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FORESEEABILITY AND COPYRIGHT INCENTIVES

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Copyright law's principal justification has for long been the theory of creator incentives. Creators are presumed to be rational utility-maximizers and therefore induced to create by the mere prospect of controlling a future market for their yet-to-be-created works. Yet, current copyright doctrine does surprisingly little to give effect to this theory. None of its doctrines enable courts to circumscribe a creator's entitlement by reference to the idea of incentives and the limitations inherent therein. As a consequence, copyright's grant of exclusivity is presumed to extend to all markets and uses for a work, whether or not they were capable of forming any part of a creator's incentive. Limitless incentives thus translate into unbounded entitlements.

Through its allocation of costs and benefits, the common law too relies on providing actors with incentives to behave in certain ways. Unlike copyright law however, the common law recognizes the existence of a clear outer limit to its incentive structure and attempts to give effect to this limit through the concept of 'foreseeability'. Premised on the idea that individuals do not cognitively process consequences that are temporally or causally far removed from their actions, foreseeability requires courts to eliminate from the liability calculus certain low-probability occurrences when they are unlikely to have influenced an individual's decision at the time of action. Foreseeability thus represents a cognition-based doctrinal limit to the behavioral modification that the common law attempts to induce.

This Article argues that if copyright law is to remain true to its theory of incentives, it needs to pay closer attention to the way in which incentives actually influence creative decision-making and internalize the idea that creators, like actors elsewhere, are subject to cognitive imperfections that in turn limit the effectiveness of incentives. To this end, it proposes a test of 'foreseeable copying' to limit copyright's grant of exclusivity to situations where a copier's use was reasonably foreseeable to the creator at the time of creation —the point when the incentive is meant to operate. Adopting a test of foreseeability is thus likely to better align copyright law with its underlying purpose and provide courts with a mechanism by which to give effect to copyright's theory of incentives in individual cases — thereby according it more than just rhetorical significance.

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I. INTRODUCTION

As an instrumentally driven entitlement, copyright has its limits. If, as most agree, copyright law's primary purpose lies in providing individuals with an incentive to generate creative expression, its grant of exclusivity must be limited by that purpose.[1] Yet, rarely ever do courts look to copyright's incentive structure in delineating its scope. They routinely assume that its property-like nature automatically entitles its holder to internalize *all* possible benefits associated with the work —whether or not the creator was responsible for them beyond just creating the work. This issue becomes most pressing in cases involving markets for new uses —that either employ the work in the context of a new technology or creatively employ the work for an altogether new purpose.[2]

An overwhelmingly large number of copyright cases, both historically and in the recent past, have involved markets for new uses —most prominently, uses involving new technologies.[3] The printing press, photocopiers, cable retransmission, audio and video

[1] *See* U.S. CONST. art. I, § 8, cl. 8 ("To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."); Neil Weinstock Netanel, *Copyright and a Democratic Civil Society*, 106 YALE L.J. 283, 285 (1996) ("To encourage authors to create and disseminate original expression, it accords them a bundle of proprietary rights in their works.").

[2] For a discussion of new uses in the context of new technologies see Jane C. Ginsburg, *Copyright and Control over New Technologies of Dissemination*, 101 COLUM. L. REV. 1613 (2001).

[3] *See, e.g.*, MARK ROSE, AUTHORS AND OWNERS: THE INVENTION OF COPYRIGHT (1995) (discussing the emergence of copyright in the era of the printing press); BENJAMIN KAPLAN, AN UNHURRIED VIEW OF COPYRIGHT 101-25 (1967) (discussing the historical evolution of copyright in light of different technologies). For prominent cases that faced the question of markets for new uses see White-Smith Publishing Co. v. Apollo Co., 209 U.S. 1 (1908) (dealing with the market for piano-rolls); Fortnightly Corp. v. United Artists Television, Inc., 392 U.S. 390 (1968) (dealing with cable retransmissions); Sony Corp. of America v. Universal City Studios, Inc.,

recorders, digital conversion and file-sharing, to name a few, each presented copyright law with a somewhat identical question: does a copyright owner's exclusive rights in a work extend to its use with a new technology that wasn't in existence when the work was created? A somewhat similar issue often arises in relation to derivative works as well, where an existent work is modified to create an altogether new one.[4] On most occasions, courts answer this in the affirmative, effectively allowing copyright-holders to control the development and direction of the new use and thereby the market for it. Occasionally though, they have refused to do so, preferring to draw a limit to copyright's exclusivity and recognizing that a creator's entitlement doesn't extend to the new use.[5] Yet in doing so, they have struggled to articulate a coherent forward-looking principle on which to justify the refusal.[6]

Of the various theories commonly advanced to justify copyright law, the utilitarian incentive-based one continues to dominate —among scholars, judges and policy-makers.[7] In this view, copyright exists primarily (if not entirely) to provide creators with an incentive to produce creative expression through the promise of limited exclusionary control over their creative work. Creators are presumed to be rational utility-maximizers and therefore capable of being induced to create by the prospect of controlling a future market for their yet-to-be-created works. For all its reliance on the idea of creator incentives though, copyright law does very little to instantiate the idea of incentives into its entitlement-delineation process. None of copyright's current doctrinal devices enable courts to circumscribe a creator's entitlement by reference to the incentive structure that the institution is premised on. As a direct consequence, creators (and their assignees) are often thought to be 'rightfully entitled' to any revenue stream associated with their creation, whether or not it owes its existence solely to the creator and regardless of it having been developed well after the creation of the work.

As should be obvious, the utilitarian justification for copyright is premised on the standard assumptions of rational choice theory. As in other contexts, individuals are deemed perfectly rational, their preferences identifiable and transitive, and they are believed to readily respond to utility-enhancing incentives.[8] For quite some time now however, the field of behavioral economics has systematically questioned several of these assumptions, and has somewhat more recently begun to provide legal scholars and policy-makers with new ways in which to understand and reformulate the standard

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464 U.S. 417 (1984) (dealing with the video recorder); Ty, Inc. v. Publications Int'l Ltd., 292 F.3d 512 (7th Cir. 2002) (dealing with the photographic cataloging of plush toys); UMG Recordings, Inc. v. MP3.Com, Inc., 92 F.Supp.2d 349 (S.D.N.Y. 2000) (dealing with the market for digital music); Kelly v. Arriba Soft Corp., 336 F.3d 811 (9th Cir. 2003) (dealing with the market for thumbnails of copyrighted photographs). Perhaps the best known cases in the recent past include those pending against Google. *See* McGraw-Hill Co. v. Google, Inc., No. 05 CV 8881 (S.D.N.Y., filed Oct. 19, 2005); The Authors' Guild v. Google, Inc., No. 05 CV 8136 (S.D.N.Y., filed Sept. 20, 2005).

[4] *See* 17 U.S.C. § 106(2) (2005).

[5] *See Fortnightly Corp*., 392 U.S. 390 (1968); Teleprompter Corp. v. Columbia Broadcasting System, Inc., 415 U.S. 394 (1974); RIAA v. Diamond Multimedia Systems, Inc., 180 F.3d 1072 (1999).

[6] *See* Ginsburg, *supra* note 2, at 1616 (noting courts' inconsistency in articulating a basis for these decisions).

[7] *See infra* Part II.A.

[8] *See generally* Robert Frank, *Departures from Rational Choice: With and Without Regret*, *in* The LAW AND ECONOMICS OF IRRATIONAL BEHAVIOR 13 (Francesco Parisi & Vernon L. Smith eds., 2005).

economic analysis of law.[9] Much of behavioral economics is centered around the idea of 'bounded rationality' —the belief that human cognitive abilities are limited.[10] Consequently, individual decision-making takes place under conditions of limited knowledge and limited information processing.[11] Since individuals are either unable or unlikely to anticipate all future contingencies associated with their actions in advance, they only ever factor some of them into their decisions to act. Cognitive limitations thus result in incomplete predictions.

Interestingly though, the common law has for long come to recognize the existence of cognitive limits to human predictive capacities and has additionally attempted to guard against it. Its principal device to this end remains the concept of *foreseeability*.[12] In its simplest formulation, foreseeability restricts a party's recovery by limiting either a plaintiff's entitlement or a defendant's liability to events and consequences that were objectively capable of being anticipated at a certain point in time.[13]

In each of the contexts where the common law employs foreseeability as a limiting device, its basis for doing so remains somewhat similar. As a process, the common law is both backward- and forward-looking. On the one hand, it allocates the costs arising from a certain event, but at the same time it attempts to induce parties to behave in certain ways in order to avoid those costs and at times obtain benefits.[14] In this latter guidance-function, it looks to how individuals behave in different contexts and formulates a set of incentives (entitlements) and deterrents (liability) to direct their future actions.[15] Foreseeability, builds here on notions of bounded rationality. When certain events or consequences could not have formed any part of an actor's decisions for an action, the law characterizes them as 'unforeseeable' and avoids attributing them to the actor. In economic terms, foreseeability thus enables courts to sift between events that could have formed part of an actor's *ex ante* incentives for action and those that couldn't, thereby restricting recovery for the former alone.

Copyright law much like the common law, is concerned with inducing behavior of a certain kind by incentivizing it. By providing creators with an *ex post* reward, it attempts to incentivize their *ex ante* production of creative expression. As an entitlement arising from the bilateral context, its similarity to other areas of the common law is more than apparent. If the law (in other contexts) readily presumes that rational actors can only ever factor 'foreseeable' consequences into their decision-making process, logically

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[9] For some pioneering work in the area see Christine Jolls, Cass R. Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471 (1998); Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 CAL. L. REV. 1051 (2000); Thomas S. Ulen, *The Growing Pains of Behavioral Law and Economics*, 51 VAND. L. REV. 1747 (1998).

[10] See *supra* Section III.A. *See also id*. at 1477.

[11] *See* HERBERT A. SIMON, ADMINISTRATIVE BEHAVIOR 79-109 (3d ed. 1976).

[12] Most prominent among these areas has of course been its use in tort law. *See* KENNETH S. ABRAHAM, THE FORMS AND FUNCTIONS OF TORT LAW 59 (2d ed. 2002); 3 FOWLER V. HARPER ET AL., THE LAW OF TORTS § 16.9, at 466 (2d ed. 1989); Leon Green, *Foreseeability in Negligence Law*, 61 COLUM. L. REV. 1401 (1961). For an analysis of its use in other contexts *See infra* Section III.B.

[13] *See* W. Jonathan Cardi, *Purging Foreseeability*, 58 VAND. L. REV. 739, 743 (2005).

[14] *See* Frank H. Easterbrook, *Foreword: The Court and the Economic System*, 98 HARV. L. REV. 4, 10 (1984) (describing these as the "ex ante" and "ex post" perspectives respectively).

[15] *See* A. MITCHELL POLINSKY, AN INTRODUCTION TO LAW AND ECONOMICS __ (2d ed. 1989).

speaking, copyright law should see little need to give creators an entitlement to unforeseeable ones. If the law remains cognizant of the limits to any behavioral modification that its scheme of incentives can produce in other areas, copyright law should see little reason not to do the same. Copyright's theory of incentives thus needs to internalize the idea of bounded rationality (in the limited cognition sense) and with it, a doctrinal mechanism by which to eliminate un-incentivized gains from a creator's entitlement.

In this Article, I argue that following from the common law's use of foreseeability to mark the outer boundaries of its incentive structure, copyright law ought to employ a test of foreseeability to determine the point up to which a copyright owner should be allowed to internalize the gains from his work. In determining liability for infringement, applying a test of foreseeability would require a court to ask whether the use complained of is one which the copyright owner (i.e., the plaintiff) could have foreseen at the time that the work was created (i.e., the point when the entitlement commences). Adopting an approach along these lines is likely to present courts with a solution to the problem of new uses and later developed technologies, and a rational basis on which to mark the outer boundaries of copyright's grant of exclusive rights —questions that have hitherto been resolved entirely on an *ad hoc* basis.

Limiting liability for copyright infringement using foreseeability is also likely to transform the way in which courts think about and apply the doctrine of fair use. At present, the primary mechanism of sifting between uses of the work in order to determine which ones the copyright holder should be allowed to claim an exclusive right over, remains the doctrine of fair use.[16] Courts and scholars have over the years developed formulations of the doctrine that speak directly to this task, such as "transformative use" and "intrinsic use".[17] These formulations suffer from a host of well-documented problems, almost all of which derive from the structural reality that as a defense to liability, fair use inevitably focuses on the defendant, ignoring altogether the plaintiff's entitlement and the reasons for it, once the work is brought into existence. Moving these questions to the issue of liability upfront would serve to mark the outer boundaries of copyright exclusivity by connecting it to the *ex ante* incentive that copyright is meant to generate.

This Article proceeds as follows: Part II examines copyright law's principal justificatory theory: the theory of creator incentives. It sets out the core assumptions

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[16] It remains common consensus among copyright scholars that the fair use doctrine —as it is structured and applied today— remains deeply flawed. *See* Paul Goldstein, *Fair Use in a Changing World*, 50 J. COPYRIGHT SOC'Y U.S.A. 133 (2003); David Nimmer, *"Fairest of Them All" and Other Fairy Tales of Fair Use*, 66 LAW & CONTEMP. PROBS. 263 (2003); Wendy J. Gordon, *Fair Use: Threat or Threatened?*, 55 CASE W. RES. L. REV. 903 (2005); Sara K. Stadler, *Copyright as Trade Regulation*, 155 U. PA. L. REV. 899 (2007); Lydia Pallas Loren, *Redefining the Market Failure Approach to Fair Use in an Era of Copyright Permission Systems*, 5 J. INTELL. PROP. L. 1 (1997); Glynn S. Lunney, Jr., *Fair Use and Market Failure:* Sony *Revisited*, 82 B.U. L. REV. 975 (2002).

[17] *See* LEON E. SELTZER, EXEMPTIONS AND FAIR USE IN COPYRIGHT (1978) (advocating a "productive use" test); Pierre N. Leval, *Toward a Fair Use Standard*, 103 HARV. L. REV. 1105 (1990) (formulating the "transformative use" test). The transformative use test was adopted by the Supreme Court shortly after its formulation. *See* Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 592 (1994). Each of these formulations however was to be a part of the standard four-factor test, which employs other quantitative and qualitative considerations. *See, e.g.*, Leval, *supra*, at 1111.

central to it, analyzes the failure of copyright doctrine to instantiate its avowed reliance on it and lays out the consequence of this failure. It thus attempts to make the case for a new limiting device within copyright law that recognizes how incentives are capable of impacting actual decision-making among creators. Part III illustrates how the idea of foreseeability—used in other contexts to structure actor incentives and limit windfalls—can serve that very purpose. It begins by looking to the idea of bounded rationality (III.A) and proceeds to analyze foreseeability's use in different areas of the law, all in recognition of the limited behavioral modification the law expects to induce (III.B). Part IV then attempts to introduce foreseeability to copyright law using a test of 'foreseeable copying'. It starts by setting out how the test would operate as part of the infringement inquiry (IV.A). It then proceeds to argue that a test of foreseeability remains perfectly compatible with copyright's theory of incentives and in many ways is mandated by it (IV.B) and finally illustrates how in the copyright context, courts do in fact routinely employ an objective test of foreseeability in other contexts, as a consequence of which, extending it to the infringement inquiry is likely to present few issues of workability (IV.C). Part V responds to three potential objections to the use of foreseeability as a principle in copyright law, while Part VI concludes.

Behavioral economics, an emerging alternative to standard neoclassical theory is likely to provide intellectual property law with numerous insights into the intricacies of creative decision-making and the ways in which individuals are likely to respond to different stimuli.[18] The present attempt to introduce foreseeability —a bounded rationality-influenced device— into copyright law is but a modest effort to try and apply one of the basic ideas of behavioral economics to the legal regulation of creative decision-making. The validity of this larger project will of course come to depend on further empirical validation. It is hoped that this Article will nevertheless help lay out the theoretical framework for such future endeavors by examining what the copyright system might look like if it were to internalize the idea of bounded rationality into its doctrinal apparatus.

II. COPYRIGHT LAW AND CREATOR INCENTIVES

As a property right —understood as a set of exclusive use privileges protected by an exclusionary right— copyright is premised on the idea of allowing its holder to

[18] Behavioral economics is yet to make sufficient headway into the area of intellectual property law. For some early work, in different contexts see: Barton Beebe, *Search and Persuasion in Trademark Law*, 103 MICH. L. REV. 2020 (2005) (examining the impact of behavioral work on elements of trademark law); James Gibson, *Risk Aversion and Rights Accretion in Intellectual Property Law*, 116 YALE L.J. 882 (2007) (examining how risk averse behavior impacts licensing practices and thereby entitlement-delineation in intellectual property generally); Gregory N. Mandel, *Patently Non-Obvious: Empirical Demonstration that the Hindsight Bias Renders Patent Decisions Irrational*, 67 OHIO ST. L.J. 1391 (2006) (examining how hindsight bias impacts the non-obviousness determination in patent cases); Avishalom Tor & Dotan Oliar, *Incentives to Create under a "Lifetime-Plus-Years" Copyright Duration: Lessons from a Behavioral Economic Analysis of* Eldred v. Ashcroft, 36 LOYOLA L.A. L. REV. 437 (2002) (examining how the optimism and sub-additivity biases impact creators under different copyright terms).

capture (or internalize) the benefits associated with the use of his/her work.[19] In spite of its being a property right though, its scope and reach remain significantly limited. Using a host of internal doctrines, copyright law limits the circumstances and ways in which an owner is permitted to exercise its grant of exclusivity.[20]

While personality- and desert-based theories of copyright abound in the literature, copyright law in the United States has undeniably come to be understood almost entirely in utilitarian, incentive-driven terms.[21] Copyright law is thus thought to exist primarily to give authors (i.e., creators) an incentive to create and thereafter distribute their works publicly. What is perhaps unique though about copyright law is that in spite of its avowed adherence to this theory of incentives, its internal doctrinal devices do little to give effect to its theoretical basis. Copyright doctrine thus strays far from instantiating the institution's broader purpose.

Limiting a party's liability or entitlement by reference to its underlying purpose is hardly novel. Tort law routinely does this. In the statutory context, this process is rather well-known in antitrust law. As part of the 'antitrust injury rule', courts there ask whether the injury complained of by a plaintiff was of "the type the antitrust laws were intended to prevent" and arose as a consequences of "that which makes the defendant's acts unlawful".[22] Yet courts in interpreting and developing different formulations of copyright's doctrinal devices rarely ever make reference to incentives.

A. Copyright's Theory of Limitless Incentives

Central to all of copyright law is the idea of incentives.[23] Copyright exists to provide creators with an incentive to create and disseminate their works publicly. Courts and scholars alike seem to take this proposition for granted.[24] In this view, copyright law promises authors a right to sue others who use their creation in a way that interferes with

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[19] For an overview of the copyright-property linkage see JAMES BOYLE, SHAMANS, SOFTWARE, AND SPLEENS: LAW AND THE CONSTRUCTION OF THE INFORMATION SOCIETY (1996); Justin Hughes, *Copyright and Incomplete Historiographies: Of Piracy, Propertization, and Thomas Jefferson*, 79 S. CAL. L. REV. 993, 1046 (2006).

[20] *See* Wendy J. Gordon, *An Inquiry in the Merits of Copyright: The Challenges of Consistency, Consent, and Encouragement Theory*, 41 STAN. L. REV. 1343, 1365-77 (1989). Some of these doctrines include: the idea-expression dichotomy, the originality requirement, the rule of fixation and the temporally limited nature of the grant. *See* 17 U.S.C. § 101 et seq. (2005).

[21] Indeed, this instrumental mandate derives from copyright's constitutional origins. *See* U.S. CONST. art. I, § 8, cl. 8 ("To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.").

[22] Brunswick Corp. v. Pueblo Bowl-O-Mat Inc., 429 U.S. 477, 489 (1977). *See* Roger D. Blair & Jeffrey L. Harrison, *Rethinking Antitrust Injury*, 42 VAND. L. REV. 1539 (1989).

[23] *See* Justin Hughes, *Fair Use Across Time*, 50 UCLA L. REV. 775, 797 (2003).

[24] *See, e.g.*, Stewart E. Sterk, *Rhetoric and Reality in Copyright Law*, 94 MICH. L. REV. 1197, 1203 (1996); Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 TEX. L. REV. 989, 993 (1997); F. Gregory Lastowka, *Free Access and the Future of Copyright*, 27 RUTGERS COMPUTER & TECH. L.J. 293, 301 (2001); Douglas Lichtman, *Copyright as a Rule of Evidence*, 52 DUKE L.J. 683, 724 (2003). *See also* Harper & Row Pubs., Inc. v. Nation Enters., 471 U.S. 539, 558 (1985); Twentieth Century Music Corp. v. Aiken, 422 U.S. 151, 156 (1975).

their ability to profit from it.[25] The promise of exclusivity in the market for the creative work is thus taken to operate as an inducement for its very production.

Beyond this though, the incentive theory tells us very little. Yet, underlying it remain several minor premises that are rarely ever analyzed in any detail. For the promise of market-exclusivity or a share in profits to operate as an incentive, creators need to be rational utility-maximizers. The possibility of maximizing their utility functions associated with their creative work is thought to induce them into devoting the necessary time and effort into the creative process. In addition, the inducement is thought to operate as a 'but-for' reason for the creator's actions. In other words, the theory assumes that but for the inducement (i.e., without copyright), creators would lack sufficient motivation and reason to engage in the creative process to begin with.[26]

The incentive provided by copyright's promise of exclusivity is also thought to correlate directly with the overall production of creative expression. Thus, greater the incentive, greater the number of creative works produced without a readily identifiable upper limit. What further contributes to this idea is a process that some refer to as the "incentive-expectation circularity".[27] The scope and extent of creators' incentives come to be equated with their overall expectations, which often have no independent basis, and as a consequence continue to expand outward without any identifiable limit. Given copyright's system of *ex post* entitlement delineation in the infringement setting, the law presumes that since creators have already created the work, the market they seek to control via the infringement action was unquestionably a part of their original incentive. Copyright's incentive structure in this formulation then, is presumptively limitless.

The limitlessness of copyright's incentive theory is generally attributed to the influence of neoclassical and new institutional economic thinking on copyright law and policy.[28] Its impact on copyright's entitlement structure, though diffused, is most pervasive. By presuming that any market —however causally or temporally removed it may be from the creator's actions— that employs the work, naturally formed part of the author's incentive in creating it, it allocates exclusive control over that market to the author. Economic thinking apart though, one suspects that a major contributing factor to this presumptive limitlessness lies in copyright the failure of copyright doctrine to instantiate its theory of incentives in any meaningful way. Since courts do not have a device by which to give effect to a limit even if they were to recognize the need for one, the topic of limits rarely ever enters the discussion.

B. The Absence of Purpose-Driven Limits in Copyright Law

Despite its being premised on the idea of incentives, courts never look to copyright's theory of incentives in delineating the scope and extent of a creator's entitlement. To the extent that they do ever make reference to incentives, they do so to

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[25] *See* Wendy J. Gordon, *An Inquiry into the Merits of Copyright: The Challenges of Consistency, Consent, and Encouragement Theory*, 41 STAN. L. REV. 1343, 1385 (1989).
[26] *See* Joseph P. Liu, *Copyright and Time*, 101 MICH L. REV. 409, 428 (2002).
[27] *See* Sara K. Stadler, *Incentive and Expectation in Copyright*, 58 HASTINGS L.J. 433 (2007).
[28] Netanel, *supra* note __, at 308-13.

examine whether a finding of no liability is likely to negatively impact *future* incentives, when ironically enough, the structure of this incentive isn't ever determined up front.[29]

Copyright remains distinct from other forms of intellectual property, in that the absence of an administrative grant-making entity (such as the PTO) ensures that it falls entirely to courts to delineate the scope and extent of a creator's entitlement. In its most basic sense, copyright's entitlement lies in its promise of exclusivity, a promise that is legally enforceable against interference by third parties. Since courts remain the primary (or rather, sole) determinants of this entitlement in any given situation, they both validate the entitlement and then enforce it through either a property or liability rule. The process of validation usually entails examining whether the work in question meets the eligibility requirements to be protected, while the enforcement process then circumscribes the entitlement by reference to the defendant's actions. Both processes operate as *limits* on the entitlement. While the latter is correlative, the former is in a sense absolute.[30] Yet, none of the doctrinal devices that courts use in either process attempts to connect the entitlement to its underlying purpose.

Copyright's absolute limiting doctrines concern themselves most directly with the need to limit a creator's monopoly power in order to minimize the deadweight losses associated with its exercise.[31] Thus devices such as the "idea-expression dichotomy" and originality/creativity serve to curtail a copyright holder's monopoly, but do so in recognition of the social costs associated with overbroad protection rather than out of a realization that creator incentives aren't warranted in the area. Indeed one might even argue that rules such as the originality requirement, in attempting to reduce creators' monopolies, run contrary to copyright's theory of incentives.[32]

Copyright law's correlative limiting devices on the other hand seem better placed to internalize its incentive theory. Since they involve determining the outer boundaries of a creator's entitlement only by reference to a specific action (i.e., the defendant's), they might be used to eliminate from the scope of the entitlement, actions that weren't part of the incentive. Yet, neither of its two principal correlative doctrines —substantial similarity and fair use— rely on copyright's attempt to induce creativity.

1. Substantial Similarity. — As part of the infringement inquiry, the law requires a plaintiff to establish that the defendant *copied* the protected work in his actions.[33] Absent copying, liability for copyright infringement is practically non-existent.[34] While copying

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[29] *See, e.g.*, Harper & Row Pubs., Inc. v. Nation Enterprises, 471 U.S. 539, 557 (1985); Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 598 (1994).

[30] By correlative here, I mean that the inquiry is done relationally, by reference to the plaintiff and the defendant. The idea of correlativity is generally used to describe tort law's entitlement structure, where liability is an attempt to connect the defendant's actions to the plaintiff's harm through the law's underlying normative goals. Ernest Weinrib's account of correlativity is perhaps the most widely accepted exposition of the idea. *See* ERNEST J. WEINRIB, THE IDEA OF PRIVATE LAW (1996); Ernest J. Weinrib, *Punishment and Disgorgement as Contract Remedies*, 78 CHI.-KENT L. REV. 55 (2003).

[31] *See* Sterk, *supra* note __, at 1210-13 (1996).

[32] *Id.* at 1221, 1220-22 ("[T]he Court's opinion [in Feist] is entirely inconsistent with the incentive justification for copyright.").

[33] 4 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT §13.01[B] (2007); Perris v. Hexamer, 99 U.S. 674, 675 (1879).

[34] 2 *id.* § 8.01[A]("[A]bsent copying, there can be no infringement of copyright, regardless of the extent of similarity.").

certainly does entail a factual element (i.e., whether the defendant took elements of the plaintiff's work), it involves more than just that and carries with it a significant normative dimension.[35] This is in the form of the rule of substantial similarity, or as some call it, "actionable copying".[36]

The requirement of substantial similarity requires a plaintiff to establish not just that the works in question are similar, but that the similarity relates to the fundamental essence or structure of the work.[37] It thus entails establishing that what the defendant took from the plaintiff's work is protected by copyright law to begin with. As one court sought to define the process:

> The traditional test for substantial similarity is whether the accused work is so similar to the plaintiff's work that an ordinary reasonable person would conclude that the defendant unlawfully appropriated the plaintiff's protectable expression by taking material of substance and value.[38]

This definition is replete with subjective terms of art ("ordinary reasonable person", "unlawfully appropriated", "substance and value"), each of which require further elucidation for the definition to be complete —aptly indicative of the complexity that the process entails.[39] All the same, courts have over the years, sought to develop myriad formulations of the test, to be applied to individual cases.

In attempting to classify these different formulations, Nimmer usefully divides them into two broad categories. The first, which he calls "comprehensive nonliteral similarity", involves situations where the essence of the work is copied, even if the copying isn't literal (i.e., verbatim).[40] Here, the tests all focus on extracting the essence of the plaintiff's work without running afoul of the idea-expression dichotomy, and then examining whether the defendant's work copied the same. The second category, "fragmented literal similarity", involves cases where the defendant's work uses parts of the plaintiff's.[41] The copying is literal (i.e., verbatim), but partial and dispersed. Substantial similarity here, Nimmer argues, cannot be decided except by reference to the defendant's purpose behind the copying, which unfortunately is a question usually reserved for the fair use inquiry.[42] Consequently, courts usually focus on whether what the defendant took was of significant value to the plaintiff's (though not the defendant's) work, for it to be characterized as substantial.

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[35] 4 *id.* § 13.01[B] (noting that "few courts or commentators have historically differentiated" between them).
[36] *Id.* § 13.01[A].
[37] ROBERT C. OSTERBERG & ERIC C. OSTERBERG, SUBSTANTIAL SIMILARITY IN COPYRIGHT LAW §1.1, at 1-1(2003).
[38] Country Kids 'N City Slicks, Inc. v. Sheen, 77 F.3d 1280, 1288 (10th Cir. 1996).
[39] *See* OSTERBERG & OSTERBERG, *supra* note __, § 1.1, at 1-2 ("Substantial similarity is an elusive concept."). *See also* Peter Pan Fabrics, Inc. v. Martin Weiner Corp., 274 F.2d 487, 489 (2d Cir. 1960) (where Judge Learned Hand notes that the determination must "inevitably be ad hoc").
[40] *See* 4 NIMMER, *supra* note __, §13.03[A][1].
[41] *Id.* §13.03[A][2].
[42] *Id.* He notes that as a consequence, the line between the two requirements often gets blurred. *But see* Nelson v. PRN Prod., Inc., 873 F.2d 1141, 1143 (1989) (rejecting an attempt to conflate the two and alter the burden of proof).

What should be most apparent from these tests though, is that the substantial similarity test focuses almost entirely on comparing the *works themselves*.[43] To the limited extent that it looks to the defendant's use or purpose, it does so exclusively to compare the components of the two similar works.[44] Nowhere does it look to the *plaintiff's* purpose or intent in creating the work, to elucidate a possible incentive and compare it in turn to the defendant's. Thus, while it relates the defendant's (infringing) work to the plaintiff's protected one, any inquiry into copyright's overall purpose (in general or in specific) is considered altogether extraneous.

2. Fair Use. — Questions of *purpose* are ordinarily understood as being a part of the fair use inquiry. Using a list of four statutorily delineated non-determinative factors, courts are given significant leeway to conclude that a defendant's use of the copyrighted work is insufficiently harmful to the plaintiff's interests.[45] While the fair use inquiry was originally meant to focus on parties' purposes (in using the work), in practice it too places large reliance on the amount and significance of the defendant's copying, with the result that an independent substantial similarity requirement often becomes superfluous, or subsumed within the fair use inquiry.

Further, even as a recognized limit on a creator's property interest (in the expression), fair use exhibits several structural infirmities. Perhaps most important of these, lies in its being an 'affirmative defense', meaning that the burden is placed on the defendant to prove that his use satisfies some or all of the statutory requirements.[46] This is unlike even the rule of substantial similarity, which as part of the infringement inquiry is a recognized part of the plaintiff's burden. The doctrine thus works to limit the copyright grant by depending entirely on the defendant's ability to convince a court that his activities are unlikely to impact a creator's otherwise protected interest. The copyright owner is thus *deemed entitled* to internalize all possible benefits, until the fair use determination concludes otherwise.[47] In focusing on this presumptive entitlement, by itself, fair use does very little in practice to link the defendant's actions (i.e., copying) with the creator's original incentive.

While fair use is today codified in the Copyright Act,[48] its intrinsic open-endedness has resulted in few general principles being discernible in both its theory and practice. Courts have often characterized it to be the "most troublesome [doctrine] in the

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[43] *See* OSTERBERG & OSTERBERG, *supra* note __, at 2-1 (observing that substantial similarity always entails a "comparison of the works").

[44] The substantial similarity requirement is applied even to derivative works, which by their very nature involve a different purpose, pointing to the general irrelevance of the purpose and use to which the work is put. *See id.* at 15-1.

[45] *See* 17 U.S.C. 107 (2005). In general terms the four factors are: (i) the purpose and character of the defendant's use; (ii) the nature of the protected work; (iii) the amount and substantiality of the portion of the work used; and (iv) its impact on the actual and potential market for the protected work.

[46] 3 NIMMER, *supra* note __, at § 12.11[F].

[47] Thus if the defendant were not to raise the defense, courts would operate on the assumption that the plaintiff is entitled to control the market that the defendant is operating in. For a recent example see Twentieth Century Fox Film Corp. v. Cablevision Systems Corp., 478 F. Supp. 2d 607 (S.D.N.Y. 2007). There, the defendant agreed not to raise the defense of fair use, *id.* at 616, with the consequence that the court merely had to conclude that the defendants had copied or performed the plaintiff's work. *See id.* at 616, 622.

[48] Fair use originated interestingly, as a common law doctrine and was codified in the 1976 Copyright Act. *See* Folsom v. Marsh, 9 F. Cas. 342 (1841).

whole law of copyright[49]" and as "defy[ing] definition[50]". Yet, a few specific formulations stand out, which might be thought to have some connection to copyright's incentive structure.

(a) Transformative Use/Purpose. — Since the first part of the fair use test revolves around the 'purpose' for which the defendant uses the protected work,[51] some have suggested that courts look beyond just the binary commercial/non-commercial distinction to answer this question. The 'transformative use' test requires courts to examine whether a use complained of is *transformative*, in its being "productive" and "employ[ing] the [protected] matter in a different manner or for a different purpose from the original".[52] Under this approach, courts are to see if the defendant's use adds value to the plaintiff's original use —value being understood of course, outside of its purely commercial sense.[53]

At first glance, one might see 'transformative use' as having some connection to creator incentives, especially in its reliance on parties' purpose in using the work. If a defendant's use is *so different* (i.e., transformative) from the plaintiff's, one might think it illogical to conclude that the possibility of controlling it was any part of the plaintiff's *ex ante* incentive. In reality though, the existence of a transformative purpose is only ever understood *through* the content, and never as an independent variable.[54] Thus, for uses that don't directly interact with the substantive content of the work (by either altering it directly, critiquing/commenting on it, or summarizing it), the transformative use test becomes somewhat meaningless.[55] Uses that involve converting a work from one format

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[49] Sony Corp., 464 U.S. at 475; Dellar v. Samuel Goldwyn, Inc., 104 F.2d 661, 662 (2d Cir. 1939).

[50] Princeton Univ. Press v. Michigan Doc. Services, Inc., 99 F.3d 1381, 1392 (6th Cir. 1996); Time, Inc. v. Bernard Geis Assoc., 293 F. Supp. 130, 144 (S.D.N.Y. 1968).

[51] 17 U.S.C. §107(1) (2005).

[52] Pierre N. Leval, *Toward a Fair Use Standard*, 103 HARV. L. REV. 1105, 1111 (1990).

[53] *Id.* The Supreme Court endorsed Judge Leval's test in Campbell v. Acuff-Rose Music, Inc., drawing a distinction between superseding and transformative uses of the work based on market substitution. 510 U.S. 569 (1994). *See generally* Christopher Yoo, *Copyright and Public Good Economics: A Misunderstood Relation*, 155 U. PA. L. REV. 635, 711-12 (2007).

[54] The Second Circuit's decision in *Castle Rock Entertainment* is aptly illustrative of this trend. *See* Castle Rock Ent., Inc. v. Carol Pub. Group, Inc., 150 F.3d 132 (2d Cir. 1998). In concluding that the defendant's use of the protected work there, which involved creating an aptitude test centering around a well-known television series, was not a form of transformative use, the court concluded that the defendant had failed to discharge its burden of showing that its use involved a significant "transformative purpose". *Id.* at 143. Without specifying what a legitimate transformative purpose entailed, the court concluded that since the defendant's work was substantially similar to the plaintiff's and had only "minimally alter[ed]" it, this evidenced the absence of a legitimate transformative purpose. *Id.* Purpose, in other words was to examined via the content. *See also* Matt Williams, *Recent Second Circuit Opinions Indicate that Google's Library Project is Not Transformative*, 25 CARDOZO ARTS & ENT. L.J. 303, 318 (2007) (arguing that the Supreme Court's decision in *Campbell* is necessarily restricted to such an examination).

[55] Indeed this derives from the Court's emphasis in *Campbell* on the fact that the test is whether the defendant creates a "new work [that] is 'transformative'", by "altering the first with new expression, meaning or message". *Campbell*, 510 U.S. at 579. *See* Sara K. Stadler, *Copyright as Trade Regulation*, 155 U. PA. L. REV. 899, 906-07 (2007) (noting how the *Campbell* intended the standard to apply only when a defendant "takes expression from a copyrighted work and adds expression of her own"); Williams, *supra*, note __, at 319-30. Additionally, cases that have found the standard to have been satisfied seem to emphasize this fact, *see* Bill Graham Archives v. Dorling Kindersley Ltd., 448 F.3d 605 (2d Cir. 2006); Blanch v. Koons, 467 F.3d 244 (2d Cir. 2006).

Two recent decisions of the Ninth Circuit however seem to have glossed over this requirement altogether. It isn't clear that their application of the standard bears sufficient resemblance to the test as formulated in *Campbell. See* Kelly v. Arriba Soft Corp., 336 F.3d 811 (9th Cir. 2003); Perfect 10, Inc. v.

to another (regardless of what this entails),[56] or that employ large portions of it within a broader business model (e.g. Google's Library Project[57]) are unlikely to satisfy even the transformative use standard.[58]

Transformative use, as it is understood today then, does nothing to connect fair use to a creator's incentive. The overbearing emphasis placed on the work itself, and the rendering of the 'purpose' element of the test practically meaningless, aptly reflect this.

(b) Market Failure. — The second, and arguably more influential attempt to give the fair use doctrine a rational basis employs an economic model of market failure and is commonly associated with the work of Wendy Gordon.[59] In this conception, the fair use doctrine exists exclusively to remedy situations of market failure.[60]

Fair use, in this formulation, is to be permitted by courts only when (i) the existence of a market failure is shown, (ii) a defendant's access to (and use of) the work is socially desirable, and most important for our purposes, (iii) it would not interfere substantially with the plaintiff's original incentive.[61] On the face of it, the market failure model appears to relate fair use to creators' incentives, in its third requirement. On closer analysis though, it doesn't. Much like its assumption about the creator's original entitlement, the model starts from the assumption that a creator's incentive lies in unfettered control over *all possible* uses and that anything that detracts from such control is necessarily an interference with it (an "injury"). The creator's entitlement is thus thought to consist in all market-based uses of a work and anything short of that is presumed to be an insufficient inducement. Yet it doesn't give us a basis for this, except in terms of a general preference for authors.[62] The market failure model then does little

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Amazon.com, Inc., 487 F.3d 701 (9th Cir. 2007). *See* 4 WILLIAM F. PATRY, PATRY ON COPYRIGHT § 10:21 (2007) (characterizing the *Kelly* holding as "novel" and its reliance on public benefit as part of the transformative use test as "perplexing"); Justin Hughes, *Size Matters (or Should) in Copyright Law*, 74 Fordham L. Rev. 575, 619 n.254 (2005) (noting that the *Kelly* decision "sit[s] uneasily" with the Supreme Court's interpretation of transformative); Williams, *supra* note __, at 317-19 (characterizing the *Kelly* case as a "misapplication").

[56] Thus, translations of a work from one language to another have been held insufficient to meet the standard. *See* Nihon Keizai Shimbun, Inc. v. Comline Business Data, Inc., 166 F.3d 65, 72 (2d Cir. 1999). Similarly, converting a work from one media format to another is considered equally non-transformative. *See* Infinity Broadcast Corp. v. Kirkwood, 150 F.3d 104, 108 (2d Cir. 1998). *See also* Hughes, *supra* note __, at 619 n.254 ("[I]t is the work, not the distribution mechanism, that needs to be transformative.").

[57] *See* Jonathan Band, *The Google Library Project: Both Sides of the Story*, 1 PLAGIARY 1, 3-7 (2007) (describing Google's fair use argument in the actual litigation).

[58] *See* Williams, *supra* note __, at 330-32.

[59] *See* 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 (1982). The dissenting opinion (arguing that the defendant's use wasn't fair use) would rely on Gordon's article. *See* Sony Corp., 464 U.S. at 478. More recently, Gordon has clarified her position, noting that she never intended to limit fair use in the way that later interpretations of her theory effectively did. *See* Wendy J. Gordon, *Market Failure and Intellectual Property: A Response to Professor Lunney*, 82 B.U. L. REV. 1031 (2002).

[60] *Id.* at 1601; Robin A. Moore, *Fair Use and Innovation Policy*, 82 N.Y.U. L. REV. 944, 950 (2007).

[61] *Id.* at 1614.

[62] The following is perhaps illustrative:

> New technologies will make certain copyrighted works more valuable…If copyright protection is denied because of an otherwise curable market failure, then the additional revenues that would have flowed from the new technological use will not appear. If the authors' revenues fail to reflect the additional value that new technology gives to such works, then insufficient resources may be drawn into their creation.

more than refer to the potential impact that a finding of non-infringement might have on the incentive, but does little to tell us what the contours of that incentive are.

(c) Time-based Proposals. — More recently others have argued that a commitment to copyright's incentive structure necessitates calibrating the fair use analysis to fluctuations in the market value for a creative work across its lifespan.[63] Justin Hughes, for instance notes that the fair use analysis needs to look to the present value of a work at the time the decision was made to invest into its creation or distribution.[64] Hughes' argument, much like the preceding analysis recognizes that fair use (in its current iteration) does absolutely nothing to connect a creator's entitlement to his/her *ex ante* incentive. All the same, his proposal would do no more than have courts be more accepting of fair use arguments, as a work grows older, rather than have them concretely adhere to the idea of creator incentives in constructing the entitlement.[65] His solution thus doesn't quite force copyright to "be true to [its] ex ante incentive structure", as he claims it should.[66]

(d) Limiting the Elusive Fourth Factor. — Perhaps more importantly though, courts too have occasionally tried to understand fair use as a purpose-driven limit on creators' entitlement. Yet, this purpose has never directly been tied to a creator's *ex ante* incentive. In the context of the fourth fair use factor, which requires identifying a potential market for the plaintiff's work (and the impact on the defendant's use on that market),[67] plaintiff's often seek to argue that their market includes a market for licenses to use the work.[68] In this construction, every use of the work by the defendant has a substitutive effect on the plaintiff's market —for even if the plaintiff's use isn't in direct competition with the defendant's, its ability to license the use certainly is.[69]

To avoid this circularity, courts have occasionally observed that the market inquiry needs to be limited to "traditional, reasonable, or likely to be developed" markets for the work.[70] All the same, without an identifiable basis by which to identify a market as 'traditional' or 'reasonable', the limit becomes meaningless. *How* and more importantly, *when* should this determination be made? Courts have thus inconsistently, based the determination on plaintiffs' post-creative (i.e., after creating the work) ability,

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Id. at 1621.

[63] *See* Hughes, *supra* note __, at 782. A somewhat more elaborate version of the proposal was made around the same time by Joseph Liu. *See* Liu, *supra* note __. Yet, unlike Hughes, Liu bases his proposal not on the need to bring copyright doctrine closes to its theory of incentives, but rather on the problems associated with the process of extending copyright's term of protection. *Id.* at 411-12 & n.10 (noting this difference).

[64] Hughes, *supra* note __, at 782-83.

[65] *Id.* at 781-82.

[66] *Id.* at 782.

[67] *See* 17 U.S.C. § 107(4) (2005) ("[T]he effect of the use upon the potential market for or value of the copyrighted work.").

[68] *See, e.g.*, Amer. Geophysical Union v. Texaco, Inc., 60 F.3d 913 (2d Cir. 1994); Princeton Univ. Press, 99 F.3d at 1388; Ringgold v. Black Entertainment Television, Inc., 126 F.3d 70 (2d Cir. 1997).

[69] For more on this circularity problem see 4 NIMMER, *supra* note __, at § 13.05[A][4]; Fisher, *supra* note __, at 1671; Lunney, *supra* note __, at 1021; Lydia Pallas Loren, *Redefining the Market Failure Approach to Fair Use in an Era of Copyright Permission Systems*, 5 J. INTELL. PROP. L. 1, 41 (1997); Sara K. Stadler, *Copyright as Trade Regulation*, 155 U. PA. L. REV. 899, 903-04 (2007); Matthew Africa, *The Misuse of Licensing Evidence in Fair Use Analysis: New Technologies, New Markets, and the Courts*, 88 CAL. L. REV. 1145, 1160 (2000); Mark Lemley, *Should a Licensing Market Require Licensing?*, 70 LAW & CONTEMP. PROBS. 185, 190 (2007).

[70] Texaco, Inc., 60 F.3d at 930. *See also* Harper & Row, 471 U.S. at 568 (using a similar "normal market" criterion).

motive, interest or expectation to enter a certain market —but never on their *ex ante* incentive in creating the work, the inducement that copyright is meant to be about. Unless 'traditional' or 'reasonable' are related back to the time of creation —the point when the incentive to create is meant to operate— it bears little connection to the idea of creator incentives.[71]

Fair use in its myriad formulations, judicial and academic, thus remains a weak basis by which to limit copyright by reference to its underlying theory of incentives. Indeed, the complexity and incoherence that its jurisprudence seem to have generated already, might be an added reason to look elsewhere.

C. The Social Costs of Copyright Windfalls

To sum up, a direct consequence of there being no independent basis by which courts can relate copyright's entitlement structure to its underlying purpose is that markets that use the work in ways that could not have possibly formed any part of the creator's incentive in creating it, are nonetheless deemed part of the creator's exclusionary entitlement. Uses for a work that are either temporally or causally disconnected from the creator's actions inevitably then get attributed and allocated to the creator.

In numerous other contexts though, courts and scholars have long characterized the unexpected gains and losses that accrue to individuals independent of any possible effort they could have exerted to bring it about, as windfalls.[72] Central to the idea of a windfall is the recognition that the actual value of an event after its occurrence (i.e., *ex post*) is far in excess of its estimated value before it occurs (i.e., *ex ante*), such that an individual is unlikely to have been incentivized to bring it about (or avoid it).[73] Windfalls thus represent *un-incentivized* gains and losses that were neither obtainable nor avoidable respectively. In this sense then, providing creators with an entitlement beyond what they could have been incentivized in the creative process, represents a similar windfall.

Why is this necessarily harmful? As an exclusionary mechanism over an otherwise non-rivalrous resource, copyright (like most forms of intellectual property) is known to impose significant social costs. It creates both static and dynamic inefficiencies,

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[71] As a historical matter, interestingly, the common law standard seems to have required relating it back to the time of creation/publication. *See* Harper & Row, 471 U.S. at 550 (observing how fair use was "predicated on the author's implied consent to 'reasonable and customary' use *when he released his work* for public consumption") (emphasis supplied).

[72] *See* Eric Kades, *Windfalls*, 108 YALE L.J. 1489, 1491 (1999) (defining windfalls as "economic gains independent of work, planning or other productive activities that society wishes to reward").

[73] *See generally*, Gideon Parchomovsky, Peter Siegelman & Steve Thel, *Of Equal Wrongs and Half Rights*, 82 N.Y.U. L. REV. 738, 756 (2007) (describing windfalls in terms of the perceivable costs and benefits of undertaking an action to bring about an event). They connect their description to tort law's well-known formulation of incentives to take care (i.e., the Learned Hand formula). *Id.* at 756 n.66. Thus windfalls represent situations where the costs C of bring about an event, multiplied by the probability of its occurrence P, exceed any gains G from event, in the *ex ante* world. $G_{ex\ ante} < CP$. Yet, in the *ex post* world (in relation to the event), these gains increase dramatically: $G_{ex\ post} > CP > G_{ex\ ante}$.

encourages rent-seeking and entails costs associated with its enforcement by courts.[74] In general, these costs are believed to be outweighed by the social benefits that the system produces, in the nature of the inducement to produce creative works of expression, rendering them tolerable.[75] In relation to windfalls though, these costs aren't necessarily counter-balanced by the incentive to create, since they represent, by their very nature, un-incentivized gains.

In practical terms these windfalls allow creators to engage in monopolistic pricing in new markets that couldn't have formed any part of their incentive in creating the work. In addition, in relation to new uses and later-developed technologies they give creators control over a market that they clearly aren't best positioned to develop. Thus, providing creators with control over a new medium of distribution[76] or a new device that uses their creations[77] (both of which are usually developed by third parties) does little more than actively facilitate a potential holdout, raising the transaction costs for developers of new media and devices, in the process stifling innovation there.

III. FORESEEABILITY AND BEHAVIORAL LIMITS TO INCENTIVES

If copyright is to be true to its theory of incentives, what it needs is a doctrinal device that limits its grant of exclusivity by reference to the *ex ante* incentive that it is meant to generate. In a host of other areas, the common law employs incentives to produce behavioral modification among individuals and in the process actively employs a device to objectively shape its incentive/deterrent structure: foreseeability. Foreseeability is commonly understood as the "quality of being reasonably anticipatable.[78]" In the common law however, courts use it to identify the point beyond which the possibility of an entitlement or of liability accruing, is incapable of influencing an actor's *ex ante* behavior, thereby rendering the occurrence unforeseeable —or, a windfall. Windfalls thus represent un-incentivized gains and losses, and the law uses foreseeability to dislodge them from the liability or entitlement determination. Foreseeability is thus likely to provide copyright law with a logical basis by which to limit its grant of exclusivity by reference to the idea of incentives.

A. Foreseeability and Bounded Rationality

The idea of bounded rationality is usually traced back to the work of Herbert Simon and is premised on the recognition that human cognitive abilities are limited.[79] In

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[74] *See* Mark A. Lemley, *Property, Intellectual Property, and Free Riding*, 83 TEX. L. REV. 1031, 1058-59 (2005) (elaborating on these costs); Wendy J. Gordon & Robert G. Bone, *Copyright*, *in* 2 ENCYCLOPEDIA OF LAW AND ECONOMICS 194-96 (Boudewijn Bouckaert & Gerrit D. Gees teds., 2000).

[75] *See* William W. Fisher III, *Property and Contract on the Internet*, 73 CHI.-KENT L. REV. 1203, 1249 (1998).

[76] *See, e.g.*, *Teleprompter*, 415 U.S. at 394; *Fortnightly, Inc.*, 392 U.S. 390 (1968). *See also* Tim Wu, *Copyright's Communications Policy*, 103 MICH. L. REV. 278 (2004).

[77] *See, e.g.*, *Sony Corp.*, 464 U.S. at 475.

[78] BLACK'S LAW DICTIONARY 660 (7th ed. 1999).

[79] *See* Herbert A. Simon, *A Behavioral Model of Rational Choice*, 69 QUART. J. ECON. 99 (1955); Herbert A. Simon, *Rationality in Psychology and Economics*, 59 J. BUS. S09 (1986); Herbert A. Simon, *Human Nature in*

innumerable contexts, Simon observed, individual decision-making tends to deviate from the assumptions of standard rational choice theory.[80] Rational choice theory, the mainstay of economic analysis, assumes that individual decision-makers can (i) compute the subjective probabilities of uncertain events, (ii) assign these events monetary values, (iii) calculate the expected utilities of alternative courses of action, and (iv) choose the one that maximizes their expected utility.[81] Bounded rationality seeks to provide an alternative account of decision-making —one that is consistent with the actual information-processing abilities of individuals.[82]

Bounded rationality thus begins with the assumption that human cognitive abilities are by nature limited.[83] There exists a finite limit to what the human mind can process and as a consequence, decision-making is subject to this inherent imperfection. Decisions are therefore thought to be made under conditions of limited information and limited information-processing.[84] This represents the original understanding of bounded rationality as developed by Simon, and focuses on the existence of cognitive limitations that influence individual decision-making. The idea has however since come to denote situations where individuals follow a set of shortcuts referred to as 'heuristics' to reach their decisions, that often result in major deviations from the predictions of standard economic theory.[85]

The idea of bounded rationality can additionally be explained in economic terms as well.[86] In this view, individuals attempt to economize during the decision-making process. When the costs associated with the identification of additional alternatives exceed the expected marginal return from the identification, individuals terminate the search and choose from one of the alternatives before them.[87] They thus compromise on the optimality of the substance of the decision to optimize their utility from the decision-making process itself. Limited cognition of the original model is explained away by

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Politics: The Dialogue of Psychology with Political Science, 79 AM. POL. SCI. REV. 293 (1985); Herbert A. Simon, *On the Behavioral and Rational Foundations of Economic Dynamics*, 5 J. ECON. BEHAVIOR & ORG. 35 (1984).

[80] Simon, *supra* note __, at 99.

[81] *See* Thomas S. Ulen, *Cognitive Imperfections and the Economic Analysis of Law*, 12 HAMLINE L. REV. 385, 386 (1989); Korobkin & Ulen, *supra* note __, at 1060-75.

[82] Simon, *supra* note __, at 99-100 ("[T]he task is to replace the global rationality of economic man with a kind of rational behavior that is compatible with the access to information and the computational capacities that are actually possessed by organisms, including man, in the kinds of environments in which such organisms exist.").

[83] *See* Herbert A. Simon, *Rationality as Process and as Product of Thought*, 68 AM. ECON. REV. 1, 12 (1978) ("The scarce resource is computational capacity —the mind.").

[84] *See* HERBERT A. SIMON, ADMINISTRATIVE BEHAVIOR 79 (3d ed. 1976).

[85] *See* Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, 185 SCIENCE 1124 (1974); Korobkin & Ulen, *supra* note __, at 1084. The idea of bounded rationality as employed in this paper corresponds to its original understanding —as denoting a cognitive limitation.

[86] *See* David M. Grether, Alan Schwartz & Louis L. Wilde, *The Irrelevance of Information Overload: An Analysis of Search and Disclosure*, 59 S. CAL. L. REV. 277, 279 (1986) (using the bounded rationality idea of 'satisficing' to explain how consumers order their preferences based on information costs associated with the search process). *See also* Richard A. Posner, *Rational Choice, Behavioral Economics, and the Law*, 50 STAN. L. REV. 1551, 1553 (1998); Melvin Aron Eisenberg, *The Limits of Cognition and the Limits of Contract*, 47 STAN. L. REV. 211, 215-16 (1995); Korobkin & Ulen, *supra* note __, at 1075-76.

[87] This idea is usually associated with the work of George Stigler. *See* George J. Stigler, *The Economics of Information*, 69 J. POL. SCI. 213 (1961).

reference to the costs associated with decision-making. Individuals are presumed capable of seeking the utility-maximizing alternative, but choose not to out of "rational ignorance".[88] As a descriptive matter though, both explanations find common ground: human decision-making isn't necessarily directed at identifying utility-maximizing alternatives.

Foreseeability is often understood as being premised on the original understanding of bounded rationality, and as representing a limit to the predictive capabilities of individuals.[89] It instantiates the idea across two (often inter-connected) dimensions: one *causal*, and the other *temporal*. Individuals are thought incapable of anticipating all the consequences that their actions cause, and indeed consequences that extend far into the future. It thus requires a court to evaluate future uncertain events as they would have occurred to the individual at the time the decision to act was made and enables a classification of those events/outcomes into those capable of being causally and temporally anticipated then (foreseeable) and those that weren't (unforeseeable). The law then attributes only those likely to be anticipated during the decision-making process into the liability or entitlement determination. All of this occurs in recognition of the basic idea that human cognition, as a descriptive matter, is necessarily limited.

Foreseeability thus works to eliminate from the liability/entitlement equation, events and outcomes that weren't capable of forming a part of the individual's *ex ante* decision-making process —either because the event is causally disconnected or temporally too far out. Very importantly, it looks to whether the event was *likely* to be anticipated, regardless of whether it actually was or wasn't —and thus focuses on cognition in an objective rather than subjective sense. Across different areas of the common law, this basic idea informs the way in which foreseeability as a mechanism is meant to operate.

B. Foreseeability and the Common Law

Foreseeability provides courts with a basis on which to mark the outer boundaries of liability in different contexts, by differentiating between events that were likely to have been anticipated by individuals and those that weren't. It is worth emphasizing though, that foreseeability adds little normative content on its own. In other words, the reasons *why* only events/outcomes that could have been anticipated ought to be attributed to an actor as part of the liability or entitlement determination remain external to the idea of foreseeability itself. They derive instead from the different policies and principles underlying the legal regime in question.

Across different areas of the common law, foreseeability does exhibit one important functional similarity. This relates to the common law's use of economic incentives to regulate future behavior. While the common law is concerned with the allocation of losses arising from an event, its basis for doing so is at the same time

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[88] Eisenberg, *supra* note __, at 215.

[89] For some prominent work using Simon's conception of bounded rationality to understand the effects on uncertainty on decision-making see OLIVER E. WILLIAMSON, MARKETS AND HIERARCHIES: ANALYSIS AND ANTITRUST IMPLICATIONS 22 (1975); OLIVER E. WILLIAMSON, ANTITRUST ECONOMICS: MERGERS, CONTRACTING, AND STRATEGIC BEHAVIOR 75 (1987).

forward-looking.[90] It thus attempts to additionally induce loss-avoiding (or cost-minimizing) behavior, by similarly situated actors in the future.[91] The possibility of liability for harm, or indeed the absence of the same, is thought to provide rational individuals with an incentive to modify their behavior *ex ante*, i.e., prior to the occurrence of the chain of events that resulted in the harm. The same holds true for benefits as well. The likelihood of a benefit-maximizing entitlement, it assumes, will have actors modify their behavior in such a way as to be able to claim the entitlement.

Interestingly though, the behavioral modification that the law expects —as a result of this incentive/deterrent effect— isn't infinite. Foreseeability comes into play here. The law recognizes that given what individuals are cognitively capable of factoring into their *ex ante* decision-making, events that are incapable of being anticipated and consequently the costs and benefits associated with them, are likely to have little influence on their decisions. It thus characterizes them as unforeseeable, in the recognition that they form no part of individuals' *ex ante* incentives for action. This general framework characterizes the common law's use of foreseeability across numerous areas.

1. Tort Law: Negligence. — Foreseeability's use is perhaps most prominent in the area of tort law, specifically in the context of liability for negligence. Foreseeability is used to determine the existence of a 'duty of care' to the plaintiff, or alternatively the existence of 'proximate causation' between the defendant's actions and the harm caused.[92] In both contexts, it helps courts to draw an outer limit to causal attribution.

In the context of the 'duty of care', courts ask whether the plaintiff in question was within the scope of the duty imposed on the defendant. They then limit the duty of care owed, to individuals and consequences foreseeable at the time that the risk was created.[93] Proximate cause on the other hand attempts to connect the defendant's conduct to the plaintiff's injury by eliminating consequences where the attribution would be impractical or unjust.[94] Foreseeability reappears here, when courts assert that proximate causation doesn't exist because the injury that occurred wasn't foreseeable to the defendant.[95]

In both contexts, foreseeability helps courts "sort consequences into the set of those payable by the tortfeasor, and the set of those found too distant … to be attributed

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[90] Some scholars refer to this process as the "social engineering" function of the common law. *See* Howard A. Latin, *Problem-Solving Behavior and Theories of Tort Liability*, 73 CAL. L. REV. 677, 677 n.2 (1985). Others call it the "incentive question". *See* POLINSKY, *supra* note __, at 130; Marcel Kahan, *Causation and Incentives to Take Care under the Negligence Rule*, 18 J. LEGAL STUD. 427 (1989).

[91] Latin, *supra* note __, at 677 (laying out the basic postulates of the idea of behavioral modification).

[92] *See* Cardi, *supra* note __, at 751.

[93] *See, e.g.*, Palsgraf v. Long Island R.R. Co., 162 N.E. 99 (N.Y. 1928).

[94] *See* DOBBS, *supra* note __, § 180, at 443; KEETON ET AL., *supra* note __, at 264 ("'Proximate Cause' — in itself an unfortunate term— is merely the limitation which the courts have placed upon the actor's responsibility for the consequences of the actor's conduct….Some boundary must be set to liability for the consequences of any act, upon the basis of some social idea of justice or policy.").

[95] *See, e.g.*, Read v. Scott Fetzer Co., 990 S.W. 2d 732, 737 (Tex. 1998); Doe v. Boys Club of Greater Dallas, Inc., 907 S.W. 2d 472, 478 (Tex. 1995); Neering v. Illinois Central R. Co., 50 N.E. 2d 497, 503 (Ill. 1943); Mudrich v. Standard Oil Co., 153 Ohio St. 31, 39 (1950); Ballard v. Uribe, 715 P.2d 624, 669 n.6 (Cal. 1986); Osborne v. Atlantic Ice & Coal Co., 177 S.E. 796, 796 (N.C. 1936).

to the tortfeasor.[96]" In the absence of this sorting, tortious liability would be unending. Individuals would be liable for outcomes that could be attributed to them, through an unending chain of factual events.[97] Foreseeability limits this.

Through a system of liability, tort law attempts to create an *ex ante* incentive for individuals to take adequate precautionary measures and exercise due care when their actions entail risks. When the cost of liability (multiplied by the probability of its occurrence) exceeds the cost of precaution/prevention, it is thought to generate an incentive for due care.[98] Unforeseeable consequences, disastrous as they may be, are characterized by low probabilities of occurrence and possibly additional costs associated with detecting, predicting and guarding against, them.[99] Consequently, liability for them is unlikely to create an incentive for greater care, because individuals will not factor them into their risk-creating activities.[100] Negligence law therefore eliminates it from its calculus. The endogenous explanation attributes this to limitations in human cognition, while the exogenous one would attribute it to the prohibitive costs associated with the process of acquiring information about these events.[101] Foreseeability thus ensures that the defendant is expected to have neither perfect information nor remain perfectly ignorant, but instead be in possession of the amount of information that he is capable of and is likely to use.[102]

2. Contract Law: Consequential Damages & Impossibility. — Contract law employs foreseeability in two unrelated contexts: consequential damages and the doctrine of impossibility of performance. Its basis for doing so remains the same.

Consequential damages are understood as damages for those losses that arise not directly from the party's breach, but rather as a logical consequence of them.[103] As a matter of rule, courts limit consequential damages to those losses that can were capable of being "in contemplation of both parties, at the time they made the contract, as the

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[96] Levmore, *supra* note __, at 132.

[97] *See* KEETON ET AL., *supra* note __, at 264 (noting how without such a rule "the consequences of an act go forward to eternity, and the causes of an event go back to the dawn of human events, and beyond" and that it would result in "infinite liability for all wrongful acts").

[98] *Id.* at 63-64.

[99] For an elaboration of this idea see Mark F. Grady, *Proximate Cause and the Law of Negligence*, 69 IOWA L. REV. 363, 385-90 (1984); Benjamin C. Zipursky, *Rights, Wrongs, and Recourse in the Law of Torts*, 51 VAND. L. REV. 1, 46-47 (1998).

[100] *See* LANDES & POSNER, *supra* note __, at 246-47; Grady, *supra* note __, at 388; Steven Shavell, Liability and the Incentive to Obtain Information About Risk, 21 J. LEGAL STUD. 259 (1992).

[101] The endogenous explanation also coincides with broader non-consequentialist explanations for negligence law, which in turn use the concept of 'outcome responsibility'. Stephen Perry, a proponent of outcome responsibility argues that the idea of 'avoidability' remains central to outcome responsibility. Avoidability refers to an agent having the "ability and opportunity to take steps" to avoid the harm, on the basis of what could have been "foreseen". *See* Stephen Perry, *Responsibility for Outcomes, Risk, and the Law of Torts*, *in* PHILOSOPHY AND THE LAW OF TORTS 72, 91 (Gerald Postema ed., 2001). Foreseeability thus plays a major role here, based on the notion of "epistemic probability" —or the idea that individuals base their decisions not on objective assessments of probability, but rather on inter-subjective standards of inductive reasoning. *Id.* at 97-98.

[102] Grady, *supra* note __, at 388-89.

[103] *See id.* at 565.

probable result of the breach of it."[104] Consequential losses are thus recoverable only if they were foreseeable to both parties when the contract was actually entered into.[105]

The idea here is that unless a party is made aware of grounds for liability beyond direct losses, he/she is unlikely to have bargained for it and consequently the consideration underlying the contract is unlikely to reflect the additional risk involved. Since liability in contract law is meant to be tied to the actual bargain, the basis of the contract, courts look to foreseeability at the time of the bargain. Again, the basis remains the law's expectation of limited behavioral modification. Unless a contracting party was likely to have foreseen a consequence, she is unlikely to have assumed the risk for it as part of the bargain.

Additionally, contract law exempts one or both parties from performance of the contract when a supervening event not anticipated renders performance impossible or commercially impracticable.[106] Courts here often employ the test of foreseeability to determine (objectively) whether an event was capable of being anticipated in order to excuse non-performance.[107] The rule thus holds a party to the terms of a contract unless the performance is rendered impossible by an "event that was unforeseeable" at the time the contract was made.[108] The idea here is that it is unobjectionable to have parties incur losses (as a result of non-performance) arising from consequences they ought to have seen and were therefore deemed to have been compensated for.[109] Central to the idea is thus that unforeseeable risks are incapable of having formed any part of the contractual bargain, while foreseeable ones are deemed part of it. Again, bounded rationality and limited behavioral modification remain motivating concerns.[110] Since contracting parties are unlikely to have foreseen all eventualities and risks when entering into the contract, courts are reluctant to allow recovery for them.[111]

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[104] 156 Eng. Rep. 145, 151 (Ex. Ch. 1854).

[105] *See* Jeffrey M. Perloff, *Breach of Contract and the Foreseeability Doctrine of* Hadley v. Baxendale, 10 J. LEGAL STUD. 39 (1981).

[106] For more on the doctrine and its development *See* John D. Wladis, *Common Law and Uncommon Events: The Development of the Doctrine of Impossibility of Performance in English Common Law*, 75 GEO. L.J. 1575 (1987); William H. Page, *The Development of the Doctrine of Impossibility of Performance*, 18 MICH. L. REV. 589 (1920); John D. Wladis, *Impracticability as Risk Allocation: The Effect of Changed Circumstances Upon Contract Obligations for the Sale of Goods*, 22 GA. L. REV. 503 (1988); Michelle J. White, *Contract Breach and Contract Discharge Due to Impossibility: A Unified Theory*, 17 J. LEGAL STUD. 353 (1988).

[107] *See, e.g.*, Waldinger Corp. v. CRS Group Engineers, Inc., 775 F.2d 781 (7th Cir. 1985); Lloyd v. Murphy, 25 Cal. 2d 48 (1944). *See also* E. Allan Farnsworth, Disputes Over Omission in Contracts, 86 COLUM. L. REV. 860 (1968). This test came to codified in the U.C.C. *See* U.C.C. § 2-615 (1994).

[108] John Elofson, *The Dilemma of Changed Circumstances in Contract Law: An Economic Analysis of the Foreseeability and Superior Risk Bearer Tests*, 30 COLUM. J.L. & SOC. PROBS. 1, 3-4 (1996).

[109] *Id.* at 4.

[110] *See* Paul L. Joskow, *Commercial Impossibility, the Uranium Market and the Westinghouse Case*, 6 J. LEGAL STUD. 119, 157 (1977) ("[T]he foreseeability requirement may only make sense if we introduce the concept of 'bounded rationality'".). *See also* Aaron J. Wright, Note, *Rendered Impracticable: Behavioral Economics and the Impracticability Doctrine*, 26 CARDOZO L. REV. 2183, 2200 (2005); Shirley R. Brener, *Outgrowing Impossibility: Examining the Impossibility Doctrine in the Wake of Hurricane Katrina*, 56 EMORY L.J. 461, 469, 477-80 (2006).

[111] *See id.*

3. Family Law: Premarital Agreements. — Courts treat premarital agreements[112] very differently from other contracts.[113] When it comes to enforcing them, they routinely examine their actual content for substantive fairness. As part of this process they often use a foreseeability test, which asks whether the situation upon divorce seems to be one that the parties could have anticipated when they entered into the agreement.[114] In situations where parties' circumstances have changed since the agreement was entered into, courts remain reluctant to enforce it.[115]

In many ways the test operates in the exact same way as the doctrine of impossibility, except that foreseeability of the event is now a condition precedent to enforcement, rather than non-enforcement. The driving idea is again bounded rationality —that there exists a limit to the changes to their situations that parties are likely to have contemplated prior to their marriage.[116]

4. Property Law: Coming to a Nuisance. — Premised on the principle of temporal priority, the doctrine of 'coming to the nuisance' is used to preclude nuisance actions by plaintiffs, who move to a location where a defendant's activities have been going on well before their move.[117]

As part of this inquiry, to determine whether a plaintiff should have been aware of the defendant's prior activities when moving there, courts often use a test of foreseeability. They thus ask if the injury being complained of was foreseeable to the plaintiff at the time of the move, and if answered in the affirmative, weigh it against the plaintiff.[118] Even in situations where the defendant's actions were temporally subsequent to the plaintiff's move, courts disallow the action when the defendant's polluting activities were unambiguously imminent —or, reasonably foreseeable.[119] This often comes into play in situations where the precise nuisance complained of originated after

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[112] *See* UNIF. PREMARITAL AGREEMENT ACT § 1(1), 9C U.L.A. 39 (2001).

[113] *See* 2 ALEXANDER LINDEY & LOUIS I. PARLEY, LINDEY AND PARLEY ON SEPARATION AGREEMENTS AND ANTENUPTIAL CONTRACTS § 110.70(2)(d) (2d ed. 2002); Allison A. Marston, Note, *Planning for Love: The Politics of Prenuptial Agreements*, 49 STAN. L. REV. 887, 897 (1997).

[114] *See* Kevin Servidea, Note, *Reviewing Premarital Agreements to Protect the State's Interest in Marriage*, 91 VA. L. REV. 535, 545 (2005).

[115] *See, e.g.*, Gant v. Gant, 329 S.E.2d 106, 115 (W.Va. 1985) (observing how substantive review entails no more than foreseeability); McKee-Johnson v. Johnson, 444 N.W.2d 259, 267 (Minn. 1989); Button v. Button, 388 N.W.2d 546, 552 (Wis. 1986);

[116] *See* Servidea, *supra* note __, at 541.

[117] For more on the doctrine see Roy E. Cordato, *Time Passage and the Economics of Coming to the Nuisance: Reassessing the Coasean Perspective*, 20 CAMPBELL L. REV. 273 (1998); Rohan Pitchford & Christopher M. Snyder, *Coming to the Nuisance: An Economic Analysis from an Incomplete Contracts Perspective*, 19 J.L. ECON. & ORG. 491 (2003); Donald Wittman, *First Come, First Served: An Economic Analysis of "Coming to the Nuisance"*, 9 J. LEGAL STUD. 557 (1980).

[118] *See* RESTATEMENT (SECOND) OF TORTS, § 840D (1979) (noting how it is but one of several factors to be considered, and not by itself a bar).

[119] *See* Wittman, *supra* note __, at 565. The case of East St. John's Shingle Co. v. Portland, 246 P.2d 554 (Or. 1952), is illustrative. There, the plaintiff acquired a parcel of land adjoining a slough that was being polluted by the city's sewage system. After moving to the land, the plaintiff complained that an increase in sewage levels in the slough was interfering with its business and causing a special nuisance to it. The court concluded that since the pollution, its continuance and increase, were all "reasonably foreseeable" to the plaintiff, its claim was barred. *Id.* at 563-64.

the plaintiff's move, but the general category of activities (of which the defendant's nuisance was but one) was known in the vicinity.[120]

As with other areas of law, the operating idea here is that reasonably foreseeable consequences ought to be a part of an individual's motives for action. Consequently, limiting liability for foreseeable events is meant to create an *ex ante* effect on individuals' moving decisions, by forcing them to factor the possibility of their occurring into their decisions.

5. Patent Law: Prosecution History Estoppel. — In patent law, the doctrine of equivalents allows courts in infringement actions, to look beyond a patent's exact claims, and to enjoin as part of the patent's exclusivity "unimportant and insubstantial changes" that do nothing more than take a defendant's actions outside the terms of a patent's literal coverage.[121] The rule of prosecution history estoppel in turn places a limit on a patentee's use of the doctrine of equivalents. It applies when a patentee during the prosecution process surrenders a claim or narrows its scope.[122] The rule then bars the patentee from later recapturing this ground via the doctrine of equivalents and operates as a rule of abandonment.[123]

In determining how much a patentee surrenders each time a claim is modified, courts have recently come to use foreseeability to differentiate between abandoned and unabandoned equivalents.[124] As used now, the rule now doesn't preclude patentees from using the doctrine of equivalents in relation to equivalents that were "unforeseeable" to them when they narrowed their claim, but rather only to objectively foreseeable ones.[125] The rationale being that when a patentee couldn't have foreseen an equivalent, he is unlikely to have abandoned it, whereas a foreseeable equivalent, unless expressly claimed may be deemed consciously abandoned. Unforeseeable equivalents are thus unlikely to have been factored into the claim-drafting process.

C. Foreseeability and Limits to Behavioral Modification

In each of the areas discussed above, foreseeability performs a similar function. Courts attempt to reconstruct actors' decision-making at the time of the triggering event —i.e., the event that triggers either the liability or the entitlement. In so doing, foreseeability, either directly or in its manifestation through the test of 'reasonable foreseeability', allows courts to eliminate from the reconstruction certain low-probability outcomes that couldn't have formed any part of the decision-making process.

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[120] *See id.* at 565 n.20; Gau v. Levy, 38 Ohio C.C. 235, 239 (1916); Bove v. Donner-Hanna Coke Corp., 258 N.Y.S. 229, 233 (App. Div. 1932).

[121] Graver Tank & Mfg. Co. v. Linde Air Products Co., 339 U.S. 605, 607-08 (1950).

[122] *See* Warner-Jenkinson Co. v. Hilton Davis Chemical Co., 520 U.S. 17, 30-31 (1997).

[123] *See* Douglas Lichtman, *Rethinking Prosecution History Estoppel*, 71 U. CHI. L. REV. 151, 153 (2004)

[124] For early analyses of this trend see Andrew C. Greenberg & Jeffrey R. Kuester, *The "Palsgraffing" of Patent Law: Foreseeability and the Doctrine of Equivalents*, INTELL. PROP. TODAY 17 (June 1998); Lemley et al., *Foreseeability*, *supra* note __. *See also* Meurer & Nard, *supra* note __, at 1970. *See also* Sage Products, Inc. v. Devon Industries, Inc, 126 F.3d 1420 (Fed. Cir. 1997). The test was adopted by the Supreme Court in Festo. Festo v. Shoketsu Kinzoku Kogyo Kabushiki Co. Ltd., 122 S. Ct. 1831 (2002)

[125] *Id.* at 1841; Richard Warburg et al., *What Territory Is Surrendered?*, 21 BIOTECH. L. REP. 551, 552 (2002); Lichtman, *supra* note __, at 154.

As a functional matter foreseeability sets a limit to the behavioral modification that the law expects to induce among actors. What is crucial in each of these examples therefore is identifying the realm of intended behavioral modification that the law (independently) aspires to achieve, and the way in which foreseeability works to temper that.

Area of Law	**Behavioral Decision**	**Foreseeability Limit**	**Rationale**
Tort Law	Precautionary behavior (*Defendant*)	Liability limited to foreseeable consequences	Costs arising from unforeseeable harm aren't cognitively processed.
Contract Law – Consequential Damages	Extent of consideration bargained for (*Defendant*)	Liability limited to foreseeable losses	Unforeseeable consequences aren't factored into the contractual consideration.
Contract Law – Impossibility	Allocation of non-performance risks (*Plaintiff*/*Defendant*)	Exemption for non-performance limited to unforeseeable events.	Risks associated with unforeseeable events aren't contractually allocated.
Premarital Agreements	Scope of agreement's coverage/anticipation (*Plaintiff*)	Coverage limited to foreseeable events.	Unforeseeable events aren't capable of being anticipated by parties.
Coming to a Nuisance	Decision to relocate to a new locality (*Plaintiff*)	Liability only for unforeseeable nuisances.	Unforeseeable nuisances wouldn't have factored into a parties' decision to move/relocate.
Prosecution History Estoppel	Claim modification during the prosecution process. (*Plaintiff-Patentee*)	Presumptive abandonment limited to foreseeable equivalents.	Unforeseeable equivalents couldn't have been anticipated and therefore abandoned.

Foreseeability thus ably instantiates the idea that individuals are less than perfectly rational, into different areas of the common law. It does so in recognition of the law's objective in influencing future behavior among actors and eliminating windfall gains and losses to parties. If copyright law is indeed about influencing creators' future behavior by inducing them to invest time and resources into the creative process in exchange for exclusionary control over a market for their work, it too is concerned with behavioral modification and should logically recognize the same limits on what creators (as actors) *are capable* of factoring into their decision-making.

IV. FORESEEABILITY IN COPYRIGHT LAW

What might copyright law look like if a test of foreseeability were introduced into its infringement inquiry, as a mechanism by which to eliminate any un-incentivized benefits (i.e., windfalls)? This Part attempts to answer that question by proposing a new

test of 'foreseeable copying' that would require a plaintiff to establish —as a precondition to a court awarding him damages for an alleged infringement— that the defendant's activities complained of (i.e., the act of infringement) were *objectively foreseeable* at the time of creation, the point at which copyright's incentive structure is meant to have influenced a creator's behavior. To begin with, consider the following hypotheticals:

Example 1: *K* a composer creates a musical work in the year 1955. At the time, television and broadcast technology are well-known, as is the process of using music for motion pictures. All the same, the video cassette recorder (VCR) hasn't been developed yet. In 1985 a few years after VCRs become commercially available, *S* makes a copy of *K*'s work on a VHS tape when it airs on television. This use implicates *K*'s exclusive right to reproduce the work.

Example 2: *C* a software developer creates a short software program to diagnose system errors. *N*, comes along and finding the code employed to be aesthetically pleasing, begins using large parts of it on a line of bed-linen that he begins to market. *N*'s use is likely to implicate *C*'s exclusive rights to reproduce and (perhaps) adapt the work.

Example 3: *JK*, an author, writes a bestselling work of fiction in the year 1995, at which time motion picture and related technologies are well-known. In 1997, *W* produces a motion picture based entirely on *JK*'s novel. *W*'s actions implicate *JK*'s exclusive adaptation right.

How should copyright law deal with each of these situations? Are there significant differences that merit differential treatment? The answer to the inadequacies of copyright's existing framework I argue here, lies in adopting a new correlatively structured limiting principle of foreseeable copying, the burden for which is placed on the plaintiff.

A. The Foreseeability Limit

If the law is willing to assume in other areas that unforeseeable events aren't motivational concerns (i.e., sufficient to be a part of the decision whether to do something), it would seem inconsistent with its basic premise to have a system of copyright that now assumes otherwise. Unforeseeable uses are thus *unlikely* to be part of a creator's inducement to create in exactly the same way that unforeseeable consequences aren't a part of an individual's decision whether to act. A test of 'foreseeable copying' would operationalize this idea.

In the abstract, foreseeability may appear to be an unworkable idea; one that is either likely to prove indeterminate in practice or interfere significantly with creators' incentives. Gordon, one of the earliest to consider its applicability to copyright, rejects it as a useful device in copyright law, observing that it is likely to present "intractable proof problems" and "dilute economic incentives".[126] This ignores altogether the nuance with

[126] Wendy J. Gordon, *On Owning Information: Intellectual Property and the Restitutionary Impulse*, 78 VA. L. REV. 149, 238 & n. 337 (1992). Gordon doesn't specify what foreseeability might indeed come to mean in the copyright context (specifically given its use elsewhere) and seems to equate foreseeability with the idea of "expected markets", thereby converting it into a subjective test, specific to individual creators. *See id.* at 238 n.337; Gordon, *supra* note __, at 1385 n.192-193; She does note however that the idea is "perhaps desirable in

which foreseeability has come to be routinely used as an objective indicator in a host of other areas, and more importantly the basic idea underlying its use in different contexts: the existence of an outer limit to any expected behavioral modification, i.e., bounded rationality.

1. 'Foreseeable Copying'. — Under the current law, protection under copyright begins the moment a work is created, with creation being defined as the point when a work, eligible for protection, is fixed in a tangible medium for the first time.[127] Protection however is automatic —with there being no obligation on the creator to comply with any formalities as a prerequisite for protection. Once protected (i.e., created) the law grants the creator a finite set of exclusive rights in relation to the work and allows the creator to initiate an action for infringement when one of those rights is interfered with.[128]

When the creator (plaintiff) commences an action for infringement against a defendant, the law places the burden on him to establish two main elements: (i) ownership of a valid copyright, and (ii) copying by the defendant of the original (i.e., protected) elements.[129] To establish ownership, the plaintiff usually has to establish that the work is entitled to protection per the statutory requirements and that he is the valid owner of the rights in it.[130] However, the law requires that the work be registered with the Copyright Office *before* an action for infringement is brought and this registration serves as *prima facie* evidence of ownership and satisfaction of the statutory prerequisites for protection.[131] Consequently, during an infringement action courts focus on the second of the two elements: copying.

Since the question of copying isn't entirely factual, a plaintiff needs to convince a court not just that the defendant appropriated part of his work, but also that the portion appropriated is protectable as such.[132] This is done using the substantial similarity requirement, discussed previously. Once this is done, the requirement of foreseeability would have courts go one step further and require the plaintiff to show not just factual and wrongful copying, but additionally foreseeable copying.

Foreseeability would thus operate as a third element in the determination of copying. In addition to showing factual copying and substantial similarity, the plaintiff would now have to satisfy a requirement of 'foreseeable copying', which would ask the question *whether the defendant's use of the protected work (i.e., copying) was*

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the abstract" since new markets might be irrelevant to creative incentives. *Id.* at 238. Interestingly though, in later work, Gordon does recognize that the idea of foreseeability as used in tort law does represent an outer limit to incentives. However, she argues that copyright's limited term gives effect to this limit independently, seemingly obviating the need for its independent incorporation into copyright doctrine. *See* Wendy Gordon, *Copyright as Tort Law's Mirror Image*, 34 MCGEORGE L. REV. 533, 538 (2003). *See also* Shyamkrishna Balganesh, *Rethinking Copyright: Property Through the Lenses of Unjust Enrichment and Unfair Competition*, 155 U. PA. L. REV. PENNUMBRA 345, 349-50 n.23 (2008); Christina Bohannan, *Copyright Harm, Foreseeability, and Fair Use*, 85 WASH. U. L. REV. 969 (2008) (using the idea indirectly in arguing that the fair use analysis should focus on the occurrence or absence of "copyright harm" to the plaintiff).

[127] *See* 17 U.S.C. § 101 (2005).

[128] *Id.* § 106.

[129] *See* 4 NIMMER, *supra* note __, at § 13.01.

[130] *Id.* at § 13.01[A].

[131] 17 U.S.C. §§ 410(c), 411 (2005).

[132] 4 NIMMER, *supra* note __, § 13.01[B] (noting that "few courts or commentators have historically differentiated among" them).

foreseeable to the plaintiff —in form and purpose— when the work was created. It is critical to note that the question being posed is one of foreseeability and not foresight. It isn't relevant whether the plaintiff actually foresaw the defendant's form of copying; only that the copying was foreseeable, in light of the information available to him at the stage of creation. In addition, by focusing the inquiry on the point of creation (and not after), it prevents a plaintiff from using hindsight in the inquiry.[133]

It is worth emphasizing that the foreseeability here relates to the 'form and purpose' of the defendant's copying and not to other factors, such as its magnitude or monetary consequences. In some ways this would track tort law's rule on 'eggshell skull' plaintiffs, where a defendant isn't allowed to argue that the magnitude/extent of the harm (or loss) suffered by the plaintiff wasn't foreseeable because it depended on attributes specific to the plaintiff (such as a pre-existent medical condition).[134] Thus, if harm was a foreseeable consequence of the defendant's actions, it matters little that the plaintiff was an ailing old woman, rather than a teenager in perfect health. In similar vein, it should matter little to the foreseeability determination that the defendant copied the entire book, or made a million copies of it, rather than a few. Foreseeability, under the test, as in tort law, would ignore magnitude.

In this formulation, foreseeability would focus on the defendant's actions (i.e., the copying), rather than function as an open-ended device that courts might then connect to the notions of 'harm' or 'market'. Any reliance on these ideas as independent concepts, even when prefaced by the question of foreseeability (i.e., as "foreseeable harm" or "foreseeable market"), will inevitably depend on a set of first-order assumptions that need to be justified on their own.[135] Questions of appropriate baselines, market substitutability, remoteness and the like enter the equation with the result that the inquiry begins to focus less on the creator's *ex ante* incentive at the time of creation and more on these other elements.[136] 'Foreseeable copying' on the other hand obviates any reliance on first-order assumptions and connects foreseeability as a behavioral device with the defendant's action that is always at the core of an infringement dispute, copying.

Given that copying in one form or another is central to every action for infringement, the test of foreseeability would operate regardless of which exclusive right the plaintiff alleges the defendant to have interfered with. Thus in most situations where substantial similarity is easily satisfied, the foreseeability test would be too. But in situations where the defendant's copying is a consequence of an innovative use that doesn't owe its existence to the creator, it begins to play a significant role. Thus, uses of prior works such as the Google Library Project that employ prior works in a new way are likely to satisfy the substantial similarity test; but whether they constitute copying would now depend on the plaintiffs establishing that the use was within the realm of foreseeable

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[133] Hindsight bias is often a fact that scholars argue influences the infringement question in all of intellectual property law. *See infra* Section V.C.

[134] *See* Vosburg v. Putney, 78 Wis. 84, 47 N.W. 99 (1890); Benn v. Thomas, 512 N.W. 2d 537 (Iowa 1994).

[135] *See, e.g.*, Bohannan, *supra* note __, at 7 (attempting to understand copyright harm as "foreseeable harm"). Bohannan seems to implicitly connect the idea to inferences of market substitutability. As a consequence, foreseeability ceases to function as an independent behavioral limit, since unforeseeable uses in her model could still form part of the entitlement upon an independent showing of substitution. *See id.* at 21.

[136] For a useful discussion of some of these ideas, as applied to copyright see Wendy J. Gordon, *Of Harms and Benefits: Torts, Restitution, and Intellectual Property*, 21 J. LEGAL STUD. 449 (1992).

uses when the work was created.[137] The same would be the case for uses involving new media such as cable television, home recording or the digitization of music.

As previously noted, under current doctrine, questions of this nature are relegated to the fair use inquiry. Given its position as an affirmative defense, the burden then falls to the defendant to show how his actions (of copying) weren't harmful to the plaintiff.[138] It places the entire focus on the defendant, glossing over the uses that the plaintiff might have legitimately expected to control *in creating the work*. A test of foreseeability (or foreseeable copying) shifts the burden onto the plaintiff to establish this as part of the infringement inquiry now and thereby connect his work to the defendant's use via the underlying theory of incentives.

2. Mirroring Non-obviousness. — The foreseeable copying test requires a court to go back in time to the year in which the work was created (and copyright attached to it) in order to determine whether the defendant's present use was capable of being anticipated then. In many ways, its retrospective nature mirrors patent law's requirement of non-obviousness. The law requires courts to invalidate a patent if the subject matter of the invention would have been obvious to a person having ordinary skill in the art (i.e., the PHOSITA) "at the time the invention was made".[139] To determine whether an invention was non-obvious, courts are thus required to put themselves not just in the shoes of a potential inventor, but base their finding on his/her likely awareness at the time of the invention.[140] In constructing the entitlement (i.e., the patent), courts thus go back in time to assess what should have been known to the inventor when the invention was made and thereupon validate the invention only if it wasn't obvious *then*.

Foreseeable copying would now have courts do just the opposite. It asks courts to determine whether the defendant's (present) use should have been 'obvious' to the creator (the plaintiff) at the time of the creation, not to constrict the entitlement but rather to expand it. It might thus adopt an equivalent of the PHOSITA standard, calibrated to the world of creators; one where a creator is presumed at minimum, to be *informed* —in the sense that he/she knows of the different mediums in existence, in which the work can be employed; and *rational* —intends to either directly or indirectly control the markets for those different mediums.

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Going back then to our earlier examples, involving *K*, *C* and *JK*.

In 1990, assume that *K* were to commence an action for copyright infringement against *P*, a producer who uses the work in a television broadcast without a license and *S*, who makes copies of it using a VCR. Under the proposed requirement of foreseeability,

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[137] *See* JONATHAN BAND, THE GOOGLE LIBRARY PROJECT: THE COPYRIGHT DEBATE 1 (2006).

[138] 4 NIMMER, *supra* note __, at §12.11[F].

[139] 35 U.S.C. § 103(a) (2005). For more on the PHOSITA standard see Rebecca S. Eisenberg, *Obvious to Whom? Evaluating Inventions from the Perspective of PHOSITA*, 19 BERKELEY TECH. L.J. 885 (2004).

[140] *See* In re Kotzab, 217 F.3d 1365, 1369 (Fed. Cir. 2000) (noting the importance of relying exclusively on "then-accepted wisdom in the field" in making the determination); In re Dembiczak, 175 F.3d 994, 999 (Fed. Cir. 1999) (noting the importance of "casting the mind back to the time of invention"); Kloster Speedsteel AB v. Crucible, Inc., 793 F.2d 1565, 1574 (Fed. Cir. 1986) (emphasizing the importance of focusing the decision-maker's mind on what would have been obvious "when the invention was made").

the onus would be on *K* to establish that both *P*'s and *S*'s use of the work constitute forms of 'foreseeable copying' —that were foreseeable in 1955, i.e., when *K* created the work. *K* would have little problem doing this in relation to *P*'s actions, given that television broadcasts were well-known in 1955, but vis-à-vis *S* his case would be more difficult, since VCRs were neither known nor invented in 1955.[141] A court is thus likely to conclude that since video recording is "markedly different" from mere television viewing, the use of the work therein wasn't foreseeable and *S*'s use isn't foreseeable copying.[142]

In identical vein, the burden would be on *C* to establish that *N*'s use of his literary work as part of a new line of bed-linen was foreseeable (even if as a derivative work) at the time of creation. While the inquiry doesn't assume the question to be answered one way or the other, a court is more likely than not to find against *C*. However, in *JK*'s case, the outcome is likely to be different. There, since motion picture technology and the use of literary works as storylines therein were well-established practices when *JK* created the work, a court is likely to conclude that *W*'s use was indeed foreseeable, amounting to an act of infringement.

JK's case serves to highlight an important point. Merely because a defendant's use is different from the creator's doesn't mean that it automatically comes to be exempted from liability. Not all new uses are unforeseeable. Where new uses are indeed foreseeable, as in the case of traditional derivatives, the foreseeability test is likely to come out in favor of the plaintiff, with few problems. The reason for this is simple: the possibility of a movie adaptation might have formed some part of *JK*'s incentive in creating the work.

While on the face of things then, a test of foreseeable copying appears to be a perfectly reasonable idea when viewed in the context of copyright doctrine, its acceptability will however depend on two additional factors: (i) being *compatible* with copyright's role as an inducement for creativity, and (ii) offering courts a *workable* basis on which to construe the copyright grant. These are each considered in turn.

B. Compatibility: Foreseeability and Copyright's Incentive Structure

A test of foreseeability is likely to limit a creator's control over the uses to which his or her creation may be put. In specific, it would eliminate those objectively unforeseeable at the time of creation, from the scope of the entitlement. What effect, if any, is this likely to have on creators' *ex ante* incentives to create? Is knowing that they are unlikely to be able to control unanticipated uses of their work likely to affect their inducement to create the work to begin with? Alternatively, will it impact their incentive to distribute the work?

This Section argues that a foreseeability-based limit is perfectly compatible with copyright's basic structure as an incentive.

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[141] The factual scenario here tracks those of a well-known licensing dispute, where the question was whether the grant of television rights covered the right to distribute the content on video-cassettes. The Court, using a foreseeability standard answered the question in the negative. Cohen v. Paramount Pictures Corp., 845 F.2d 851 (9th Cir. 1988).

[142] *See id.* at 854.

1. Open-ended Expectations. — Given the development of technological media over the last several decades and the incremental extension of copyright terms by Congress that has followed, one might argue that creators today rightfully *expect* such developments to occur, and are indeed driven (i.e., incentivized) by the expectation.[143] If they tend to factor these expectations into their *ex ante* creative decision-making, shouldn't copyright vindicate them *ex post*?

To begin with, it is worth noting that these open-ended expectations differ from the paradigmatic incentive. Unlike incentives that are grounded in ascertainable market indicators, expectations rely almost entirely on predictions that derive from events in the past that have no independent reason to repeat themselves in the future. Thus, a creator's expectation in creating a work today, hoping that at some time in the future Congress is likely to retroactively extend the copyright term simply because it has done so before is markedly different from her incentive in creating the work, attempting to satisfy an identifiable demand for works of that nature and generating profits from the process. Similarly, a creator's belief that her work will come to be used in association with some *wholly unforeseeable* medium, merely because such unforeseeable media emerged in the past, represents an expectation that isn't necessarily grounded in anything other than a bald prediction that a historical contingency is likely to repeat itself.[144] It isn't readily apparent that copyright needs to validate every *ex ante* estimate/expectation of a creator.

Yet, one might still want such expectations to form some part of copyright's incentive structure —in the same way as a lottery with fluctuating odds does in the end provide individuals with an incentive of some kind. Indeed current policy tends to favor its inclusion. As Sara Stadler notes, courts and legislators are often driven by creators' 'expectations' (determined *ex post*) in constructing copyright's actual incentive, creating a cycle that results in the outward expansion of copyright's exclusive rights regime.[145] The process of determining the incentive is then indirectly delegated to creators —who equate their open-ended expectations with their incentives— resulting in anything short of perfect control being viewed as less than optimal.[146] A large part of this of course derives from the obvious use of hindsight to reconstruct the *ex ante* incentive. Having brought the work into existence, creators argue that they wouldn't have done so had they known that their open-ended expectations would not be realized, causing courts and policy-makers to impute this *ex post* realization into their *ex ante* decision-making.

Leaving aside the question of whether this expectation should at all be a part of copyright's incentive structure if indeed we remain concerned with a satisfactory (as

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[143] Indeed the Supreme Court seems to have adopted precisely such an argument in its validation of the Sonny Bono Copyright Term Extension Act. *See* Eldred v. Ashcroft, 537 U.S. 186, 215 (2003). There the Court made reference to Congress' "consistent historical practice" of extending copyright's term and applying the extension retroactively. *Id.* at 204.

[144] To the extent that it is indeed grounded in an awareness of the industry in question and technological developments therein, it is likely to be characterized as 'foreseeable' under the standard and test described earlier. The discussion here therefore is restricted to predictions and expectations that aren't grounded in such an awareness.

[145] Stadler, *supra* note __, at 454-56. For a slightly different argument on how expectations influence risk aversion thereby feeding back into the scope of the rights granted see James Gibson, *Risk Aversion and Rights Accretion in Intellectual Property Law*, 116 YALE L.J. 882 (2007).

[146] *Id.* at 17.

opposed to optimal, or maximal) incentive, the question that persists is whether the test of 'foreseeable copying' is likely to directly interfere with or diminish, that expectation. Here, the fact that the test is structured as an uncertain standard rather than as a bright-line rule is likely to make a major difference.[147]

Unlike rules, standards are characterized by their relegating the process of giving content to the law and its application, to a point in time after an action has taken place, i.e., *ex post*.[148] Rules are generally more costly to create upfront (given the precision they involve), while standards transfer those costs to the adjudicative process.[149] Viewed *ex ante* then, standards thus tend to be somewhat indeterminate (or fuzzy), characterized by the uncertainty of their applicability to a specific context. This uncertainty it turns out though, is responsible for minimizing the law's impact on creative decision-making.

Intellectual property laws —patent and copyright in specific— contain innumerable vague standards.[150] In many ways this is largely beneficial. Standards enable courts to calibrate the scope of the entitlement to its underlying purpose and function.[151] This is especially true when it comes to standards that work to limit an entitlement. Incentives tend to vary from one inventor/creator to another or one area of application to another, necessitating significant contextual fine-tuning.[152] In these contexts, a bright-line rule would have the effect of proving insufficient for creators/inventors who need *ex ante* incentives in excess of the curtailed entitlement, since the curtailment would be known upfront. While a standard wouldn't necessarily limit the entitlement any less than an equivalent rule, it would only ever curtail the entitlement *ex post*, thereby providing the creator/inventor with the necessary (but probabilistic) incentive upfront. One might thus call this the perverse effect of uncertainty on incentives. Because a creator/inventor doesn't know *ex ante* that the entitlement is likely to exclude certain things, the impact that the standard has on his incentive is minimal.

Indeed this has for long been recognized to be true in the patent law context. Patent law, much like copyright, is concerned with providing inventors with an incentive in the nature of an exclusionary right. Since the process of innovation that patent law is concerned with tends to entail greater investment of time and effort, the incentive that it

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[147] For an overview of the rule-standard distinction see Ronald Dworkin, *The Model of Rules*, 35 U. CHI. L. REV. 14, 22 (1967); Duncan Kennedy, *Form and Substance in Private Law Adjudication*, 89 HARV. L. REV. 1685 (1976); Louis Kaplow, *Rules Versus Standards: An Economic Analysis*, 42 DUKE L.J. 557 (1992); Cass R. Sunstein, *Problems with Rules*, 83 CAL. L. REV. 953 (1995).

[148] *See* Kaplow, *supra* note __, at 560.

[149] *Id.* at 557.

[150] Gideon Parchomovsky & Kevin A. Goldman, *Fair Use Harbors*, 93 VA. L. REV. 1483, 1503 (2007).

[151] This distinction between rules and standards, translates most directly into the difference between the strategies of 'exclusion' and 'governance' that property law uses to allocate and enforce its grant of rights. *See* Henry E. Smith, *Exclusion Versus Governance: Two Strategies for Delineating Property Rights*, 31 J. LEGAL STUD. S453 (2002). Exclusion strategies such as trespass, much like rules, entail high up-front delineation costs, and low ex post enforcement costs, while governance strategies such as nuisance, do just the opposite. *See* Henry E. Smith, *Exclusion and Property Rules in the Law of Nuisance*, 90 VA. L. REV. 965 (2004). Governance strategies enable courts to carry-out balancing exercises as circumstances demand, and thereby contextualize the entitlement to an exogenously defined purpose.

[152] Michael Carroll identifies this as the problem of "uniformity cost" in intellectual property law and notes that context-specific standards serve to minimize theses costs. *See* Michael W. Carroll, *One For All: The Problem of Uniformity Cost in Intellectual Property Law*, 55 AM. U. L. REV. 845, 856, 890 (2006).

needs to provide innovators with has to be much stronger —manifested in the scope and coverage of its exclusionary rights framework.[153] Anything weaker than these broad incentives, is unlikely to result in the necessary investment of resources into the process of innovation. Notwithstanding the need for these strong incentives, scholars have argued that standards-based *ex post* limits on patent law's grant of exclusionary right are likely to have little impact on the original incentive. This analysis is particularly instructive here.

Patent rights are inherently probabilistic by nature. Their existence, validity, and scope are contingent on a host of considerations, most of which are outside the owner's (i.e., creator's) control.[154] Uncertainty thus manifests itself in more ways than one, all the way until the right is adjudicated upon. Consequently, contingent *ex post* limits have little impact on the original incentive, given the extent of uncertainty there exists to begin with. In a counter-intuitive move, Ian Ayres and Paul Klemperer thus argue that increasing patent law's overall uncertainty through under-inclusive standards (as opposed to over-inclusive rules), so as to reduce the system's predictability is likely to curb monopolistic pricing *without impacting a patentee's original incentive.*[155] They thus advocate the use of standard-based doctrines such as the 'reverse doctrine of equivalents'—which allows a defendant to avoid liability *ex post* by showing that his actions weren't within the 'principle' of the claimed invention, even though they fall within its scope when literally construed.[156] Such doctrines, they argue, have little effect on a patentee's original incentive to invest resources into the innovation process, even though the possibility of its being used later on (to diminish the entitlement) is known up-front.[157] Since its invocation and use depend on events, the occurrence of which are inherently unpredictable (i.e., unforeseeable), they have little impact on a patentee's *ex ante* incentives.

To be sure, Ayres and Klemperer recognize that this increase in the uncertainty of enforcement needs to be compensated for, in order to avoid interfering significantly with an innovator's incentive.[158] Consequently, they advocate extending a patent's duration (again *ex post*) to off-set any increased uncertainty, based on a system of Ramsey pricing.[159] They propose implementing this by allowing patentees to leverage their power into the future, or alternatively expanding the geographic/product scope of the patent.[160] In the copyright context, the Ramsey intuition side of their model could be implemented in more ways than one. First, if enhancing copyright's term of protection is indeed a possible off-set, one might argue that this is in some ways already in place, given the

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[153] This is seen most prominently in the absence of an independent invention defense and a fair use limitation in patent law. For more on this see Maureen A. O'Rourke, *Toward a Doctrine of Fair Use in Patent Law*, 100 COLUM. L. REV. 1177, 1184-87 (2000).

[154] On the probabilistic nature of property and intellectual property rights see Mark A. Lemley & Carl Shapiro, *Probabilistic Patents*, 19 J. ECON. PERSPECTIVES 75 (2005); Keith Leffler & Cristofer Leffler, *The Probabilistic Nature of Patent Rights: A Response to Kevin MacDonald*, ANTITRUST, Summer 2003, at 77.

[155] *See* Ian Ayres & Paul Klemperer, *Limiting Patentees' Market Power Without Reducing Innovation Incentives: The Perverse Benefits of Uncertainty and Non-Injunctive Remedies*, 97 MICH. L. REV. 985 (1999).

[156] *Id.* at 1025.

[157] *Id.* at 1025-26.

[158] *Id.* at 1001.

[159] *Id.* at 1026-27.

[160] *Id.* at 1026-28.

periodicity with which Congress extends terms retroactively without a valid empirical basis for the extension. Using the Ayres-Klemperer framework then, current copyright policy already reflects elements of staggered-duration Ramsey pricing, making the introduction of additional uncertainty via a foreseeability test, the equivalent of their "stationarity intuition".[161] In the alternative however, another option would certainly lie in minimizing reliance on the currently incomprehensible fair use doctrine; something the foreseeability test is likely to achieve on its own, by moving most of these (i.e., fair-use related) issues to the entitlement delineation process.

In more simple terms, Robert Merges argues that the reverse doctrine of equivalents, as an *ex post* limit, is likely to have no more than a minimal effect on the original incentive, given the numerous other contingencies that the patentee is faced with even before that stage is reached.[162] The inherently probabilistic nature of the rights-bundle thus generates sufficient uncertainty on its own, such that the uncertainty that the vague standard adds to it, is marginal.

Others such as Michael Meurer and Craig Nard even go one step further. They argue that limiting patent law's doctrine of equivalents —which allows a patentee to control uses of the invention that weren't foreseeable and therefore not literally covered by the patent's claims— is likely to have little to no impact on the original incentive.[163] As long as the entitlement allows the inventor to cover his/her appreciation of "industry and technology trends", they argue that curtailing the entitlement *ex post*, by eliminating unforeseeable developments from its coverage is unlikely to have an appreciable impact on incentives.[164] They thus observe that the incentive isn't harmed when "when, ex post, she is denied [protection] over technology that she did not foresee ex ante.[165]"

When carving unforeseeable uses out of the entitlement *ex post* isn't thought to be problematic in the context of patents, where the incentive is much closer to the ideal of 'perfect control', it is indeed more than plausible that a similar limit is likely to be even less problematic in the copyright context. First off, copyright's entitlement structure is certainly more contingent/probabilistic than is its equivalent in patent law. The absence of an administrative agency validating the grant at first instance, coupled with its emphasis on a showing of actual and actionable copying, make its grant more uncertain. Secondly, our focus here is on the impact that a foreseeability limit is likely to have on unpredictable expectations. To the extent that these expectations aren't based on industry and technology trends but rather on stochastic occurrences whose probabilities aren't ascertainable, they only ever enter the equation with a very high initial level of uncertainty. Consequently, any additional uncertainty that the test as an *ex post* standard, will introduce and thereby impact the overall incentive structure, is likely to be insignificant.

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[161] *See id.* at 989-90.

[162] Robert P. Merges, *Intellectual Property Rights and Bargaining Breakdown: The Case of Blocking Patents*, 62 TENN. L. REV. 74, 101-03 (1994).

[163] *See* Michael J. Meurer & Craig Allen Nard, Invention, *Refinement and Patent Claim Scope: A New Perspective on the Doctrine of Equivalents*, 93 GEO. L.J. 1947, 1996 (2005); Julie E. Cohen & Mark A. Lemley, *Patent Scope and Innovation in the Software Industry*, 89 CAL. L. REV. 1 (2001).

[164] Meurer & Nard, *supra* note __, at 1997.

[165] *Id.* at 1998.

Additionally, *ex post*, indeterminate constraints on exclusivity are rather well-known in copyright law, in the form of the fair use doctrine.[166] Structured as a standard, it too renders the exclusivity contingent on factors that are often outside a creator's control, and in many ways unpredictable.[167] In circumstances where a court concludes that the defendant's use is sufficiently transformative, or substantially non-infringing, it effectively circumscribes the grant, *ex post*. Few argue that fair use needs to be eliminated *because* its contextual *ex post* uncertainty interferes with creator incentives.[168] The uncertainty of the standard, if anything, is likely to deter potential users (i.e., putative infringers) from treading too close to the boundaries of impermissible copying.[169] Indirectly therefore, this is likely to preserve creators' original incentives by deterring significant infringement.

What *is* more likely to interfere with creators' original incentives is a bright-line rule that limits copyright's grant *ex ante*. Proposals aimed at limiting a copyright holder's bundle of rights *ex ante* contextually thus suffer from this drawback. Consequently, a clear *ex post* standard is preferable to a vague or bright-line rule that would limit the grant *ex ante* and thereby interfere with a creator's incentives, as others have noted in the patent context.[170]

If copyright's incentive structure thus entails avoiding any harm to creators' expectations, regardless of their bases, the foreseeability test being structured as a fuzzy-standard will ensure that any impact it is likely to have on these expectations is at best, marginal.

2. Prospect Theory. — A second argument derives from a variant of incentive theory that finds application in the world of patents, and is commonly referred to as the 'prospect theory'.[171] According to this theory, the exclusive rights regime operates much like a mineral prospecting system with the creator being given an incentive to invest

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[166] *See* 17 U.S.C. § 107 (2005).

[167] *See* Douglas Lichtman, *Property Rights in Emerging Platform Technologies*, 29 J. LEGAL STUD. 615, 637-38 (2000) (observing that fair use excuses infringement whenever "public policy favors the result" and that it is an "all-inclusive, equitable inquiry").

[168] To the contrary, the dominant view appears to be that the fair use doctrine stifles innovation by not allowing defendants sufficient leeway to use protected works. *See* Kevin M. Lemley, *The Innovative Medium Defense: A Doctrine to Promote the Multiple Goals of Copyright in the Wake of Advancing Digital Technologies*, 110 PENN. ST. L. REV. 111 (2005); Adrienne J. Marsh, *Fair Use and New Technology: The Appropriate Standards to Apply*, 5 CARDOZO L. REV. 635 (1984).

[169] *See* Parchomovsky & Goldman, *supra* note __, at 1498 (noting that "the vagueness of the fair use standard" causes actors to "err on the side of safety and either overcomply (by minimizing the use of protected works) or overinvest in precautions").

[170] *See* Ayres & Klemperer, *supra* note __, at 1024 (noting how under-inclusive standards are preferable to over-inclusive rules and standards). Quite apart from interfering with creator incentives, replacing the current standard-based approach with a rule-based one is also likely to alter a copyright owner's willingness to bargain with a potential user, as a consequence of the uncertainty being eliminated altogether. *See* Jason Scott Johnston, *Bargaining Under Rules Versus Standards*, 11 J.L. ECON. & ORG. 256, 258 (1995); Dan L. Burk, *Muddy Rules for Cyberspace*, 21 CARDOZO L. REV. 121, 140 (1999). *But see* Parchomovsky & Goldman, *supra* note __, at 1502 (advocating the introduction of specific contextual fair use rules into copyright doctrine).

[171] The prospect theory is attributed to the work of Edmund Kitch. *See* Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265 (1977). *See also* John F. Duffy, *Rethinking the Prospect Theory of Patents*, 71 U. CHI. L. REV. 439 (2007). This theory bears no connection to the prospect theory in behavioral economics. *See* Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 ECONOMETRICA 263 (1979).

further in the creation and improve upon it, without fear that free-riders will appropriate the benefits of it.[172] While the theory originated in the context of patents, it is often employed as a justificatory device in copyright law.[173]

The prospect argument assumes that giving creators greater control *ex ante*, incentivizes *their own* actual development of new uses *ex post*.[174] It thus ties in with what some describe as copyright's distributional incentive —the idea that copyright exists to give creators an incentive to both create *and distribute* their work publicly. Control over unforeseeable uses then, it might be argued, gives them an incentive to develop after-markets that weren't obvious to them at the time of creation. One might thus characterize the argument as one relating to an *ex post* incentive.[175]

First off, it isn't readily apparent why a creator is best placed to control and direct future development of the creation.[176] Historically, some of the most beneficial new uses for works and ideas have almost never come from creators and inventors of the originals.[177] Most new uses entail the development of new technologies of distribution and thus involve inventive processes unconnected with those of a creator (artistic, literary, etc.). Consequently, barring entities that engage in both creativity and research into new mechanisms of distribution —unquestionably, a small minority— the two are unlikely to go together. The process of creation in copyright law is additionally far less resource intensive than is the process of developing new mechanisms (i.e., technologies) of distribution. As a result, there seems little reason to believe that the creator of an expressive work is best placed to invest in the management of, or in developing new uses for that work, when that investment is likely to be orthogonal to, and far in excess of, the one made for the original creation. Thus for instance, it isn't clear why the Beatles (or any music group) might have been expected to invest in the development of digital recording, just because they created the expressive work, the subject of the recording. Unlike in patent law then, there remains little basis to believe that the original creator is best suited to developing new uses, a fact that is borne out vividly in copyright cases involving new uses.[178]

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[172] *Id.* at 276.

[173] *See* Lemley, *The Economics of Improvement in Intellectual Property Law*, *supra* note __, at 1047 ("While Kitch makes his argument in the patent context, it is copyright rather than patent law that seems to have taken his theory to heart."). Abramowicz argues that the dominant theme in the prospect theory is the idea of avoiding wasteful rent dissipation, and attempts to use it to explain copyright law's protection for derivative works. *See* Abramowicz, *supra* note __, at 355.

[174] *See* Lemley, *Justifications*, *supra* note __, at 133-35 (describing the use of this theory to justify copyright's retrospective term extension under the CTEA).

[175] *Id.* at 132.

[176] *Id.* at 136. As Lemley rightly notes, this logic flies in the face of the fundamental idea that competition —and de-concentration in markets— is preferable for simple efficiency reasons. Indeed this principle dominates antitrust law's prohibition on tying and other forms of exclusive dealing arrangements. *See* Keith N. Hylton & Michael Salinger, *Tying Law and Policy: A Decision Theoretic Approach*, 69 ANTITRUST L.J. 469 (2001); Ward S. Bowman, Jr., *Tying Arrangements and the Leverage Problem*, 67 YALE L.J. 19 (1957); Jay Pil Choi, *Tying and Innovation: A Dynamic Analysis of Tying Arrangements*, 114 ECON. J. 83 (2004).

[177] *See id.* at 137 & n.29. He notes: "Creators are often terrible managers. They frequently misunderstand the significance of their own invention and the uses to which it can be put."

[178] *See* cases cited at *supra* note 3.

In response, it might be argued however that even if creators themselves aren't best-placed to invest in further development, they might license this out to others; copyright's grant of exclusivity then becomes necessary to incentivize these others to invest in the development process. In this formulation, exclusivity in the post-creation market functions as a distributional incentive, not for creators, but rather for independent distributors (e.g. record companies).

Now even if distributors do need an incentive to invest in developing the market for new distribution mechanisms it seems to make little sense to vest it in the creator, on the assumption that the rights will come to be allocated most efficiently. In a world of zero transaction costs, this would indeed make no difference; but where these costs are significant and remain coupled with the problem of potential holdouts (e.g., a creator refusing to license the work to a distributor for whimsical reasons), the argument seems fairly problematic. If distributional incentives are indeed necessary, a more plausible basis for it might lie in creating an independent entitlement and vesting it in the distributor directly.[179]

One of the main concerns motivating the prospect theory, in the patent context, is the idea that if an inventor isn't allowed to control future uses and development of the invention early on, this is likely to result in wasteful duplicative efforts among inventors. An improver might decide to take the inventor's nascent idea, develop and commercialize it, regardless of the inventor doing the exact same thing (perhaps in the belief that he is likely to be the first to do so). This, the prospect theory argues, results in a redundancy, or deadweight loss, that is clearly of no benefit socially.[180] Multiple inventors might expend resources not just to get the initial patent monopoly, but also later on, to improve and commercially develop the invention. Since such efforts are likely to be wasteful, the prospect theory argues for a forward-looking patent regime that extends a patentee's grant beyond the immediate idea, to unforeseeable uses of it as well.[181]

This concern with redundancy sits somewhat oddly within the broader scheme of copyright policy, which otherwise actively encourages such redundancies. Copyright's defense of independent creation has long been identified as one of its defining features, and one that sets it apart from patent.[182] Perhaps more importantly, copyright law has long avoided according protection to ideas, with the result that expressive variations that rely on a single idea are tolerated, even when actively copied. [183] If the law recognizes, and tolerates multiple versions in these different contexts, it seems unlikely to find the

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[179] Indeed, a new set of rights referred to as "neighboring rights" or "related rights" attempts to do precisely this, by giving distributors exclusionary control over their investments. The most common neighboring rights are performers' rights, phonogram producers' rights, and broadcasters' rights. *See* George H.C. Bodenhausen, *Protection of "Neighboring Rights"*, 19 LAW & CONTEMP. PROBS. 156 (1994); Shyamkrishna Balganesh, *The Social Costs of Property Rights in Broadcast (and Cable) Signals*, 22 BERKELEY TECH. L.J. 1303 (2008).

[180] *See* Abramowicz, *supra* note __, at 352 ("In the absence of patent protection….[m]ore inventors may pursue a particular line of research than is socially optimal.").

[181] *See* Mark F. Grady & Jay I. Alexander, *Patent Law and Rent Dissipation*, 78 VA. L. REV. 305, 318-19 (1992).

[182] For an overview of the doctrine and an economic explanation for it in terms of information cost theory see Clarisa Long, *Information Costs in Patent and Copyright*, 90 VA. L. REV. 465, 528 (2004). For an attempt to extend the idea to patent law see Samson Vermont, *Independent Invention as a Defense to Patent Infringement*, 105 MICH. L. REV. 475 (2006).

[183] *See* Abramowicz, *supra* note __, at 355 (referring to the idea-expression dichotomy in copyright).

development of a use which the creator couldn't himself identify, as being problematic or redundant, in the sense that patent law might. In addition, the law actively tolerates (and encourages) duplicative expressions of the same idea. Indeed, when the possibility of such redundancy isn't deemed sufficient to interfere with copyright's original incentive (i.e., to create), its interference with *ex post* incentives through a loosening of control over unforeseeable uses is likely to be negligible, if not non-existent.

In many ways then, the prospect theory operates on assumptions that seem alien to copyright's general structure and perhaps more importantly, to the peculiarities of unforeseeable uses in the context of expressive works.

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A requirement of foreseeability then —whereby a creator is denied control over unforeseeable uses of the work— is unlikely to interfere significantly with his original incentive to create the work. The impact, if any, it is likely to have is marginal. To the contrary, one might argue, the rule is likely to generate a new kind of incentive among creators.

The foreseeability test is in the end an *objective* one, dependent on the general state of knowledge known at the time of creation, which is then imputed to the creator. Consequently, in situations where the creator is best-positioned to generate this level of knowledge, it incentivizes the creator to actually make it widely known. Take the case of a company that invests in the development of both software and hardware technologies. Assume that the company were to develop a new software program (that meets the requirements for copyright protection) —and foresees the possibility of the program finding application in a new platform (in addition to those in existence) that it is in the process of developing. Instead of being able to keep the new platform (or the technology that it is likely to employ there) completely secret, the requirement now forces it to generate an objective level of knowledge about the platform. This could range from simple trade journal publications or other research disclosures —where it describes the basis of the new platform's use of the copyrighted work (i.e., the software). Disclosures of this kind are likely to be of immense benefit socially —and the principle of foreseeability now creates an active incentive for it. By making the scope of liability depend on the plaintiff's disclosure of possible uses —in situations where the plaintiff is indeed in the best position to foresee new uses— the requirement creates an *ex ante* incentive to disseminate information relating to possible uses widely.

Foreseeability as an information-generating incentive performs a function that is the mirror-image of its role in tort law. In the absence of a foreseeability limit, tort law would have individuals devoting needless time and energy into assessing the probabilities of remote events, in order to avoid liability.[184] In the copyright context, by contrast we have a potential entitlement (as opposed to liability) and perhaps more importantly, a basic recognition that the additional information generated (or is likely to be generated) is socially beneficial, rather than wasteful. In this latter respect, it resembles the rule in *Hadley*.[185] A creator's acquisition of knowledge that his work could be used in relation to

[184] *See* Zipursky, *supra* note __, at 47 (noting how the acquisition of such information is "socially inefficient").

[185] *See* Lucian Arye Bebchuk & Steven Shavell, *Information and the Scope of Liability for Breach of Contract: The Rule of* Hadley v. Baxendale, 7 J.L. ECON. & ORG. 284, 286 (1991) (observing how when one party's

a new platform technology that is in the process of being developed is clearly different from a potential tortfeasor spending resources to know that his actions could trigger an infinite variety of harms/injuries among individuals in the vicinity of his actions. The foreseeability rule would in the context of copyright serve to generate an incentive to generate the former, while it operates to deter the latter —likely producing an overall social benefit.

C. Workability: Objective Constructions of the Copyright Grant

Even if the test of 'foreseeable copying' is compatible with copyright's theory of incentives, does it actually present courts with a workable basis on which to construe copyright's grant of exclusivity? In other words, isn't it likely to complicate copyright law by introducing an altogether new conceptual device, the use of which would entail additional costs?

Interestingly enough, the idea of foreseeability isn't altogether alien to copyright law and its treatment of new uses. It remains somewhat common for courts to use the idea in construing the scope of rights granted by a licensor to the licensee under a license for the work.[186] Its use in that context is likely to provide courts with a directly relevant way in which to operationalize the test, making the transition to the new approach much simpler than one might imagine.

Foreseeability in the licensing context, traces itself back to Judge Friendly, who in the case of *Bartsch v. Metro-Goldwyn-Mayer, Inc.*,[187] is credited with using it to determine whether an assignment of motion picture rights included the right to telecast a copyrighted work. Observing that knowledgeable people knew of television's potential at the time that the license was entered into, the court there concluded that the licensor had "reason to know" of the new technology and was therefore deemed to have included it in the grant.[188] In *Bartsch*, the district court had in turn relied on expert testimony to the effect that "[t]he processes of theatre and home television exhibition [were] markedly similar" from both commercial and technical perspectives in the industry, when the contract was entered into —thirty-seven years prior to the actual litigation.[189] The Second Circuit endorsed this approach to construing the license, concluding that the work's use in the context of a telecast was therefore plainly foreseeable.[190]

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communicating information to the other is "socially desirable", the foreseeability requirement in Hadley provides an incentive for it).

[186] *See* Sidney A. Rosenzweig, *Don't Put My Article Online!: Extending Copyright's New Use Doctrine to Electronic Publishing Media and Beyond*, 143 U. PA. L. REV. 899, 915 (1995) ("In determining whether the new technology falls within the scope of the explicitly granted or preexisting technology, courts examine the foreseeability of the new medium."). *See also* I. Trotter Hardy, *Copyright and "New-Use" Technologies*, 23 NOVA L. REV. 659 (1999).

[187] 391 F.2d 150 (2d Cir. 1968). For a more recent application of the doctrine see: Boosey & Hawkes Music Publishers, Ltd. v. Walt Disney Co., 145 F.3d 481, 486 (2d Cir. 1998) (restating the Bartsch doctrine in clearer terms).

[188] *Id.* at 154 (finding that the law will "not charge a grantor with the duty of expressly saving [some] rights when he could not know of the invention's existence" and that "an experienced businessman" is "bound by the natural implications of the language he accepted when he had reason to know of the new medium's potential").

[189] 270 F. Supp. 896, 900-01 (D.C.N.Y. 1967).

[190] 391 F.2d at 154.

As a seemingly natural corollary, in situations where the technology or use in question wasn't publicly known at the time that the license was entered into, or where circumstances mean that there exists no reasonable basis on which to impute knowledge of the same to the licensor (at the time of the licensing), courts construe the grant narrowly to exclude the new use (in dispute) from its scope.[191]

The logic for this attempt to limit the grant resonates with foreseeability's use as a bounded rationality-driven device. Thus, one court openly alluded to this in noting that a new use needed to be excluded from the contractual grant when it "was completely *unforeseeable* and therefore *could not possibly have formed* part of the bargain between the parties at the time of the original grant.[192]" Since contract law is concerned with linking liability (for breach) with parties' intent in entering into the contract, factors and possibilities that couldn't have possibly formed part of this intent are excluded, and liability correspondingly limited. As a matter of contract law, this approach appears reasonable and perfectly logical, given contract law's focus on the parties' 'bargain'.[193]

All the same, the approach is often justified in non-contractual terms as well: as deriving from the need to avoid giving one party an unjustified windfall. In explaining the rationale for it, one court for instance, notes that the foreseeability test prevents the licensee from reaping "the entire windfall" associated with the unforeseen use.[194] Allowing a licensee to benefit from exogenous technological developments that weren't part of the bargain is deemed a 'windfall' and perhaps rightly so. But why then isn't the licensor's (i.e., creator's) benefiting from similar exogenous developments a 'windfall' too? In other words, why shouldn't the unforeseeable windfall remain outside the reach of the original copyright grant to begin with?

Foreseeability is thus used to limit a licensee's copyright grant, but not the licensor's original one, which remains somewhat of an anomaly— especially given that courts have over the years developed tools by which to answer the retrospective inquiry in the contractual context. They look to popular media, trade journals, expert testimony, industry practice, and at times, simple logic to assess the foreseeability of a specific use. Each of these tools/mechanisms is capable of direct use in construing copyright's original grant of exclusivity as well.

Cases such as *White-Smith* are more than apt for an analogous application of the foreseeability test.[195] In *White-Smith*, the Supreme Court was presented with the question of whether a composer's exclusive rights in a musical composition extended to its use in the market for perforated rolls used in mechanical piano players to produce the same sounds.[196] Attempting to objectively determine the boundaries of the statutory grant by

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[191] *See* Kirke La Shelle Co. v. Paul Armstrong Co., 188 N.E. 163 (N.Y. 1933); Cohen, 845 F.2d at 854; Rey v. Lafferty, 990 F.2d 1379, 1388 (1st Cir. 1993); Platinum Record Co. v. Lucasfilm Ltd., 566 F. Supp. 226, 227 (D.N.J. 1983); ABKCO Music, Inc. v. Westminster Music Ltd., 838 F. Supp. 153, 156 (S.D.N.Y. 1993).

[192] Rey, 990 F.2d at 1388.

[193] *See generally* Melvin Aron Eisenberg, *The Bargain Principle and Its Limits*, 95 HARV. L. REV. 741 (1982). Cf. Rosenzweig, *supra* note __, at 917 (noting that the open-ended nature of the analysis allows courts to "manipulate" the determination).

[194] *Rey*, 990 F.2d at 1388.

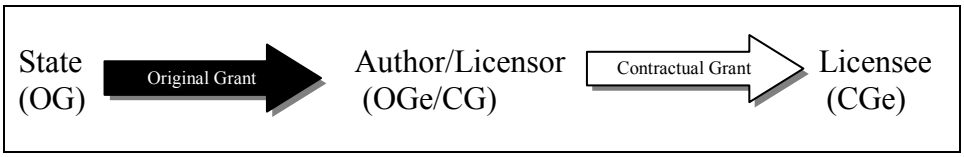
[195] *White-Smith*, 209 U.S. at 1.

[196] *Id.* at 18.

reference to legislative intent, the Court found for the defendants.[197] In their arguments before the Court however, both parties made express reference to the foreseeability of the defendant's actions. The plaintiff plainly conceded that when the works in question were composed —in 1831— the use of perforated rolls was "not known" (and therefore unforeseeable), yet maintained that this fact was immaterial to the question of liability.[198] In spite of this, the Court preferred to exempt the defendant by reference to Congress' failure to specify certain new technologies in its definition of 'copying'.[199]

A direct consequence of the Court's objective approach (of deferring to Congressional intent in construing copyright's exclusivity), was of course that when Congress chose to amend the copyright statute to make it technologically-neutral, the Court's reasoning was rendered redundant. Instead, had the Court taken the plaintiff's admission seriously, and chosen to examine whether the defendant's use was in any sense foreseeable (in light of the existent technology at the time), using the methods developed to construe copyright licenses, it might have reached the same conclusion —but on much firmer footing.

In addition, the bipolarity of copyright disputes is likely to ensure that in the infringement context, parties will advance opposing constructions of foreseeability in much the same way as they do in the contractual setting. Thus in the contractual setting, there are three parties in the overall scheme of things: (i) the original grantor of rights (OG), the state, (ii) the original grantee (OGe), also the contractual grantor (CG or the licensor), and (iii) the contractual grantee (CGe), the licensee.



When a court is called upon to interpret the scope of an assignment, the dispute is now between the author in his capacity as contractual grantor (CG) and the licensee, as contractual grantee (CGe). Courts use foreseeability as an objective proxy for parties' intentions, to determine whether or not the disputed use was part of the assignment. What is critical however is that both parties to the dispute have opposing interests in

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[197] Modern iterations of this approach exist too. *See* New York Times Co. v. Tasini, 533 U.S. 483 (2001); Greenberg v. Nat'l Geographic Soc'y, 244 F.3d 1267 (11th Cir. 2001). *See also* Rosenzweig, *supra* note __, at 902-08; Hardy, *supra* note __, at 686.

[198] *White-Smith*, 209 U.S. at 4, 10.

[199] In its opinion, the Court posed the following question to itself, preferring to draw an analogy to technologies that were known at the time, yet consciously excluded by Congress:

> Also it may be noted in this connection that if the broad construction of publishing and copying contended for by the appellants is to be given to this statute it would seem equally applicable to the cylinder of a music box, with its mechanical arrangement for the reproduction of melodious sounds, or the record of the graphophone, or to the pipe organ operated by devices similar to those in use in the pianola. All these instruments were well known when these various copyright acts were passed. Can it be that it was the intention of Congress to permit them to be held as infringements and suppressed by injunctions?

White-Smith, 209 U.S. at 18-19 (emphasis supplied). For a general discussion *See* Kenneth M. Alfano, *Copyright in Exile: Restoring the Original Parameters of Exclusive Reproduction*, 11 J. TECH. L. & POL'Y 215, 220 (2006).

interpreting the grant. The grantor naturally prefers a narrow construction (to limit the assignment), while the grantee, a broader and more expansive one.

In an infringement action by contrast, the author as original grantee (OGe) now prefers an expansive construction of the grant, while the original grantor (OG), the state, isn't a party to the proceeding. Instead of the state however, is the defendant, whose interests interestingly enough, track those of the contractual grantor (CG) in the bilateral setting. The defendant's interest is thus to narrow the grant, and thereby minimize/avoid liability for infringement. The absence of a grantor seeking a narrow construction of the grant is accounted for by the presence of the defendant. Given the bipolar setting within which the entitlement and its scope is determined, it replicates the exact same process and interests that are at play in the contractual one.

It is worth emphasizing that even though it may appear as if the foreseeability inquiry is one of subjective intent—i.e., whether one or both parties actually foresaw the grant as covering a use—in reality, the determination is always objective.[200] Since parties' intentions are readily apparent from the terms of the contract, courts impute foresight (or the lack thereof) to parties based on external circumstantial evidence. The test is thus entirely objective and has little to do with parties' actual intentions. Consequently, the mere fact that unlike in the contract setting, one of the parties (the state, OG) isn't present and able to advance a construction of its actual intent, is completely irrelevant. The bipolar nature of the dispute before the court ensures that this happens in both contexts, even when either grantor or grantee isn't a party to the proceedings before the court.[201]

Foreseeability as a limiting basis then, is perfectly well-known in the world of copyright. Expanding it beyond its current use in the bilateral context, to construing copyright's original grant of exclusivity as well, is likely to face few conceptual hurdles.

V. OBJECTIONS

Having examined how a test of foreseeability might work in the copyright context, its likely impact on creator incentives, and the manner in which courts might implement it, this Part looks to three potential objections that may be raised to it. They are in turn that: (a) a foreseeability limit renders copyright's extended term of protection

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[200] Indeed much of contract law has concerned itself with the move from a model of subjective intention to an objective one, which some view as in itself problematic —and detracting from contract law's avowed emphasis on the ideas of consent and party autonomy. For more on objective intention in construing contractual terms see: LON L. FULLER & MELVIN A. EISENBERG, BASIC CONTRACT LAW 743 (7th ed. 2001); LARRY A. DIMATTEO, CONTRACT THEORY: THE EVOLUTION OF CONTRACTUAL INTENT (1998); Larry A. DiMatteo, *The Counterpoise of Contracts: The Reasonable Person Standard and the Subjectivity of Judgment*, 48 S.C. L. REV. 293 (1997); Nancy Kim, *Mistakes, Changed Circumstances and Intent*, 57 KAN. L. REV. (forthcoming 2008).

[201] Consider the following hypothetical:

> Author A creates a literary work and relinquishes a set of rights in it by dedicating them 'to the public domain', while retaining some others. In a later action by A against a user of the work for infringement of the work, the defendant D, while not an actual grantee has the exact same incentives as a grantee in construing the grant/dedication widely.

meaningless, (ii) as a standard it is indeterminate and incoherent, and (iii) it is likely to rely heavily on hindsight.

A. Term Redundancy

Since 1950, Congress has extended copyright's term of protection twelve times and today works are protected for a period of 95 years from the year of creation.[202] On the face of it, one might argue, a test of foreseeability will by necessity come to limit this duration. No creator can expect to foresee uses to which the work may be put, nine decades into the future; consequently, copyright's long term of protection becomes somewhat redundant. The existence of an extended period of protection, might be taken as evidence of an intent to protect unforeseeable uses as well.

Yet, it is precisely the existence of this abnormally long period of protection that justifies non-temporal limits on copyright. In the world of intellectual property, the existence of trade-offs between term and extent remain somewhat well-known. Thus, while patent law gives inventors a set of exclusive rights for no more than 20 years (unlike copyright's 95), the extent and coverage of those rights are far wider than those of copyright.[203] Unlike copyright, patent rights aren't limited by numerous subject-matter limits and purpose-based exceptions, which is taken to justify the correspondingly short term of protection.[204] Copyright's extended term is therefore a policy reason to *relax* rather than strengthen its coverage non-temporally.

The frequency with which Congress has extended copyright's term, yet left intact its basic entitlement structure —without seeking to take it in the direction of patent law— is perhaps additionally indicative of its acceptance of (or acquiescence in) judicially-created, non-term related, limiting devices.

B. Potential Indeterminacy

A second and perhaps, more basic objection to the model proposed derives from the flexibility inherent in the idea of foreseeability. This objection might proceed as follows. Ascertaining whether a defendant's copying is foreseeable or not is dependent on the specificity with which the form/mechanism of copying is described. Consequently, the same action might be classified as foreseeable/unforeseeable depending on a judge's *description* of it —rendering its application grossly inconsistent.

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[202] *See* LAWRENCE LESSIG, FREE CULTURE 4 (2004). The most recent extension, the Sonny Bono Copyright Term Extension Act (CTEA) was the subject matter of a well-known Supreme Court decision. *See* Eldred v. Ashcroft, 537 U.S. 186 (2003).

[203] *See* Henry E. Smith, *Intellectual Property as Property: Delineating Entitlements in Information*, 116 YALE L.J. 1742, 1806 (2007) (discussing these differences). *See also* William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, in ECONOMIC ANALYSIS OF THE LAW: SELECTED READINGS 83, 94 (Donald A. Wittman ed. 2002).

[204] *See id.* at 1812.

An argument along these lines is somewhat well-known in relation to foreseeability's use in tort law.[205] Referred to as the "multiple description" problem, it postulates that speaking of foreseeability is meaningless in the absence of individuals having a system of shared meaning that they adhere to in their description of an event.[206] Given the fact that the foreseeability of an event (or use) is only ever reconstructed *ex post*, when additional details are known, judges and juries are likely to come to different conclusions on the same set of facts, depending entirely on their descriptions of the event.

To the extent that foreseeability depends on an individual's description of an event, it certainly is subject to some amount of indeterminacy. Yet the fact of the matter remains, that at some basic level individuals do share a common set of conceptual meanings in understanding the way the world works.[207] Most of tort law, and indeed the common law, takes this for granted, and it would seem somewhat inconsistent to argue that foreseeability will fall prey to a level of indeterminacy any greater than that fostered by current common law devices. In the context of tort law, Hart and Honoré thus argue:

> [T]o avoid fallacies, the first question to ask is not "Was this harm foreseeable?" but "Under what specific description which fits this harm has experience taught us to anticipate harm?". If we have learned from experience to expect a "rainstorm" on seeing dark clouds, then the rainstorm was foreseeable even if, when it occurs, it has other characteristics.[208]

Foreseeability thus places reliance on the existence of a common meaning system among individuals similarly situated; one that derives from shared experience. Descriptive variations thus do not correspond to the reality that individuals tend to view the world (and respond to stimuli in it) in similar ways. In studying human perception, noted linguistic philosopher, J.L. Austin thus observed that individuals tend to "perceive" the world and understand themselves to be doing so in roughly similar ways —in terms of what he called "moderate sized specimens of dry goods" or "familiar objects".[209] The existence of a basic meaning structure is thus central to much of the law's basic conceptual framework and to the extent that it might be characterized as indeterminate, so too is foreseeability.

The idea of a shared system of meaning is in many ways central to current copyright doctrine. In the context of substantial similarity for instance, courts have long recognized that dissimilarities, while relevant to the inquiry, are to be differentiated into trivial and non-trivial ones, the former being understood as those that involve

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[205] *See* Perry, *supra* note __, at 99-101. *See also* Richard A. Epstein, *Beyond Foreseeability: Consequential Damages in the Law of Contract*, 18 J. LEGAL STUD. 105, 124 (1989) (noting how foreseeability "utterly lacks the descriptive content that allows it to be the principled basis for decision").

[206] *See* Michael S. Moore, *Foreseeing Harm Opaquely*, *in* ACTION AND VALUE IN CRIMINAL LAW 125, 126 (Steven Shute et al. eds. 1993); Clarence Morris, *Duty, Negligence, and Causation*, 101 U. PA. L. REV. 189, 194 (1952).

[207] *See* CLARENCE MORRIS, TORTS 174-77(1953)

[208] HART & HONORÉ, *supra* note __, at 258.

[209] J.L. AUSTIN, SENSE AND SENSIBILIA 7-8 (G.J. Warnock ed., Oxford Univ. Press 1962) (1959).

modifications to non-central parts of the work.[210] Whether something is a trivial modification or not is inevitably a qualitative assessment, based on what a court perceives to be central to the protected work. The test of foreseeable copying would now ask courts to do no more than extend that logic beyond just the work, to its broader context or medium of use.

C. Hindsight Bias

A third possible objection derives from a more nuanced understanding of individual decision-making and the cognitive biases that occur therein. Hindsight bias refers to the general tendency among individuals to see an event that has actually occurred as more probable than it actually was before its occurrence.[211] The presence of information about an outcome thus produces an unjustified increase in its perceived predictability.[212] Given copyright law's *ex post* process of entitlement delineation, any attempt to reconstruct a creator's foresight at the time of creation will therefore inevitably be influenced by information possessed by the decision-maker that wasn't available to the creator *ex ante*. Judges will therefore be more inclined to view a defendant's copying as foreseeable to the plaintiff at the time of creation, when presented with actual evidence of the copying.

In the related context of patent law, while determining the validity of a patent, courts are required to determine whether the patentee's idea was non-obvious (to a skilled person) at the time of its invention.[213] It thus entails a similar retrospective reconstruction of an actor's likely foresight. In that context, studies have shown that hindsight tends to play a major role.[214] Given the structural similarity between the non-obviousness inquiry and the proposed foreseeability test in copyright law, the same consequence is likely to been seen in the latter too.

Studies have indeed shown that both judges and jurors overwhelmingly tend to let negative outcomes influence their eventual decisions, when asked to examine the *ex ante* foreseeability of an event after its actual occurrence.[215] As a structural matter copyright

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[210] *See* OSTERGARD & OSTERGARD, *supra* note __, at 2-39 to -41; 3 NIMMER, *supra* note __, at § 13.03[B]. *See also* Segrets, Inc. v. Gillman Knitwear Co., Inc., 207 F.3d 56, 65 (1st Cir. 2000) (finding an alteration in color to be a trivial and insubstantial modification).

[211] For a general overview of the hindsight bias and its influence on judicial decision-making see Jeffrey J. Rachlinski, *A Positive Psychological Theory of Judging in Hindsight*, 65 U. Chi. L. Rev. 571 (1998). *See also* Jay J. J. Christensen-Szalanski & Cynthia Fobian Willham, *The Hindsight Bias: A Meta-Analysis*, 48 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 147 (1991).

[212] Baruch Fischhoff, *Hindsight ≠ Foresight: The Effect of Outcome Knowledge on Judgment Under Uncertainty*, 1 J. EXP. PSYCH. 288, 288 (1975). Fischhoff's work is credited with identifying the bias. *See also* Baruch Fischhoff, *For those Condemned to Study the Past: Heuristics and Biases in Hindsight*, *in* JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES 335 (Daniel Kahneman et al. eds., 1982)

[213] *See* 35 U.S.C. § 103(a) (2005) (noting how an invention isn't patentable if it "would have been obvious at the time the invention was made").

[214] *See* Mandel, *supra* note __, at 1391.

[215] *See, e.g.*, Susan J. LaBine & Gary LaBine, *Determinations of Negligence and the Hindsight Bias*, 20 LAW & HUM. BEHAV. 501 (1996); Kim A. Kamin & Jeffrey J. Rachlinski, *Ex Post ≠ Ex Ante: Determining Liability in Hindsight*, 19 LAW & HUM. BEHAV. 89 (1995); Erin M. Harley, *Hindsight Bias in Legal Decision Making*, 25 SOC. COGNITION 48 (2007); Mark Kelman et al., *Decomposing Hindsight Bias*, 16 J. RISK & UNCERTAINTY 251 (1998).

however, lends itself almost perfectly to the possibility of hindsight bias. Since the existence and scope of the entitlement in a work are only ever decided when the defendant copies parts of it, the presence of actual copying (appropriation) tends to hurt the defendant's case. Indeed, as a historical matter courts seem to have acknowledged their reliance on hindsight with observations like "what is worth copying, is worth protecting".[216] A similar situation, one might argue, is likely to occur in relation to the test of foreseeable copying as well. While courts are asked to determine whether a particular form of copying was foreseeable in the past, they do so with it actually before them. To the extent that copyright law remains structurally different from both patent and trademark law, in its *ex post* entitlement delineation, the test of foreseeability too is likely to exhibit the same deficiencies of the existent system. There may be reason however to believe that the introduction of a foreseeability limit is likely to minimize the overall effect of any hindsight on the determination.

What contributes towards the hindsight bias during an infringement inquiry is the fact that courts are presented with evidence of actual copying (the extent itself varying) by the defendant, at the same time or before they determine the existence of the plaintiff's entitlement. As a consequence, courts tend to focus directly on a defendant's copying — determining its extent (similarity), relevance to the plaintiff's work (substantiality), etc.— and often lose sight of the fact that as a preliminary, they need to determine the existence of the entitlement, originating at the point of the work's creation. In the process, the point of creation—the time at which the law presumes its exclusive rights to vest in the creator— tends to be altogether ignored. The near-exclusive focus on copying, results in the inquiry becoming largely about the defendant's appropriation and the propriety of it.

The foreseeability test would now have the effect of anchoring the infringement inquiry in the entitlement-delineation (as opposed to -interference) process, as a preliminary. By emphasizing that a defendant's copying is actionable only if objectively foreseeable to the plaintiff at the time of creation, it is likely to shift the focus of the inquiry away from the present (i.e., the actual copying) to the past (i.e., the creation) in order to establish the existence of the entitlement. It would thus effectively move copyright away from its misappropriation-like emphasis to a more nuanced purpose-driven one, that recognizes the point at which copyright protection attaches to the work, and in turn accords it some significance in the overall process.[217]

None of this is of course, likely to detract from the possibility that courts will view the post-creation development of new technological uses as *ex ante* foreseeable merely because they are presented with the actual use —especially in cases where the time-lag is very short. As with every foreseeability reconstruction, the problem isn't likely to be eliminated altogether. Yet, the fact that a temporal baseline is identified for the inquiry (unlike in other contexts), will perhaps mitigate it to some extent. Thus, in the context of tort law when courts ask whether a certain consequence was foreseeable to the defendant at the time of his actions, their reference is the "reasonable man", constructed over time —and therefore imbued with an awareness of the world as it exists at the time

[216] University of London Press Ltd. v. University of Toronto Press Ltd., [1916] 2. Ch. 601, 610. While U.S. copyright law has since moved away from this model, it is in many ways representative of the general ex post structural framework that copyright is premised on.

[217] *Cf.* Richard A. Posner, *Misappropriation: A Dirge*, 40 HOUS. L. REV. 621, 623 (2003).

of the decision-maker. Thus, if the defendant's negligent action occurred in 1984 — courts rarely ever set that year as the cut-off point in their construction of the reasonable man's objective foresight. The 'reasonableness' standard is thought to permit the inter-temporality of the inquiry. In the copyright context however, the test would place emphasis on the state of the world in the year that the work was created —off-setting any potential hindsight influence in situations where the time-lag (between the plaintiff's creation and the defendant's actions) is significant. To this extent, it is therefore far less likely to be influenced by hindsight.

VI. CONCLUSION

Central to much of the preceding argument is the idea that copyright law isn't the best way of allocating windfalls associated with unforeseeable uses. In numerous other contexts, the law uses *foreseeability* as a mechanism by which to avoid and re-allocate these windfalls, in the belief that the costs and benefits associated with them are incapable of inducing any significant *ex ante* behavioral modification among individuals. Given the primacy of these behavioral assumptions across different areas of the common law, I have attempted to argue here that copyright law should be no different.

To the extent that copyright law continues to rely on a theory of incentives and the need to provide creators with an incentive to invest time and resources into the creative process, it too attempts to bring about *ex ante* behavioral modification among individuals. If the behavioral assumptions that the common law relies on in a host of other areas are indeed true, then copyright should find little reason to be different. Individuals will (and can) not factor the unforeseeable consequences of their actions into their *ex ante* reasons for acting. Consequently, limiting copyright's grant of exclusivity to uses of the creative work that were foreseeable to a creator at the time of creation is likely to better align creators' creative decision-making with their incentives. The test of foreseeable copying, proposed here would thus provide copyright law with a device by which to doctrinally instantiate its theory of incentives and simultaneously avoid misallocating windfalls that the current system lends itself to. Using the idea of bounded rationality as its basis, it remains premised on providing creators with an incentive that is tailored to the exact way in which the law presumes individuals to behave in a variety of other contexts.

For far too long, copyright law and policy have centered around the rhetoric of incentives and inducements but failed to integrate into doctrine, the way in which they actually impact human behavior. It is hoped that the present model will contribute towards enabling the idea of incentives to be more than just of rhetorical significance, or in the very least, serve to wean copyright away from its reliance on an illusive theory of creator incentives.