo, *supra* note 46, at 250–56. But Yoo's use of “close substitutes” may differ from Abramowicz's use. Yoo is not contemplating infringing entry, but instead a high volume of entry triggered by strong incentives, which allows for increased access as close but not infringing substitutes compete with one another on price. Cf. Joseph Scott Miller, *Hoisting Originality*, 32

In an attention economy, the entrant need not secure all its reward from selling the work or licensing adaptation rights. In a system with significant attention scarcity and weak copyright protection, the rational move for the median new entrant is to create a new work that is as similar to an existing, successful work as possible. Narrower protection means lower financial incentives from the sale or licensing of copyrighted expression, but it does not reduce the value of entering to redirect some of the attention garnered by a successful incumbent work. Indeed, duplicative entry will become more likely. Attention is an independently valuable resource, easier to secure in some cases than payments for copies of derivative works or licenses to make adaptations. And the weaker the copyright protection, the less the new entrant need concern herself with making sure to imitate only ideas and genre conventions, rather than expression.²⁶¹ Thus, narrowing copyright protection would likely lead to more entry of close substitutes, rather than of more distinct and creative works.

Rent dissipation is likely to occur as entrants race to be the first to make an unlicensed adaptation of a new work or free ride on the attention it has attracted. The more redundant the work, the more likely the copier's use will drag on scarce consumer attention. New entrants will still contribute to information glut, but that entry is more likely to be wasteful and duplicative of prior works, and less likely to be independently valuable or clearly distinguishable. Thus, a reduction in copyright protection may lead to *less creative* and *less distinguishable* entry. A "Babel of signals" is more likely, not less likely, with weaker copyright protection, or broader exceptions for duplicative fair use.²⁶²

We can see a similar dynamic in the market for phone games. Game rules are generally not protected by copyright expression, so we see an

CARDOZO L. REV. 451, 458 (2009) (arguing that a higher originality threshold would lead to more valuable innovative expressive works).

²⁶¹ Abramowicz, *Derivative Right*, *supra* note 46, at 321; *see also* Abramowicz, *Uneasy Case*, *supra* note 2, at 1665.

²⁶² ORRIN EDGAR KLAPP, *OVERLOAD AND BOREDOM: ESSAYS ON THE QUALITY OF LIFE IN THE INFORMATION SOCIETY 2* (1986). If the barrier to qualify for fair use were lowered, we would expect excessive entry of redundant, rent-dissipating works, as we would with a narrower scope of protection. *But see infra* Section III.E.1.

abundance of games that duplicate a popular game mechanic.²⁶³ Recent examples include three-match games that play similarly to Candy Crush and its predecessors;²⁶⁴ games designed to imitate the surprise success of Flappy Bird;²⁶⁵ and games designed to emulate the gameplay of Clash of Clans.²⁶⁶ If a creative industry has developed with presumptions of broad rights of borrowing and duplication, broad protections can upset expectations.²⁶⁷ But an ecosystem built on borrowing and duplication also shapes the available set of games for consumers to choose. For example, the app store ecosystem for mobile games appears to reward developers who seek to siphon off users by offering a similar experience or duplicative gameplay, but “does not reliably reward developers who break the mold and try something new.”²⁶⁸ Thus, the app store ecosystem

²⁶³ Drew S. Dean, Comment, *Hitting Reset: Devising A New Video Game Copyright Regime*, 164 U. PA. L. REV. 1239, 1249 (2016) (“[T]he video game industry is rife with the copying, recycling, and redevelopment of other developers’ ideas.”).

²⁶⁴ *Candy Crush Saga Makers to Sue Game They Copied*, METRO (Feb. 13, 2014, 2:21 PM), <http://metro.co.uk/2014/02/13/candy-crush-saga-makers-to-sue-game-they-copied-4303096> (<https://perma.cc/7YJT-P7YK>).

²⁶⁵ Dean, *supra* note 263, at 1251 (citing Paul Tassi, *Over Sixty ‘Flappy Bird’ Clones Hit Apple’s App Store Every Single Day*, FORBES (Mar. 6, 2014, 10:15 AM), <https://www.forbes.com/sites/insertcoin/2014/03/06/over-sixty-flappy-bird-clones-hit-apples-app-store-every-single-day/#2dbc5f4d68f5> [<https://perma.cc/9MPT-W8D>]) (“[A]fter Dong Nguyen removed *Flappy Bird* from the Apple App Store, an astounding sixty *Flappy Bird* clone apps were submitted for approval to the App Store every day, each trying to cash in on the original’s success and fill the vacuum left by its removal.”). *Ceteris paribus*, a market without a desired game seems reasonably subject to more copying than one with an existing incumbent.

²⁶⁶ Supercell’s *Clash of Clans* is a desirable target—in 2014, the game generated a daily estimated revenue of \$1.3 million on Apple’s App Store. Kenneth W. Eng, Note, *Content Creators, Virtual Goods: Who Owns Virtual Property?*, 34 CARDOZO ARTS & ENT. L.J. 249, 253 (2016) (citing *Clash of Clans*, THINK GAMING, <http://thinkgaming.com/app-sales-data/1/clash-of-clans> (last visited Feb. 21, 2016)); see also Stuart Dredge, *Clash of Clans Heads 2014’s Billion-Dollar Mobile Games*, GUARDIAN (Dec. 9, 2014, 2:30 PM), <http://www.theguardian.com/technology/2014/dec/09/clash-of-clans-billion-dollar-mobile-games> [<https://perma.cc/7MM2-MUEG>] (reporting that *Clash of Clans* generated \$1.8 billion in revenue in 2014).

²⁶⁷ See Kal Raustiala & Christopher Sprigman, *The Piracy Paradox: Innovation and Intellectual Property in Fashion Design*, 92 VA. L. REV. 1687, 1705 (2006) (discussing how broad design patent protections could hamper the fashion industry); see also Susanna Monseau, *The Challenge of Protecting Industrial Design in a Global Economy*, 20 TEX. INTELL. PROP. L.J. 495, 537 (2012); Erika Myers, *Justice in Fashion: Cheap Chic and the Intellectual Property Equilibrium in the United Kingdom and the United States*, 37 AIPLA Q.J. 47, 80 (2009).

²⁶⁸ Dean, *supra* note 263, at 1248 (citing Simon Parkin, *Clone Wars: Is Plagiarism Killing Creativity in the Games Industry?*, GUARDIAN (Dec. 23, 2011, 6:00 AM), <https://www.theguardian.com/technology/gamesblog/2011/dec/21/clone-wars-games-industry-plagiarism> [<https://perma.cc/78fy-tj3>]) (“[F]ollowing the rise of the App Store where, thanks to

benefits entrenched incumbents, or those with formal relationships with publishers, over independent developers.²⁶⁹ This effect leaves consumers with fewer innovative games while strengthening entrenched producers.

Consistent with the product differentiation account advanced separately by Abramowicz and Yoo, modest controls on market entry may well improve consumer welfare.²⁷⁰ The exclusive rights to copy and to adapt protected expression both regulate wasteful duplicative entry. In particular, the derivative right allows the copyright owner to create sequels and other adaptations of reasonably high quality, without racing against subsequent entrants who would rush to obtain first-mover advantages and, *ceteris paribus*, bring lower quality adaptations to market.²⁷¹ Even if the analyses from Abramowicz and Yoo were not persuasive in the general case, attention scarcity exacerbates the conditions warned about in their product dissemination account.²⁷²

The attention scarcity condition also highlights the importance of an observation from Joseph Fishman: copyright's moderate constraint can increase creativity.²⁷³ Scholars of disciplines as disparate as cognitive psychology, management studies, and art history recognize the phenomenon.²⁷⁴ Research in these disparate disciplines describes an oft-overlooked creative benefit to constraint. Consider the potential difference between writing free verse and writing a verse in iambic pentameter, or haiku. The constraint created by the form imposes some rigor in the process, and that rigor can in turn improve the output. When an artistic endeavor is subject to constraint, whether imposed by genre or medium requirements or resource limitations, the output is often more original, arguably more valuable, and a better fit for the target audience

low costs and shorter development periods, studios can be far more responsive to popular trends, claims of game plagiarism are becoming more commonplace . . .").

²⁶⁹ Dean, *supra* note 263, at 1250–51; Christopher Lunsford, Comment, *Drawing a Line Between Idea and Expression in Videogame Copyright: The Evolution of Substantial Similarity for Videogame Clones*, 18 INTELL. PROP. L. BULL. 87, 90 (2013) (“[Independent] developers often lack legal support since publishers are usually the ones aggressively defending the intellectual property rights of developers.”).

²⁷⁰ Abramowicz, *Derivative Right*, *supra* note 46, at 321; *see also* Abramowicz, *Uneasy Case*, *supra* note 2, at 1665; Yoo, *supra* note 46, at 272.

²⁷¹ Abramowicz, *Derivative Right*, *supra* note 46, at 319–20.

²⁷² Yoo, *supra* note 46, at 272 (describing how the opportunity for demand diversion creates the possibility of excess entry).

²⁷³ *See generally* Fishman, *supra* note 5.

²⁷⁴ *Id.*

or context than it would have been in the absence of that constraint. As Fishman noted, creativity “thrives best not under complete freedom, but rather under a moderate amount of restriction.”²⁷⁵

That constraint should work to the public’s benefit. If a new entrant must enter more cautiously to avoid a valid claim of copyright infringement, she may reasonably choose to disseminate less information in order to reduce potential entry costs.²⁷⁶ In choosing among a number of works to create and disseminate, she will pick those works she predicts will more clearly differ from available, protected works. Thus, even though maintaining protection will continue to encourage entry generally, it will likely constrain the type of entry we see. This in turn moderates the effect of the information glut on consumer attention. The effect can hold even though entrants do not pay directly for adding to existing abundance.

One might reasonably ask whether society is better with clearer differentiation between competing expressive works. If society benefits more from close derivatives of public domain works than more clearly differentiated works, close copying is a virtue, rather than a vice. Indeed, some have maintained that protecting the derivative work right might reduce creativity. For example, the Seventh Circuit recently rejected an attempt to extend copyright protection to Sherlock Holmes (first portrayed in public domain stories) based on the continuing character development in later stories still under copyright. Judge Posner explained that such an extension would *discourage* creativity, incentivizing authors to write more stories about old characters rather than “creat[ing] stories with entirely new characters.”²⁷⁷ But having a character in the public domain incentivizes exactly that type of creativity, because the costs of creating around are zero.

Rebecca Tushnet raises a similar point: a copyright system designed to optimize creativity might reasonably deny *any* protection to a derivative work, maximizing the incentive to create something entirely

²⁷⁵ *Id.* at 1336–37. *But see* Rebecca Tushnet, *Free to Be You and Me? Copyright and Constraint*, 128 HARV. L. REV. F. 125, 128–29 (2015) [hereinafter Tushnet, *Free*] (questioning the applicability of studies summarized by Fishman to copyright policy).

²⁷⁶ Mark Lemley notes the potential benefits of reduced entry in the trademark context. Lemley, *Lanham Act*, *supra* note 199, at 1687, 1695 (“[W]e might all be better off in a world with fewer brands clamoring for our scarce attention.”).

²⁷⁷ *Klinger v. Conan Doyle Estate, Ltd.*, 755 F.3d 496, 501 (7th Cir. 2014).

new by denying protection if a work includes any preexisting material.²⁷⁸ In such a system, the author could not secure rights in or extract rents from the derivative work. That would leave the realm of derivative works to entities who could afford to create them without securing any copyright-driven profits for their subsequent sale, perhaps by leveraging the work for other purposes. In the current attention economy, we would expect much of what platforms are currently delivering—business models that refine ad targeting with data mining.

But in an attention economy, the absence of a derivative right would lead to a more acute version of the consequences highlighted above. A regime with no derivative right would also fail to incentivize repurposing of public domain works, except those works for which the repurposer can acquire a clear first-mover advantage, or gain some complementary benefit with an existing protected work. Such a rule would thus discourage otherwise marketable uses of works in the public domain, like Sherlock Holmes as a character.

Removing the derivative right would also severely reduce incentives for fair uses except among amateurs—one could use an existing work and any transformation whatsoever would fall outside the copyright owner's grant, but the appropriator would have no rights in her output, and thus limited traditional incentive to create. If society relies solely on first-mover advantages, the resulting incentives compress the time for the creation of derivative works, reducing the ability of creators of derivative works to take the time to craft new expression compared to a regime with a derivative right. Indeed, without the derivative right, only non-pecuniary inputs (like internal motivation) or revenues drawn from the first-mover advantage (wasteful races) will be available to incentivize creators.²⁷⁹

C. *Copyright Signals*

In addition to keeping attention costs down, the ability of copyright to maintain some boundaries between otherwise close competitors can provide important information to consumers. Consumers value a modest

²⁷⁸ Tushnet, *Free*, *supra* note 275, at 130; *see also* Bambauer, *supra* note 36, at 391–92.

²⁷⁹ *See* Abramowicz, *Derivative Right*, *supra* note 46, at 319–20; *see also* Duffy, *supra* note 43, at 466.

level of product differentiation. Indeed, that is part of the goal of trademark protection.²⁸⁰ Copyright protection also provides some narrative product differentiation that consumers may value. The exclusive right to make derivative works allowed Lucasfilm before and Disney now to maintain a cohesive universe and to control the order and volume of *Star Wars*-related copyrighted expression.²⁸¹ Consumers find some value in the ability to distinguish authorized from unauthorized *Star Wars* merchandise, films, stories, etc. That's a role that copyrighted expression performs as effectively in its context as any trademark or branding.²⁸² The wider the berth that *Star Wars* appropriators must give—appropriate the genre, not the characters, dialogue, vehicles; or engage in parody, not mere preemption of derivative markets—the clearer the difference and the lower the attention burden on consumers.²⁸³

The protection of narrative authority sends a signal to consumers. The signaling effect of property rights has been recognized in other intellectual property regimes.²⁸⁴ For example, Clarisa Long argues that one reason to secure a patent not otherwise worth the cost of prosecuting is for the signal sent by patent ownership—a patent is a “means of credibly publicizing information” that is otherwise difficult or impossible to obtain.²⁸⁵ Jonas Anderson extends that argument to suggest that patents signal to entities who are not inventors or “person[s] having ordinary skill

²⁸⁰ Note that the desire of consumers for some product differentiation does not justify maximum product differentiation, and we should remember that advertisers have shown the ability to manipulate consumer desire. James M. Treece, *Protectability of Product Differentiation: Is and Ought Compared*, 18 RUTGERS L. REV. 1019, 1025 (1964); see also James M. Treece, *Copying Methods of Product Differentiation: Fair or Unfair Competition?*, 38 NOTRE DAME LAW. 244 (1963). For more on the tradeoffs between the proximity costs imposed by similar marks on similar products and distance costs imposed by unfamiliar, fanciful, or randomly generated marks, see generally Hemel & Ouellette, *supra* note 211.

²⁸¹ *The Legendary Star Wars Expanded Universe Turns a New Page*, STAR WARS (Apr. 25, 2014), <http://www.starwars.com/news/the-legendary-star-wars-expanded-universe-turns-a-new-page> [<https://perma.cc/BFD3-RGNL>].

²⁸² Cf. Joseph P. Liu, *The New Public Domain*, 2013 U. ILL. L. REV. 1395, 1423 (2013) (noting that consumers derive value from being able to distinguish authorized from unauthorized expressive content).

²⁸³ See also *infra* notes 353–55 and accompanying text (discussing fan fiction). See also generally Hughes, *supra* note 235.

²⁸⁴ Jake Linford, *Trademark Owner as Adverse Possessor: Productive Use and Property Acquisition*, 63 CASE W. RES. L. REV. 703, 711–13, 760–61 (2013); Rose, *supra* note 6, at 77–79.

²⁸⁵ Clarisa Long, *Patent Signals*, 69 U. CHI. L. REV. 625, 627 (2002).

in the art” that the patentee might have desirable qualities, like an innovative corporate culture.²⁸⁶

Scholars have also identified how copyright protection sends signals in various contexts. For example, assertions of copyright protection can stimulate short-term increases in stock price.²⁸⁷ In addition, extending copyright protection to video games legitimized them in the eyes of those who were inclined to lump them in with gambling devices like slot machines.²⁸⁸ Furthermore, some have suggested that extending copyright protection to pornography sends an unfortunate signal that Congress is publicly subsidizing pornographic expression.²⁸⁹

Signaling effects can be imperfect,²⁹⁰ and difficult to control.²⁹¹ In addition, patent rights likely provide a stronger signal than copyright protection. Copyright protection is comparatively cheap to secure, whereas patent protection is expensive.²⁹² But copyright protection

²⁸⁶ J. Jonas Anderson, *Nontechnical Disclosure*, 69 VAND. L. REV. 1573, 1590–91 (2016) (“[P]atent doctrine requires that an inventor describe in sufficient detail that one skilled in the art can practice the invention without undue experimentation.”); *id.* at 1596–97; *see also* Annamaria Conti, Jerry Thursby & Marie Thursby, *Patents as Signals for Startup Financing*, 61 J. INDUS. ECON. 592 (2013) (conducting an empirical study on Israeli companies between 1994–2011); Annamaria Conti, Marie Thursby & Frank T. Rothaermel, *Show Me the Right Stuff: Signals for High-Tech Startups*, 22 J. ECON. & MGMT. STRATEGY 341 (2013).

²⁸⁷ Olufunmilayo B. Arewa, *Measuring and Representing the Knowledge Economy: Accounting for Economic Reality Under the Intangibles Paradigm*, 54 BUFF. L. REV. 1, 77 (2006); Arewa, *supra* note 6, at 272–75.

²⁸⁸ Joshua I. Miller, *Unknown Futures and the Known Past: What Can Patent Learn from Copyright in the New Technological Age?*, 21 ALB. L.J. SCI. & TECH. 1, 34, 37 (2011) (“[U]nder certain circumstances, the presence of copyright can provide some value outside of the potential for exclusion or rent.”).

²⁸⁹ Ned Snow, *Discrimination in the Copyright Clause*, 67 ALA L. REV. 583, 632 (2016); *see also* Ann Bartow, *Copyright Law and Pornography*, 91 OR. L. REV. 1, 49 (2012); Michael W. Carroll, *One for All: The Problem of Uniformity Cost in Intellectual Property Law*, 55 AM. U. L. REV. 845, 869 (2006).

²⁹⁰ *See* Ruth L. Okediji, *Trading Posts in Cyberspace: Information Markets and the Construction of Proprietary Rights*, 44 B.C. L. REV. 545, 556–57 (2003) (arguing that proprietary rights send “fuzzy” signals); *id.* at 571 (copyright protection sends unreliable signals, particularly in new markets).

²⁹¹ Michael J. Madison, Comment, *Where Does Creativity Come from? And Other Stories of Copyright*, 53 CASE W. RES. L. REV. 747, 757 (2003) (considering a potential signaling effect from copyright litigation).

²⁹² Long, *supra* note 285, at 657; *see also* Douglas Lichtman, *Copyright as a Rule of Evidence*, 52 DUKE L.J. 683 (2003). The low originality bar, on the other hand, might suggest that the copyright owner signals little else in its claim other than a minimal amount of originality. Justin Hughes, *Cognitive and Aesthetic Functionality in Trademark Law*, 36 CARDOZO L. REV. 1227, 1266 (2015) (characterizing copyright’s signaling effect as weak).

nonetheless has a recognizable signaling effect, at least to the extent that authoring creative expression requires some level of investment, planning, and developing resources.²⁹³

D. *Application by Industry*

This Section considers how copyright protection might modify attention costs in specific content areas: music, books, movies and television, and academic research.

1. Music

In a recent book, Joel Waldfogel argues that digitization has generally created a renaissance in a number of markets, music among them.²⁹⁴ According to Waldfogel's summary of the research, the number of new songs released annually has tripled, and top-selling lists include more independent artists than previous generations, indicating that consumers have access to more music of greater variety.²⁹⁵ Using a variety of measures, Waldfogel argues music in the digitization age has increased in quality compared to an apparent creative trough from the mid-eighties to the early 2000s, although it has not reached peaks obtained by music from the late sixties and early seventies.²⁹⁶

At the same time, sales of music have fallen precipitously in the years since Napster's launch. Research by Waldfogel suggests that those who download songs without paying purchase fewer songs than those who don't pirate, at a rate of five to one—for every five songs they download, they purchase one less song.²⁹⁷ Studies from some scholars suggest in the alternative that file sharing does not displace sales. For example, Felix Oberholzer-Gee and Koleman Strumpf measured sales and file sharing

²⁹³ Clarisa Long, *Information Costs in Patent and Copyright*, 90 VA. L. REV. 465, 480–81 (2004).

²⁹⁴ JOEL WALDFOGEL, *DIGITAL RENAISSANCE: WHAT DATA AND ECONOMICS TELL US ABOUT THE FUTURE OF POPULAR CULTURE* 163 (2018).

²⁹⁵ *Id.*

²⁹⁶ *Id.* at 69–71.

²⁹⁷ *Id.* at 43; Joel Waldfogel, *Digital Piracy: Empirics*, in *THE OXFORD HANDBOOK OF THE DIGITAL ECONOMY* 531 (Martin Pietz & Joel Waldfogel eds., 2012).

volume for albums in 2002, concluding that artists whose albums were pirated more did not experience lower sales.²⁹⁸ A later meta-study attributed much if not all of post-Napster sales losses to file sharing.²⁹⁹

Note that benefits from reduction of costs of creation and dissemination have come without a reduction in effective copyright protection, unless one assumes that the expansion of piracy has significantly decreased the chance of detection. Critics of the scope of music copyright generally argue that the menu of musical options is so limited that what is often characterized as infringement is merely close follow-on innovation in an industry where creativity is cabined.³⁰⁰ But a shift in protection might reasonably change the character of songs created.

Most of the music in the long tail—the content available to consumers in this new age of digitization—remains undiscovered or undesired. For example, in 2014, Spotify released data revealing that roughly twenty percent of the songs available on Spotify, approximately four million songs, had never been played once.³⁰¹ Reducing copyright protection would allow new hopefuls to edge closer to existing songs, potentially increasing the level of confusion between offerings. This follows in part because attention research indicates that in many fields, consumers focus on a handful of options in making a decision, no matter the number of alternatives.³⁰² But the options selected are driven by situational factors that increase visibility or salience,³⁰³ which could include the attractiveness of a copyrightable work.

²⁹⁸ Felix Oberholzer-Gee & Koleman Strumpf, *The Effect of File Sharing on Record Sales: An Empirical Analysis*, 115 J. POL. ECON. 1 (2007).

²⁹⁹ Stan J. Liebowitz, *How Much of the Decline in Sound Recording Sales Is Due to File-Sharing?*, 40 J. CULTURAL ECON. 13 (2016).

³⁰⁰ See, e.g., David May, Note, “So Long as Time is Music”: *When Musical Compositions Are Substantially Similar*, 60 S. CAL. L. REV. 785, 791 (1987) (“[C]omposers of popular music are often limited to the smaller pool of musical possibilities common to a popular style when composing works which, if successful, will reach the largest audience and yield huge commercial returns . . .”).

³⁰¹ *Forgotify Plays Never-Listened-To Spotify Songs*, BBC NEWS (Jan. 31, 2014), <https://www.bbc.co.uk/news/technology-25980850> [<https://perma.cc/B7BX-RGG8>].

³⁰² Hefti & Heinke, *supra* note 95, at 46 (summarizing literature).

³⁰³ *Id.* (citing Peter S. Fader & Leigh McAlister, *An Elimination by Aspects Model of Consumer Response to Promotion Calibrated on UPC Scanner Data*, 27 J. MARKETING RES. 322 (1990); Anusree Mitra, *Advertising and the Stability of Consideration Sets over Multiple Purchase Occasions*, 12 INT’L J. RES. MARKETING 81 (1995); Greg M. Allenby & James L Ginter, *The Effects*

One might wonder whether attention competition provides a means for competitive entry of new artists against dominant players. The flow of attention generally runs in the other direction. Indeed, a broad right to make cover tunes—a new version of a publicly released song—historically has allowed prominent artists with corporate support to dominate smaller players.³⁰⁴ Historically, black artists innovated and white artists and record labels appropriated that innovation, paying no more than the compulsory license required to secure the right to make a “cover” song.³⁰⁵ The appropriator gets bigger, benefitting from the appropriation enabled by weak protection against infringement, or by a compulsory license. The originator might continue to toil in obscurity.

A recent case highlights a similar dynamic. Led Zeppelin was accused of infringing copyright in a composition by the less popular band, Spirit.³⁰⁶ The case turns on whether Spirit has rights in an arpeggio that may not be sufficiently original to merit copyright protection. Given their relative fame, it is clear that if the members of Led Zeppelin

of In-Store Displays and Feature Advertising on Consideration Sets, 12 INT’L J. RES. MARKETING 67 (1995)).

³⁰⁴ In some cases, this resembles what happens under the trademark doctrine of reverse confusion. *In re Shell Oil Co.*, 992 F.2d 1204, 1208 (Fed. Cir. 1993) (“The term ‘reverse confusion’ has been used to describe the situation where a significantly larger or prominent newcomer ‘saturates the market’ with a trademark that is confusingly similar to that of a smaller, senior registrant for related goods or services.”).

³⁰⁵ See, e.g., Brief Amicus Curiae of the Institute for Intellectual Property and Social Justice Musician and Composers and Law, Music, and Business Professors in Support of Appellees, *Williams v. Gaye*, 885 F.3d 1150 (2018) (No. 15-56880), 2016 WL 7494673, at *14 (arguing that limiting juries to comparing lead sheets instead of aural expression distorts copyright and “discourages the participation of marginalized creators and communities in the copyright regime”); Aloe Blacc, Irina D. Manta & David S. Olson, *A Sustainable Music Industry for the 21st Century*, 101 CORNELL L. REV. ONLINE 39 (2016) (describing the market distortions created by compulsory licenses for music copyright); K.J. Greene, *Copyright, Culture & Black Music: A Legacy of Unequal Protection*, 21 HASTINGS COMM. & ENT. L.J. 339 (1999) (arguing that structural discrimination limits copyright protection extended to black artists); Neela Kartha, Comment, *Digital Sampling and Copyright Law in a Social Context: No More Color-Blindness!!*, 14 U. MIAMI ENT. & SPORTS L. REV. 218, 232–34 (1997) (contending that the compulsory licensing of cover songs allows the appropriation of innovative black music by white performers); Robert P. Merges, *Contracting into Liability Rules: Intellectual Property Rights and Collective Rights Organizations*, 84 CAL. L. REV. 1293, 1308–16 (1996) (discussing the market distortions created by the compulsory license for cover songs); Elizabeth L. Rosenblatt, *Copyright’s One-Way Racial Appropriation Ratchet*, 53 U.C. DAVIS L. REV. 591, 620 (2019) (describing the appropriation by white artists of the songs of black artists using the compulsory license). *But see* Netanel, *supra* note 87, at 320 (criticizing the “neoclassicists” skepticism of compulsory licenses and fair uses in cases other than extreme market failure).

³⁰⁶ *Skidmore v. Led Zeppelin*, 952 F.3d 1051 (9th Cir. 2020) (en banc).

intentionally appropriated the arpeggio, they didn't do it to free ride on Spirit's reputation. It is not the equivalent of free riding on the goodwill of a mark. Instead, if the composition has some power to attract and retain attention, then Led Zeppelin was well-placed to benefit from it, likely to the detriment of Spirit, who may have found itself muscled out of the market; attention is not flowing directly from Spirit's reputation to Led Zeppelin.

2. Books

As discussed above, derivative rights provide multiple potential avenues for the author or parties that license or purchase rights from the author to make money.³⁰⁷ They also make investing in a work less risky, and encourage large entities to invest, as record labels have historically invested in artists and publishers in authors.³⁰⁸ That protection matters if one wants copyright protection to subsidize authors who can make a living from their expression. Here, there is an interaction effect between distributing free copies of the work online (which violates the reproduction and distribution right) and the creation of new derivative works. If readers of the first book in a series decide to pirate a book instead of purchase it, that decision reduces revenue for the book and signals to publishers that the rest of the series may be a bad bet. The publisher then rationally cancels the series.³⁰⁹ One recent study confirmed the effect for ongoing comic book series, but not for completed series.³¹⁰ Another study

³⁰⁷ Bambauer, *supra* note 36, at 376 (summarizing the argument).

³⁰⁸ Demsetz, *supra* note 35, at 6–9.

³⁰⁹ Adam Rowe, *U.S. Publishers Are Still Losing \$300 Million Annually To eBook Piracy*, FORBES (July 28, 2019, 4:02 PM), <https://www.forbes.com/sites/adamrowe1/2019/07/28/us-publishers-are-still-losing-300-million-annually-to-ebook-piracy> [<https://perma.cc/6J5R-5A38>] (noting, among the harms created by piracy, that “[a]uthors are regularly unable to complete a book series that isn’t turning a profit, and ebook piracy is a big contributing factor to lost income”); Alison Flood, ‘We’re Told to be Grateful We Even Have Readers’: Pirated eBooks Threaten the Future of Book Series, GUARDIAN (Nov. 6, 2017, 9:57 PM), <https://www.theguardian.com/books/2017/nov/06/pirated-ebooks-threaten-future-of-serial-novels-warn-authors-maggie-stiefvater> [<https://perma.cc/9R3B-RGM5>] (reporting that the third book in one author’s trilogy was cancelled after book two came out due to low sales).

³¹⁰ Tatsuo Tanaka, *The Effects of Internet Book Piracy: Cases of Comics* (Keio Univ. IES Discussion Paper Series, DP2019-016, 2019), <https://ies.keio.ac.jp/upload/pdf/en/DP2019-016.pdf> [<https://perma.cc/A9Z9-ZNFV>].

reported that eBooks benefit more from protection against piracy than books in other formats.³¹¹

One could imagine a similar result if new entrants created unlicensed sequels that closely followed on an original series. But that effect would not hold in every case. Indeed, the Chinese market was filled with unlicensed Harry Potter sequels,³¹² but the authorized versions sold well enough in other countries, if not in China, that the fifteen million unauthorized derivatives available in 2007 at the time of the publication of the final authorized Harry Potter novel did not appear to threaten the authorized market.³¹³

3. Movies and Television

High-capital investment genres like movies and television may be difficult to produce without derivative rights, and perhaps vulnerable to shocks in the build up to their release.³¹⁴ Technology allows for high quality bedroom productions,³¹⁵ but the average production costs for films made in the twenty-first century is approximately eighteen million dollars.³¹⁶ Even an independent film is likely to cost more than one

³¹¹ Imke Reimers, *The Effect of Piracy Protection in Book Publishing*, SEMANTIC SCHOLAR (Oct. 6, 2014), <https://www.semanticscholar.org/paper/The-Effect-of-Piracy-Protection-in-Book-Publishing-Reimers/4137f43424ed9d26e23bbb86ccc6764021ea138c> [https://perma.cc/4N54-7MBU].

³¹² Howard W. French, *Lots of Harry Potter Books in China, Not All of Them by the Author*, N.Y. TIMES (July 31, 2007), <https://www.nytimes.com/2007/07/31/world/asia/31iht-china.1.6915542.html> [https://perma.cc/56KN-CTRY].

³¹³ *But see* Tania Su Li Cheng, *The Power of Potter: Copyright Law and its Influence on Sequels and Parodies*, 49 F. FOR MOD. LANGUAGE STUD. 1 (2013).

³¹⁴ Stan J. Liebowitz & Stephen Margolis, *Seventeen Famous Economists Weigh in on Copyright: The Role of Theory, Empirics, and Network Effects*, 18 HARV. J.L. & TECH. 435, 448 (2005).

³¹⁵ Steve Harvey, *Finneas on Producing Billie Eilish's Hit Album in His Bedroom*, PROSOUND (Apr. 10, 2020), <https://prosoundnetwork.com/recording/finneas-on-producing-billie-eilishs-number-one-album-in-his-bedroom> [https://perma.cc/89DX-LS9Y].

³¹⁶ Stephen Follows, *How Much Does the Average Movie Cost to Make?*, STEPHEN FOLLOWS: FILM DATA & EDUC. (July 8, 2019), <https://stephenfollows.com/how-much-does-the-average-movie-cost-to-make> [https://perma.cc/QAM5-NSTW].

million dollars to produce.³¹⁷ Beyoncé can drop a surprise album,³¹⁸ but a surprise movie seems largely beyond consumer and producer imagination.³¹⁹ The fixed costs of production, of course, may discourage infringing entry with a full-scale derivative production. Infringers will more likely pirate copies or provide unlicensed access.

Joseph Fishman explains that copyright protection can provide what we might label an attention-assisting constraint, using movie production as an example.³²⁰ As Fishman recounts the tale, the restraint of copyright protection directly relates to the *Star Wars* universe of films. George Lucas desired to make a movie derived from the *Flash Gordon* comic strip property, but he couldn't secure a license.³²¹ In the absence of a derivative right, Lucas might have filmed his *Flash Gordon* retread. Instead, he started a film franchise that captured the imagination of multiple generations and was recently valued by *Fortune* magazine at nearly forty-two billion dollars.³²² The derivative right had a disciplining effect on Lucas's expression.³²³ A similar effect generally will increase consumer surplus compared to a low- or no-protection regime.

³¹⁷ Joshua A. Gold, *Equity Crowdfunding of Film—Now Playing at A Computer Near You*, 95 TEX. L. REV. 1367, 1386 (2017) (“[A]t the 2015 Sundance Film Festival, the average budget for an indie dramatic feature was \$1.7 million and \$400,000 for documentary features.”).

³¹⁸ Phillip Henry, *Five Years Later, Beyoncé’s Surprise Album is Still One of the Most Important Moments in Music*, TEEN VOGUE (Dec. 13, 2018), <https://teenvogue.com/story/beyonce-surprise-album-five-year-anniversary> [<https://perma.cc/9CMC-26XJ>].

³¹⁹ *But see* Joanna Robinson, *Netflix Stuns with Surprise Cloverfield Paradox Super Bowl Release*, VANITY FAIR (Feb. 5, 2018), <https://www.vanityfair.com/hollywood/2018/02/where-can-i-watch-cloverfield-paradox-netflix-super-bowl-release-same-night> [<https://perma.cc/TC7T-W7AV>] (describing how Netflix released the film *The Cloverfield Paradox* on Super Bowl Sunday without advanced warning, the same night its trailer was released).

³²⁰ *See supra* notes 273–75 and accompanying text.

³²¹ Fishman, *supra* note 5, at 1336 (citing J.W. RINZLER, *THE MAKING OF STAR WARS 4* (2007)).

³²² Jonathan Chew, *Star Wars Franchise Worth More than Harry Potter and James Bond, Combined*, FORTUNE (Dec. 24, 2015, 8:00 AM), <http://fortune.com/2015/12/24/star-wars-value-worth> [<https://perma.cc/9SYU-YT9M>].

³²³ *But see* Burk, “*Creating Around*”, *supra* note 210, at 120 (arguing that the disciplining effect will dissipate with subsequent entry because in a thick market, some owner of preexisting expression within the genre will grant a license). *See also* Sunder, *supra* note 63, at 250 (“*Star Wars* would not be *Star Wars* without the Copyright Act of 1976, which expanded considerably from focusing on exact or substantially similar reproductions in the same medium to ownership of derivatives in a wide range of media, even those far flung from the original work.”).

4. Academic Research

Cases like *Princeton University Press v. Michigan Document Services*,³²⁴ *American Geophysical Union v. Texaco Inc.*,³²⁵ and *Cambridge University Press v. Patton*,³²⁶ recognize copyright protection for academic research. The aforementioned cases all deal with photocopying of academic works. Unlicensed photocopying is a reproduction that can cut into the profit margins of publishers who distribute academic literature in circumstances where but for the copying, a user would otherwise purchase the work or license the right to copy it. In all three cases, the defendants argued fair use.

In *American Geophysical Union*, scientists working for a corporation made multiple archival copies of research articles on chemistry. The Second Circuit affirmed a district court holding, concluding that the copying was for the same basic purpose as the authorized dissemination of the articles, and that the corporation would likely have purchased more copies of the work, but for the unauthorized copying, cutting into the market for the articles. In *Michigan Document Services* and *Patton*, the alleged infringers, a copyshop and a university respectively, were creating photocopied or digital coursepacks for students, the functional equivalent of textbooks. The Sixth Circuit in *Michigan Document Services* held that the copyshop's creation of course-packs without paying an available license was not fair use. The court concluded the shop gained competitive advantage from refusing to pay the license paid by other shops, and could not cloak its use under the ostensibly noncommercial and noninfringing behavior of students who used the course packs.³²⁷ The court also concluded the shop's practice, if widespread, would cause publishers' "revenue stream [to] shrivel."³²⁸

The Eleventh Circuit in *Patton* affirmed in part and reversed in part a voluminous district court case, holding that as to an academic publisher who licenses rights to create coursepacks, the market harm factor of the

³²⁴ *Princeton Univ. Press v. Mich. Document Servs.*, 99 F.3d 1381, 1386–87 (6th Cir. 1996).

³²⁵ *Am. Geophysical Union v. Texaco Inc.*, 60 F.3d 913 (2d Cir. 1994).

³²⁶ *Cambridge Univ. Press v. Patton*, 769 F.3d 1232 (11th Cir. 2014).

³²⁷ *Mich. Document Servs.*, 99 F.3d at 1385–86.

³²⁸ *Id.* at 1387.

traditional test weighs against fair use.³²⁹ But the court also held that the market harm factor will generally weigh against a publisher who refuses to offer a license.³³⁰ Copyright protection thus incentivizes the creation of scholarship with licenses available to promote broad redistribution, and uses fair use as a release valve for pressures built up by recalcitrant publishers unwilling to extend licenses.

One might reasonably be skeptical of something like a derivative work for scholarship. Generally, most of the innovation is in the ideas disclosed. The nature of the work means that protectable academic expression is often inexorably bound up with non-copyrightable ideas in a manner that is difficult to separate. The nature of the endeavor suggests that the rights in this Article would not prevent the subsequent creation of another article considering the proper scope of the Copyright Act in an attention economy. Most likely, any similarities will be similarities of idea, not expression. Those similarities are not subject to copyright protection.³³¹ What does not fall outside the scope of copyright protection might well be fair uses.³³² In particular, one might consider academic research to be basic educational infrastructure,³³³ and subject to fair use reappropriation for that very reason.³³⁴

Nonetheless, there is a strong norm in favor of crediting the author of an academic article when building on their research, and a norm against copying their research without attribution. Failing to do so constitutes plagiarism, a behavior that draws a strong negative response from the copied author and from the academic community. Brian Frye has argued that the plagiarism norm is illegitimate because it allows the academic author to “claim property rights in the public domain.”³³⁵

³²⁹ *Patton*, 769 F.3d at 1278.

³³⁰ *Id.* (“If the market for digital excerpts were in fact de minimis or zero, then neither Defendants’ particular use nor a widespread use of similar kind would be likely to cause significant market harm.”).

³³¹ See *Feist Publ’ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 344–45 (1991).

³³² The preamble to the fair use provision of the Copyright Act provides examples of fair use including “teaching[,] . . . scholarship, or research.” 17 U.S.C. § 107.

³³³ See, e.g., Brett M. Frischmann, *An Economic Theory of Infrastructure and Commons Management*, 89 MINN. L. REV. 917, 948–49 (2005).

³³⁴ See also Jeanne C. Fromer, *An Information Theory of Copyright Law*, 61 EMORY L.J. 71, 84, 90 (2014) (arguing on information theory grounds that “copyright law ought to encourage helpful forms of redundancy,” those that reduce “noise in a message transmission”).

³³⁵ Brian L. Frye, *Plagiarize This Paper*, 60 IDEA 294, 297 (2020).

But the anti-plagiarism norm makes more sense from the perspective of attention scarcity. There are multiple markets for academic research. Among the consumers of the research are the authors who make new discoveries standing on the shoulders of giants and the general public that benefits from those discoveries. Nonetheless, as Ramsi Woodcock astutely observes, the employers of scholars subsidize that research, and the anti-plagiarism norm may help those institutions make better hiring decisions by providing clearer signals about the provenance of the most valuable lines of research.³³⁶ An anti-plagiarism norm provides utility similar to trademark law's prevention of passing off.³³⁷ The goal is to prevent the plagiarist from passing the work of another off as their own and thus subverting the interest of members of an academic community and their potential employers who desire to make accurate assessments about the quality of the plagiarist's scholarship relative to the scholarship of others.³³⁸

E. *Caveats*

In light of the benefits of some modest level of product differentiation, maintaining copyright protection might at least keep costs of attention scarcity from getting worse. That's not to say this evidence urges broadening or lengthening copyright protection. Compared to the status quo, lengthening the grant without strengthening the right would slightly increase the incentive,³³⁹ but without increasing the cost of inventing around any given work. Thus, extending the duration of protection would likely increase entry without improving the creativity or distinctiveness of the median work. However, extending

³³⁶ Ramsi Woodcock, *The Capital Snub* (Jan. 14, 2020), <https://zephyranth.pw/2020/01/14/the-capital-snub> [<https://perma.cc/4ZXL-XXGE>] (“[P]lagiarism subverts the academic incentive system in the same way that theft subverts the market’s incentive system.”).

³³⁷ My thanks to Mark Lemley for pointing out the connection between plagiarism and reverse passing off. See also Jake Linford, *Placebo Marks*, 47 PEPP. L. REV. 45, 109–12 (2019) (discussing passing off).

³³⁸ See also Woodcock, *supra* note 336 (“The anti-plagiarism norm is . . . another approach to achieving proper routing of incentive signals, one that is optimized for the production of ideas in which the academic community engages.”).

³³⁹ *Eldred v. Ashcroft*, 537 U.S. 186, 242 (2003) (Breyer, J., dissenting) (summarizing economic evidence that adding twenty years of copyright protection to the life-plus-fifty term for authors was unlikely to incentivize additional creation).

duration would increase the total number of works that the entrant must create around, assuming a condition when some works would otherwise have already fallen out of protection.

The case for increasing the relative strength of the work, especially combined with shorter duration is somewhat stronger. In that case, we would see fewer works under protection at any given time, but with a slightly broader scope of protection. New entrants would seek to create more distinguishable works, but each individual work would have a shorter window of protection and thus impose creation costs for a shorter period of time.

Two other concerns require a more detailed response. First, the attention cost account might not hold for “heterodox” derivative works.³⁴⁰ Second, perhaps courts should exclusively address attention scarcity through the trademark regime, rather than the copyright regime.

1. The Value of Heterodox Derivatives

Fair use inquiries focus primarily on the transformative nature of the defendant’s use.³⁴¹ The fair use right, which allows entry that is transformative and does not threaten the market for the original, should be sufficiently broad to account for many unconventional entrants. The recent shift in fair use analysis to favor transformative use as the sine qua non of fair use suggests some necessary and salutary differentiation between the appropriated work and the final product.³⁴² To be

³⁴⁰ Bracha & Syed, *supra* note 48, at 269–70 (“Heterodox works challenge broadly held views, beliefs or tastes, and include content that is outside the mainstream, is avant-garde, or is aimed at preferences and tastes that are relatively marginal.”). Of course, consumers might prefer a variation on a familiar theme rather than a new work that challenges the reader or demands attention. A regime that allows transformative fair use without a license but requires a license for the pedantic derivative increases the costs on the latter, but not the former. Note, as well, that interacting with a work also requires attention, and consumption costs might differ from search costs. Search costs might be lower for a truly unique work because it stands out, while consumption costs could be dramatically higher.

³⁴¹ Jiarui Liu, *An Empirical Study of Transformative Use in Copyright Law*, 22 STAN. TECH. L. REV. 163 (2019) (reporting a study showing transformative use is dominating other factors in fair use analysis).

³⁴² *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 579 (1994); Clark D. Asay, Arielle Sloan & Dean Sobczak, *Is Transformative Use Eating the World?*, 61 B.C. L. REV. 905 (2020) (arguing that courts should rely even more on transformative use to distinguish fair from unfair uses); Leval, *supra* note 22, at 1111–12.

transformative, a work must “alter . . . the [original] with new expression, meaning, or message,”³⁴³ or serve a “different purpose.”³⁴⁴ Transformative fair uses are less likely to be redundant with the works from which they are derived.³⁴⁵ To the extent that the perspective is truly different from the perspective of the source work, the derivative is likely to be transformative and likely not to divert demand from the original or from authorized derivatives in a manner that imposes excessively on consumers’ attention resources.³⁴⁶

But this attention economy defense of the current boundaries of copyright protection may discount the value of heterodox derivatives. When the copyright owner has an exclusive right to develop derivative markets, entrants with a heterodox or unconventional take on the original may face higher access costs, and those access costs may outweigh what some have described as the low-incentive benefit of the derivative right.³⁴⁷ Neil Netanel posits that works in this vein might be both “highly derivative” and thus infringing, but nonetheless “powerfully subversive.”³⁴⁸ Tom Forsythe’s “Food Chain Barbie,” a work at issue in a well-known copyright fair use case,³⁴⁹ fits both criteria. The artist photographed Barbie dolls imperiled and attacked by kitchen appliances to critique the “impossible beauty myth” that the dolls embody.³⁵⁰ The post hoc balancing required by the Supreme Court’s fair use test results

³⁴³ *Campbell*, 510 U.S. at 579.

³⁴⁴ *Kelly v. Arriba Soft Corp.*, 336 F.3d 811, 819 (9th Cir. 2003).

³⁴⁵ See Abramowicz, *Uneasy Case*, *supra* note 2, at 1673 (“Transformative parodies are less likely to be redundant than nontransformative parodies, and copyright law should thus be less concerned about rent dissipation from parodic derivative works.”).

³⁴⁶ Asay, Sloan & Sobczak, *supra* note 342 (arguing in part that the transformative use concept must remain an adaptable construct in order to ensure that fair use continues to play its role in balancing the copyright system).

³⁴⁷ Bracha & Syed, *supra* note 48, at 268–69, 271–73; cf. Tushnet, *Free*, *supra* note 275, at 134 (citing Carys J. Craig, *Reconstructing the Author-Self: Some Feminist Lessons for Copyright Law*, 15 AM. U. J. GENDER SOC. POL’Y & L. 207 (2007); K.J. Greene, *Intellectual Property at the Intersection of Race and Gender: Lady Sings the Blues*, 16 AM. U. J. GENDER SOC. POL’Y & L. 365 (2008)) (“[S]cholars focusing on race and gender have elaborated who is benefiting and who isn’t, and suggested reasons that aren’t founded in optimizing creativity.”).

³⁴⁸ NEIL WEINSTOCK NETANEL, *COPYRIGHT’S PARADOX* 159 (2008).

³⁴⁹ *Mattel Inc. v. Walking Mountain Prods.*, 353 F.3d 792 (9th Cir. 2003).

³⁵⁰ Bracha & Syed, *supra* note 48, at 271 n.133 (quoting *Food Chain Barbie*, R Prints, Edition of 450, Artsurdist, <http://www.tomforsythe.com/food-chain-barbie---r-prints.html>).

in less ex ante certainty than might otherwise be desirable.³⁵¹ Forsythe prevailed in his case, but the results were far from certain, and the process was time consuming and expensive.³⁵²

In addition, Laura Bradford has argued that cognitive research suggests broader fair use exceptions might be sensible in some cases of close substitutes. This may follow both because consumers are otherwise likely to resist heterodox messages, and because the existence of one “authorized” line of derivative expression meets consumer needs, making it more likely that consumer attention will not be diverted by multiple close entrants.³⁵³ Thus, perhaps some works like fan fiction might be held to be noninfringing fair uses.³⁵⁴

But as Bradford notes, there is a level at which frequent repetition is likely to distort audience perception. Thus, “frequent exposure may override the efficacy of other informational cues such as source and so confuse consumers as to authorized and illicit interpretations.”³⁵⁵ Even advocates for low protection recognize that “unrestricted production of fan fiction is likely to create high amounts of wasteful duplicative activity.”³⁵⁶ In this attention economy, consumers likely receive some value from the assurance that derivative expression adds something to the discourse, and care should be taken before assuming that the current contours of the derivative right and the fair use exception miss the mark.

³⁵¹ *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 577 (1994) (determining whether an allegedly infringing use is in fact fair use is a task “not to be simplified with bright-line rules” for it “calls for case-by-case analysis”); David Fagundes, *Crystals in the Public Domain*, 50 B.C. L. REV. 139, 189 (2009) (proposing that fair use could be made more rule-like, providing more certainty ex ante and thus “enable actors to rely more on private bargaining rather than ex post court determination of rights”). Compare also LAWRENCE LESSIG, *FREE CULTURE: HOW BIG MEDIA USES TECHNOLOGY AND THE LAW TO LOCK DOWN CULTURE AND CONTROL CREATIVITY* 187 (2004) (fair use is little better than a license to litigate) with R. Polk Wagner, *The Perfect Storm: Intellectual Property and Public Values*, 74 FORDHAM L. REV. 423, 428 (2005) (arguing that the rights of copyright owners are difficult to vindicate).

³⁵² Bracha & Syed, *supra* note 48, at 271 n.133 (describing Forsythe’s “five-year legal battle”).

³⁵³ Bradford, *supra* note 177, at 761–64.

³⁵⁴ Christina Z. Ranon, Note, *Honor Among Thieves: Copyright Infringement in Internet Fandom*, 8 VAND. J. ENT. & TECH. L. 421, 435 (2006) (“Fan fiction qualifies as an unauthorized derivative work . . .”). Compare Rebecca Tushnet, *Legal Fictions: Copyright, Fan Fiction, and a New Common Law*, 17 LOY. L.A. ENT. L.J. 651, 681 (1997) (arguing that fan fiction is generally non-infringing fair use) with Meredith McCardle, Note, *Fan Fiction, Fandom, and Fanfare: What’s All the Fuss?*, 9 B.U. J. SCI. & TECH. L. 433, 445 (2003) (“[W]riting fan fiction infringes on copyright protections.”).

³⁵⁵ Bradford, *supra* note 177, at 765.

³⁵⁶ Bracha & Syed, *supra* note 48, at 276.

This Article advances an argument justifying the derivative right from an attention cost perspective.³⁵⁷ Perhaps the fair use inquiry should also expressly consider attention scarcity. The text of the fair use provision does not expressly request that courts consider the needs of the public at large, but questions of public good bubble up repeatedly,³⁵⁸ typically grounded in the constitutional justification for copyright protection.³⁵⁹ That public good inquiry could more explicitly account for attention costs in its calculation.

In particular, the transformative use inquiry embedded in the first statutory fair use factor could more explicitly account for attention costs imposed or mitigated by ostensible fair use. One can read some recent fair use decisions through that lens. In cases like *Perfect 10 v. Amazon*,³⁶⁰ *Kelly v. Arriba Soft*,³⁶¹ and *Authors Guild v. Google*,³⁶² the promised transformative utility of search functions dominates the infringement claims of copyright owners. Frank Pasquale similarly argues that fair use is “a natural way of ‘cleaning up’ the mess of expression encouraged by copyright law.”³⁶³ Pasquale focuses on privileging categorizers like search engines to do their work, and perhaps with regard to those categorizers who process metadata, there is good cause for a strong safe harbor.³⁶⁴

³⁵⁷ See *supra* Sections III.B–C.

³⁵⁸ See, e.g., *Sony Corp. Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 454 (1984) (expressly considering “the public interest in making television broadcasting more available” in its analysis of whether time shifting by consumers was fair use); see also *id.* at 478 (Blackmun, J., dissenting) (urging an interpretation of fair use that required productive use by the defendant and defining the goal of fair use as “permit[ting] the second author to make limited use of the first author’s work for the public good”).

³⁵⁹ *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 579 (Fair uses generally further “the goal of copyright, [i.e.] to promote science and the arts.”).

³⁶⁰ *Perfect 10, Inc. v. Amazon.com*, 508 F.3d 1146, 1165 (9th Cir. 2007) (“[A] search engine may be more transformative than a parody because a search engine provides an entirely new use for the original work, while a parody typically has the same entertainment purpose as the original work.”).

³⁶¹ *Kelly v. Arriba Soft Corp.*, 336 F.3d 811, 819 (9th Cir. 2003) (holding that Arriba’s use of thumbnail images was a fair use primarily based on the transformative nature of a search engine and its benefit to the public).

³⁶² *Authors Guild v. Google, Inc.*, 804 F.3d 202, 216–17 (2d Cir. 2015) (“Google’s making of a digital copy of Plaintiffs’ books for the purpose of enabling a search for identification of books containing a term of interest to the searcher involves a highly transformative purpose, in the sense intended by *Campbell*.”).

³⁶³ Pasquale, *supra* note 77, at 166.

³⁶⁴ Compare Matthew Sag, *Copyright and Copy-Reliant Technology*, 103 NW. U. L. REV. 1607, 1645 (2009) (arguing that fair use should protect technology that copies expression and that “acts of copying that do not communicate the author’s original expression to the public do not typically

There are nevertheless reasons to be skeptical of the work of at least some categorizers, and perhaps a majority of attention opportunists.³⁶⁵ Courts may have been overly optimistic about the unmitigated benefits of search. Thus, for reasons similar to those discussed above,³⁶⁶ preserving fair use for distinctly different new works allows copyright law to retain its attention-channeling benefits. On the other hand, broadening fair use in a manner that relieves the defendant's burden of establishing transformative use would lower the cost of creating around the work, leading, for the reasons articulated above, to a set of new works more likely duplicative of existing expression and thus more likely to weigh on scarce attention resources.

2. Should Trademark Law Have Exclusive Jurisdiction Over Attention Costs?

One might wonder whether trademark law properly controls all disputes grounded in diversion of consumer attention. Many scholars advocate maintaining sharp lines between intellectual property regimes.³⁶⁷ Trademark law is historically focused on consumer confusion; the end result of actionable trademark infringement is unfair diversion of consumer attention or custom.³⁶⁸ In addition, claims of trademark infringement and unfair competition are often brought together,³⁶⁹ and

constitute copyright infringement") with Linford, *Second Look*, *supra* note 29, at 624–25 (arguing that fair use properly requires new technologies and internet intermediaries to account for risk of loss that unlicensed use imposes on copyright owners, including the risk of unintended exposure of the work to piracy).

³⁶⁵ See *supra* Sections II.B–C.

³⁶⁶ See *supra* Section III.B.

³⁶⁷ See, e.g., Mark P. McKenna, *Dastar's Next Stand*, 19 J. INTEL. PROP. L. 357 (2012); Viva R. Moffat, *Mutant Copyrights and Backdoor Patents: The Problem of Overlapping Intellectual Property Protection*, 19 BERKELEY TECH. L.J. 1473, 1512 (2004); Viva R. Moffat, *The Copyright/Patent Boundary*, 48 U. RICH. L. REV. 611, 612 (2014) ("Delineating the boundary between copyright and patent law is thus fundamentally important to the federal intellectual property regime and to the goals of the patent system in particular.").

³⁶⁸ *But see* Rebecca Tushnet, *Running the Gamut from A to B: Federal Trademark and False Advertising Law*, 159 U. PA. L. REV. 1305, 1364 (2011) [hereinafter Tushnet, *Running the Gamut*] ("The United States, however, has generally taken the position that when a trademark's scope reaches beyond deception to attention, consumers lose valuable and relevant information.").

³⁶⁹ See, e.g., *Kelly Servs., Inc. v. Creative Harbor, LLC*, 124 F. Supp. 3d 768, 773–74 (E.D. Mich. 2015) (Plaintiff's complaint alleged defendant's use of the mark at issue "constitutes trademark infringement and unfair competition under federal and state law.").

trademark infringement might be properly described as a subset of unfair competition.³⁷⁰ Thus, Goold's descriptive account that copyright infringement by competitors sounds in unfair competition might raise concerns from scholars who prescribe rigid boundaries between trademark and copyright regimes.³⁷¹

Nevertheless, trademark has no exclusive jurisdiction over actions grounded in attention diversion. Indeed, trademark law's role in preventing diversion of attention is somewhat disputed. For instance, attention diversion is clearly at issue in cases of initial interest confusion,³⁷² but many scholars argue that protection against initial interest confusion should be reduced or abandoned entirely. Courts sometimes recognize that the confusing use of a mark might draw consumers in under false pretenses, even if those consumers sort out their confusion before making a purchase. For example, in *Grottrian v. Steinway and Sons*, the court held the defendant's use of plaintiff's mark in advertisements to entice consumers to enter defendant's piano store was likely to cause confusion and thus infringing, even though defendant did not use plaintiff's mark in the store to misrepresent the origin of its pianos.³⁷³ Similarly, courts have held that the use of plaintiff's mark creates initial interest confusion even in cases in which the cost of the goods or services at issue should put consumers on notice of the harm.³⁷⁴ Courts sometimes conclude, however, that initial interest confusion is easy to remedy, especially online. Critics of initial interest confusion note

³⁷⁰ 3 CALLMANN, UNFAIR COMPETITION, TRADEMARKS AND MONOPOLIES, § 85(1)(b) (3d ed. 1969) ("The law of trademarks is one corner of the law of unfair competition").

³⁷¹ See *supra* notes 235–36 and accompanying text; see also Laura A. Heymann, *The Trademark/Copyright Divide*, 60 SMU L. REV. 55, 58 (2007) ("By allowing copyright to reach beyond its core purpose—to offer incentives for creation that resolve the free-rider/nonrivalrous goods problem—courts grant first-generation creators the . . . power to thwart second-generation creators.").

³⁷² *Brookfield Commc'ns, Inc. v. W. Coast Entm't. Corp.*, 174 F.3d 1036, 1063 (9th Cir. 1999) (citing *Dr. Seuss Enters., L.P. v. Penguin Books USA, Inc.*, 109 F.3d 1394, 1405 (9th Cir. 1997); *Mobil Oil Corp. v. Pegasus Petroleum Corp.*, 818 F.2d 254, 257–58 (2d Cir. 1987)) ("[D]iversion of consumers' initial interest is a form of confusion against which the Lanham Act protects.").

³⁷³ *Grottrian, Helfferich, Schulz, Th. Steinweg Nachf. v. Steinway & Sons*, 54 F.R.D. 280 (S.D.N.Y. 1971).

³⁷⁴ *Bd. of Regents of the Univ. of Houston Sys. ex rel. Univ. Houston Sys. v. Houston Coll. of Law, Inc.*, 214 F. Supp. 3d 573, 597–98 (S.D. Tex. 2016).

that in many cases, it is either easy to remedy,³⁷⁵ or frequently unrelated to any consumer or competitive harm.³⁷⁶

In addition, as described above,³⁷⁷ copyright case law has an account about diversion of attention that differs from the trademark account.³⁷⁸ Trademark law aims primarily to ensure that consumers have the information necessary to purchase the desired product from the same source. Trademark protection thus secures the right to use a mark as a designator of source to prevent consumer confusion and deception, and to encourage consistency and clarity from mark owners.³⁷⁹ Trademark law encourages competition between competitors within a market. Copyright law instead allows the copyright owner to capture the benefit of the attention attracted by the creative expression of the work. Copyright's exclusive rights (and its exclusions from protection) ensure protection of creative expression within a genre.³⁸⁰

In fact, it might actually be preferable to channel some attention sorting through copyright law. Blair and Cotter suggest that trademark and derivative work rights might have overlapping roles that the prospect

³⁷⁵ Robert G. Bone, *Hunting Goodwill: A History of the Concept of Goodwill in Trademark Law*, 86 B.U. L. REV. 547, 613 (2006) (suggesting that initial interest confusion imposes more costs on consumers in the bricks-and-mortar context but has a weaker impact in the online context where switching is easy).

³⁷⁶ Dogan & Lemley, *supra* note 207, at 780–81 (“Some courts have used the initial interest confusion doctrine to justify claims against virtually any use that temporarily diverts customers to a website not authorized by the trademark holder, regardless of whether the diversion resulted from confusion or harmed consumer interests in any way.”); Jennifer E. Rothman, *Initial Interest Confusion: Standing at the Crossroads of Trademark Law*, 27 CARDOZO L. REV. 105, 130–39 (2005) (arguing that “potential purchasers, legitimate businesses, and the public at large are [often] worse off because of the application of initial interest confusion”); Tushnet, *Running the Gamut*, *supra* note 368, at 1354–55 (“The doctrine of initial interest confusion . . . is another example of expansion of rights unconnected to identifiable harms.”).

³⁷⁷ See *supra* Section III.A.

³⁷⁸ Recognizing the distinctions between the trademark and copyright accounts of attention diversion is important in part because the Supreme Court held in *Dastar Corp. v. Twentieth Century Fox Film Corp.*, 539 U.S. 23 (2003), that one cannot use trademark law to prevent the unauthorized use of a work for which copyright protection has expired.

³⁷⁹ Robert G. Bone, *Enforcement Costs and Trademark Puzzles*, 90 VA. L. REV. 2099, 2116 (2004) (“The three main policy reasons for protecting marks—reducing consumer search costs, maintaining and improving product quality, and remedying intentional deception—all relate to the quality of the product information available to consumers.”).

³⁸⁰ Burk, “*Creating Around*”, *supra* note 210, at 121 (describing how copyright protection for derivative works and exceptions like *scènes à faire* and the merger doctrine foster competition within genre).

theory can explain.³⁸¹ As John Duffy argues, the virtue of prospect rights is channeling competition, in part by encouraging an earlier end to patent protection and thus to the prospect right.³⁸² Like a patent right, the derivative right under § 106(2) eventually expires.³⁸³ But unlike patent rights and copyright protections, trademark protections need not expire.³⁸⁴ If we desire an end to attention curation for a given work, copyright may be the better mechanism. The calculus might cut the other way if we conclude copyright protection is so much stronger than trademark rights that the social cost of the current copyright grant seventy years after the author's death (or ninety-five years in the case of a corporate work) is greater than an effectively perpetual trademark.

CONCLUSION

There is a cost to costless creation—superabundant information imposes search costs on consumers trying to find the highest value use for their limited attention bandwidth. Limited or non-existent copyright protection would likely exacerbate the information glut—we may see lower entry overall, but a higher relative percentage of that entry may impose attention costs on consumers because new expression will likely be wastefully redundant of existing expression.³⁸⁵ Moreover, increasing search costs offset price-reducing effects we might expect from a greater number of market entrants.³⁸⁶

On the other hand, the current level of protection—reproduction and derivative rights as cabined by fair use—imposes a beneficial cost on

³⁸¹ Roger D. Blair & Thomas F. Cotter, *An Economic Analysis of Damages Rules in Intellectual Property Law*, 39 WM. & MARY L. REV. 1585, 1607 (1998).

³⁸² Duffy, *supra* note 43, at 458–59.

³⁸³ 17 U.S.C. § 302 (general copyright term of life of the author plus seventy years); 35 U.S.C. § 154 (twenty-year utility patent term).

³⁸⁴ A trademark remains valid so long as it is used as a source signifier, U.S. DEP'T OF COMMERCE & PATENT & TRADEMARK OFFICE, BASIC FACTS ABOUT REGISTERING A TRADEMARK 1 (1995) (“Unlike copyrights or patents, trademark rights can last indefinitely if the owner continues to use the mark to identify its goods or services.”), and a trademark registration can be renewed every ten years upon payment of a fee. 15 U.S.C. § 1059.

³⁸⁵ Narrowing the derivative work right or expanding the range of potential fair uses would have the same result, using different mechanisms. Compare Sections I.B, III.B, and III.E.1

³⁸⁶ Gerard R. Butters, *Equilibrium Distribution of Sales and Advertising Prices*, 44 REV. ECON. STUD. 465 (1977); Hefti & Heinke, *supra* note 95, at 65.

new entrants. Modest copyright protection not only continues to incentivize creativity, but also may constrain the type of entry we see, encouraging new works that are less redundant and more original, and thus impose lower costs on consumer attention. In light of this potential for copyright protection to alleviate some of the externalities imposed by information glut, calls to reduce copyright protection, and especially the derivative right, based primarily on reductions in the cost of generating and distributing information, may be somewhat premature. Legislators and judges should exercise caution before sacrificing the attention-assisting aspects of IP rights based solely on the suggestion that we may require a lower level of ex post incentives to trigger ex ante production of expressive content, especially in this modern information economy.