
Enhancing Patent Damages

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Many policymakers, judges, and scholars justify patent law on economic-utilitarian grounds. It is therefore unsettling that when it comes to damages for patent infringement in excess of the compensatory baseline, courts have followed an approach that reflects primarily moral, rather than economic, considerations. In order to obtain enhanced damages, the prevailing plaintiff must show — among other things — that the defendant actually knew of the existence of the patent-in-suit. This subjective standard stems from pre-industrial tort actions designed to

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punish egregious interpersonal behaviors such as assault, piracy, libel, and seduction, and to preserve the public order. But as the law developed to cover “depersonalized” torts committed by corporate defendants and expanded from its moral foundations to embrace economic reasoning to a greater degree than before, the range of cases in which punitive damages could be awarded broadened significantly. Specifically, courts relaxed the culpability standard by making it less subjective, allowing punitive damages for generalized reckless disregard for the rights of others. The recklessness framework is now dominant in the fields of negligence and products liability, which typically allow for punitive damages without actual knowledge of a specific victim or defect, and in other civil actions — including copyright and trademark infringement. Patent law, however, continues to be an outlier by requiring actual, subjective knowledge of the plaintiff’s patent and, in so doing, in effect clings to the old moral-opprobrium model of punitive damages.

*Not surprisingly, this standard has led to anomalous results. For one thing, the actual-knowledge approach to enhanced damages discourages firms from searching for and reading relevant patents, an unfortunate result given the widely recognized notion that disclosure is a core function of the patent system. Indeed, this rule errantly treats potential infringers who make good-faith attempts to ascertain the nature of the patent landscape in the fields in which they operate worse than those that decide to bury their heads in the sand and do no patent searching whatsoever. But there is a prospect for improvement in the law. A recent Supreme Court decision, *Halo Electronics v. Pulse Electronics*, arguably pushed a reset button on the jurisprudence of enhanced damages in patent cases. Although it accepted the pre-industrial, subjective conception of punitive damages in its discussion of “deliberate” and “wanton” infringements, the Court also pointed to the modern trend when it referred to recklessness as an acceptable standard of culpability for enhanced patent damages.*

I argue that, in failing to embrace Halo’s endorsement of recklessness, the lower courts are making a mistake. I contend that installing recklessness toward patent rights of others as the threshold level of culpability for enhanced damages is consistent with the modern conception of punitive damages in tort — which, at least to some degree, reflects a shift away from the moral grounding of this remedy and toward economic analysis. Accordingly, I propose a recalibration of the willfulness doctrine to include reckless failures to search for patents as a route to making infringers eligible for enhanced damages. If applied properly, the new standard would mitigate the current doctrine’s perverse effect of discouraging reading of patents, promote cost-effective patent searches,

and take account of significant differences in patent landscapes between various industries.

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INTRODUCTION

The Patent Act, like many other statutes setting forth civil causes of action,¹ allows prevailing plaintiffs to obtain retrospective relief in the form of monetary damages.² As in other areas of law, damages for past tortious acts can come in two forms — compensatory damages and additional damages that might generically be described as “supra-compensatory” or “enhanced.”³ In recent years, rules for determining compensatory damages in patent cases have been the focus of many important court decisions⁴ and scholarly work.⁵ Although controversy

¹ See, e.g., 18 U.S.C. § 2520(b) (2018) (authorizing awards of compensatory and punitive damages for intercepting communications); 42 U.S.C. § 1981a(b) (2018) (authorizing awards of compensatory and punitive damages for employment discrimination).

² See 35 U.S.C. § 284 (2018) (“Upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement . . .”).

³ *Id.* (“[T]he court may increase the damages up to three times the amount found or assessed.”); see G. Robert Blakey, *Of Characterization and Other Matters: Thoughts About Multiple Damages*, 60 LAW & CONTEMP. PROBS. 97, 106-11 & nn.47-51 (1997) (discussing “accumulative,” “enhanced,” and “punitive” damages); Catherine M. Sharkey, *Economic Analysis of Punitive Damages: Theory, Empirics, and Doctrine*, in RESEARCH HANDBOOK ON THE ECONOMICS OF TORTS 486, 486 (Jennifer Arlen ed., 2012) [hereinafter Sharkey, *Economic Analysis of Punitive Damages*] (“Punitive damages have been a part of the civil law landscape in the United States since the nineteenth century, but the past two decades have witnessed a firestorm of renewed interest and debate over this supra-compensatory remedy, whose goals are to punish and to deter wrongful behavior.”).

⁴ *Mentor Graphics Corp. v. EVE-USA, Inc.*, 851 F.3d 1275, 1283-90 (Fed. Cir. 2017); *Commonwealth Sci. & Indus. Research Org. v. Cisco Sys., Inc.*, 809 F.3d 1295, 1301-07 (Fed. Cir. 2015); *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1225-35 (Fed. Cir. 2014); *VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1326 (Fed. Cir. 2014); *WhitServe, LLC v. Comput. Packages, Inc.*, 694 F.3d 10, 26-27 (Fed. Cir. 2012); *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1317 (Fed. Cir. 2011); *ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860, 868-73 (Fed. Cir. 2010); *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1326 (Fed. Cir. 2009); see Jonas Anderson, *Congress as a Catalyst of Patent Reform at the Federal Circuit*, 63 AM. U. L. REV. 961, 1000-02 (2014) (discussing some of these decisions).

⁵ See, e.g., Daniel Harris Brean, *Ending Unreasonable Royalties: Why Nominal Damages Are Adequate to Compensate Patent Assertion Entities for Infringement*, 39 VT. L. REV. 867 (2015); Bernard Chao, *Lost Profits in a Multicomponent World*, 59 B.C. L. REV. (forthcoming 2018), <https://ssrn.com/abstract=3016814>; Tun-Jen Chiang, *The Information-Forcing Dilemma in Damages Law*, 59 WM. & MARY L. REV. 81 (2017); Daralyn J. Durie & Mark A. Lemley, *A Structured Approach to Calculating Reasonable Royalties*, 14 LEWIS & CLARK L. REV. 627 (2010); Dmitry Karshedt, *Damages for Indirect Patent Infringement*, 91 WASH. U. L. REV. 911 (2014) [hereinafter Karshedt, *Damages for Indirect Patent Infringement*]; William F. Lee & A. Douglas Melamed, *Breaking the Vicious Cycle of Patent Damages*, 101 CORNELL L. REV. 385 (2016); Oskar Liivak, *When Nominal Is Reasonable: Damages for the Unpracticed Patent*, 56 B.C. L.

over proper legal frameworks for damages to compensate for patent infringement continues,⁶ there is at least a consensus with respect to the notion that such damages should reflect economic considerations, however they are to be translated into the actual rules that courts should use.⁷ The proposition that careful calibration of damages is important for the fulfillment of the patent system's purpose of optimizing innovation incentives is difficult to contest,⁸ and thanks to the attention that compensatory damages in patent law have received of late, courts have been making progress toward achieving the goal of economically rational awards.⁹ There is more work to be done, perhaps much more,¹⁰ but the problem of compensatory damages for patent infringement has undoubtedly benefited from recent engagement of courts and scholars.

Supra-compensatory damages in patent law present a very different picture. To begin, although the section of the Patent Act governing damages, 35 U.S.C. § 284, at least states the function of compensatory damages — unsurprisingly, they must be “adequate to compensate for the infringement”¹¹ — that section says nothing about the purpose of enhanced damages or the standard for awarding them. The only “guidance” given by Congress is that “the court may increase the damages up to three times the amount found or assessed” beyond the damages clearly denominated as compensatory.¹² In an effort to give content to the statutory authorization to award these so-called “treble

REV. 1031 (2015); Brian J. Love, *The Misuse of Reasonable Royalty Damages as a Patent Infringement Deterrent*, 74 MO. L. REV. 909 (2009); David W. Opperbeck, *Patent Damages Reform and the Shape of Patent Law*, 89 B.U. L. REV. 127 (2009); Michael Risch, *(Un)Reasonable Royalties*, 98 B.U. L. REV. 187 (2018); David O. Taylor, *Using Reasonable Royalties to Value Patented Technology*, 49 GA. L. REV. 79 (2014).

⁶ See *supra* note 5. See generally Ted Sichelman, *Purging Patent Law of “Private Law” Remedies*, 92 TEX. L. REV. 517 (2014) (advancing a broad criticism of the Patent Act's remedial schemes).

⁷ Compare, e.g., Sichelman, *supra* note 6, at 554-60 (rejecting the tort-law framework for compensatory damages in patent law), with, e.g., Robert D. Blair & Thomas F. Cotter, *Rethinking Patent Damages*, 10 TEX. INTEL. PROP. L.J. 1, 4 (2001) (arguing that tort rules are appropriate for patent damages).

⁸ See, e.g., Lee & Melamed, *supra* note 5, at 439-45.

⁹ See, e.g., *Commonwealth Sci. & Indus. Research Org.*, 809 F.3d at 1303-04; *Uniloc*, 632 F.3d at 1313-17.

¹⁰ See, e.g., Lee & Melamed, *supra* note 5; Risch, *supra* note 5; see also Erik Hovenkamp & Jonathan Masur, *How Patent Damages Skew Licensing Markets*, 36 REV. LITIG. 379, 414-15 (2017).

¹¹ See 35 U.S.C. § 284 (2018).

¹² *Id.*

damages,”¹³ courts have sometimes looked to private law, and particularly to the common law of torts, to see how courts handle enhanced damages in those cases.¹⁴ This instinct is understandable, and seems sound as a matter of statutory interpretation.¹⁵ After all, the various iterations of the Patent Act have been passed with little indication that, when it comes to issues shared with other areas of law, courts in patent cases are to develop rules that are unique and patent-specific.¹⁶ Indeed, there is much evidence to the contrary — that

¹³ The term “treble” refers to the maximum allowable enhancement — total damages up to treble the compensatory damages. Under appropriate circumstances, trial courts can award less than treble damages. *See, e.g., Datascope Corp. v. SMEC, Inc.*, 14 U.S.P.Q.2d (BNA) 1071, 1074 (D.N.J. 1990) (“A fifty-percent enhancement of damages is appropriate here. Although SMEC’s infringement was willful, it was not blatant.”); *see also infra* Section III.D.

¹⁴ *See, e.g., Read Corp. v. Portec, Inc.*, 970 F.2d 816, 827-28 & n.8 (Fed. Cir. 1992) (citing *Hodges v. S.C. Toof & Co.*, 833 S.W.2d 896, 900-01 (Tenn. 1992)); *see also Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1933 (2016) (relying on the *Restatement of Torts* and precedent that was in turn based on prior sources in determining the proper level of culpability for enhanced damages); *Hoechst Celanese Corp. v. BP Chems. Ltd.*, 78 F.3d 1575, 1583 (Fed. Cir. 1996); *infra* Section I.A.

¹⁵ *See* William Baude & Stephen E. Sachs, *The Law of Interpretation*, 130 HARV. L. REV. 1079, 1105, 1112 (2017) (observing that the common law routinely provides unwritten “substantive rules” for interpreting federal legislation); Dmitry Karshedt, *Causal Responsibility and Patent Infringement*, 70 VAND. L. REV. 565, 586 (2017) (discussing this mode of interpretation in the context of non-performer liability in patent law) [hereinafter Karshedt, *Causal Responsibility and Patent Infringement*]; Adam J. MacLeod, *Patent Infringement as Trespass*, 69 ALA. L. REV. (forthcoming 2018) (manuscript at 19), <https://ssrn.com/abstract=3029708> (“[T]he original Patent Act could just as plausibly have codified the common law of trespass for patent infringement generally.”); Lynda J. Oswald, *The “Strict Liability” of Direct Patent Infringement*, 19 VAND. J. ENT. & TECH. L. 993, 999-1005 (2017) (discussing the role of trespass in interpreting various provisions of the Patent Act); Jason A. Rantanen, *An Objective View of Fault in Patent Infringement*, 60 AM. U. L. REV. 1575, 1592-96 (2011) [hereinafter Rantanen, *An Objective View*] (discussing the influence of aiding and abetting principles in tort law on indirect liability in patent law). For case law examples applying this principle outside patent law, see *Kirtsang v. John Wiley & Sons, Inc.*, 568 U.S. 519, 538 (2013) (“When a statute covers an issue previously governed by the common law, we must presume that Congress intended to retain the substance of the common law.” (alterations and quotation marks omitted)); *Staub v. Proctor Hosp.*, 562 U.S. 411, 417 (2011) (“start[ing] from the premise that when Congress creates a federal tort it adopts the background of general tort law”); *United States v. Texas*, 507 U.S. 529, 534 (1993) (“In order to abrogate a common-law principle, the statute must ‘speak directly’ to the question addressed by the common law.” (quoting *Mobil Oil Corp. v. Higginbotham*, 436 U.S. 618, 625 (1978))).

¹⁶ *See, e.g., SCA Hygiene Prods. Aktiebolag v. First Quality Baby Prods., LLC*, 137 S. Ct. 954, 964 (2017) (holding that general laches rules apply to patent law and explaining that “[p]atent law is governed by the same common-law principles, methods of statutory interpretation, and procedural rules as other areas of civil

Congress meant for background common-law principles to apply to cognate patent law issues.¹⁷ Accordingly, courts in patent cases have drawn on the law of torts to deal with problems ranging from mental states for indirect infringement,¹⁸ to proximate cause limits on the scope of the defendant's liability,¹⁹ to — reasonably enough — the but-for causation requirement for awarding compensatory damages.²⁰ This move has not always enabled dispute-free resolutions of these various aspects of patent infringement claims,²¹ but it has at least given courts a starting point for interpreting the sometimes sparse language of the Patent Act.

When it comes to treble damages, however, examination of other areas of law has not yielded a clear answer even with respect to the

litigation” (quoting *SCA Hygiene Prods. Aktiebolag v. First Quality Baby Prods., LLC*, 807 F.3d 1311, 1333 (Fed. Cir. 2015) (en banc) (Hughes, J., dissenting)); *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837-40 (2015) (rejecting a patent-specific rule for the standard of review of trial judges' fact findings underlying claim construction); *Highmark Inc. v. Allcare Health Mgmt. Sys., Inc.*, 134 S. Ct. 1744, 1748-49 (2014) (similar for the standard of review of trial judges' exceptional case determinations); *Medtronic, Inc. v. Mirowski Family Ventures*, 134 S. Ct. 843, 849-51 (2014) (similar for allocation of burdens of proof in declaratory judgment actions); *MedImmune, Inc. v. Genentech, Inc.*, 549 U.S. 118, 129-30 (2007) (similar for declaratory judgment standing); *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 392-94 (2006) (similar for injunctions and equity practice). For a recent analysis of this dynamic, see Peter Lee, *The Supreme Assimilation of Patent Law*, 114 MICH. L. REV. 1413, 1425-31 (2016). See also Rebecca S. Eisenberg, *The Supreme Court and the Federal Circuit: Visitation and Custody of Patent Law*, 106 MICH. L. REV. FIRST IMPRESSIONS 28, 31-32 (2007).

¹⁷ See *supra* note 15; see also *Recovery in Patent Infringement Suits: Hearing on H.R. 5231 Before the H. Comm. on Patents*, 79th Cong., 2d Sess. 9 (1946) (statement of Mr. Conder C. Henry, Assistant Commissioner of Patents) (likening enhanced patent damages to what “[s]ometimes in actions of tort . . . is called exemplary damages”).

¹⁸ See, e.g., *Commil USA, LLC v. Cisco Sys., Inc.*, 135 S. Ct. 1920, 1930 (2015).

¹⁹ See, e.g., *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1546 (Fed. Cir. 1995) (en banc).

²⁰ See, e.g., *Mentor Graphics Corp. v. EVE-USA, Inc.*, 851 F.3d 1275, 1284-85 (Fed. Cir.) *reh'g en banc denied*, 870 F.3d 1298 (Fed. Cir. 2017) (mem.).

²¹ See, e.g., *Commil*, 135 S. Ct. at 1931-32 (Scalia, J., dissenting); *Rite-Hite*, 56 F.3d at 1558-60, 1569-70 (Nies, J., dissenting); *Mentor Graphics*, 870 F.3d at 1300-01 (Fed. Cir. 2017) (Dyk, J., dissenting from denial of rehearing en banc) (denying the very relevance of tort principles to an aspect of patent damages). *But see id.* at 1299 & n.1 (Stoll, J., concurring in denial of rehearing en banc) (“I . . . believe the panel decision to be consistent with long-standing damages principles in property, tort and contract. I do not agree with the dissent that there should be a special rule for damages in patent cases which is at odds with mainstream damages principles.”). See generally Karshtedt, *Damages for Indirect Patent Infringement*, *supra* note 5 (criticizing courts' misapplication of tort principles in patent cases in the context of measuring damages for indirect patent infringement).

basic purpose of this remedy. In recent times, consensus has developed that such damages should be reserved for “willful” patent infringement,²² however defined. But over the long history of treble damages in patent law, courts have variously mentioned punishment,²³ deterrence,²⁴ and even adequate compensation²⁵ as potential justifications for these awards, and legal scholarship has sent similarly conflicting messages over the years.²⁶ Although it is certainly possible for a remedy to have multiple purposes,²⁷ at least some of the pairings — like punishment and compensation — might be at odds.²⁸ Moreover, deciding which of these multiple possible purposes of treble

²² See *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1934 (2016) (stating that enhanced damages in patent law “should generally be reserved for egregious cases typified by willful misconduct”).

²³ *Id.* at 1928-29 (quoting *Seymour v. McCormick*, 57 U.S. (16 How.) 480, 488-89 (1854)).

²⁴ *Rite-Hite Corp. v. Kelley Co.*, 819 F.2d 1120, 1126 (Fed. Cir. 1987) (“The role of a finding of ‘willfulness’ in the law of infringement is partly as a deterrent — an economic deterrent to the tort of infringement — and partly as a basis for making economically whole one who has been wronged . . .”).

²⁵ *Id.*; see also *In re Seagate Tech., LLC*, 497 F.3d 1360, 1382-84 (Fed. Cir. 2007) (en banc) (Gajarsa, J., concurring); *Trio Process Corp. v. L. Goldstein’s Sons, Inc.*, 638 F.2d 661, 662-63 (3d Cir. 1981).

²⁶ See Keith N. Hylton, *Enhanced Damages for Patent Infringement: A Normative Approach*, 36 REV. LITIG. 417, 435, 439-41 (2017) [hereinafter Hylton, *Enhanced Damages for Patent Infringement*] (focusing on deterrence); Mark A. Lemley & Ragesh K. Tangri, *Ending Patent Law’s Willfulness Game*, 18 BERKELEY TECH. L.J. 1085, 1089 (2003) (focusing on punishment); Note, *The Enforcement of Rights Against Patent Infringers*, 72 HARV. L. REV. 328, 350-51 (1958) (focusing on compensation).

²⁷ Indeed, the purposes of punishment and deterrence are often interrelated. See generally Gary T. Schwartz, *Deterrence and Punishment in the Common Law of Punitive Damages: A Comment*, 56 S. CAL. L. REV. 133 (1982). In addition, compensatory rather than punitive damages can also further the goals of deterrence. See generally Russell M. Gold, *Compensation’s Role in Deterrence*, 91 NOTRE DAME L. REV. 1997 (2016); Love, *supra* note 5.

²⁸ See Harvey McGregor, *Compensation Versus Punishment in Damages Awards*, 28 MOD. L. REV. 629, 629 (1965) (“That the object of an award of damages is to compensate the plaintiff for his loss and not to punish the defendant for his wrongdoing is a modern notion. In an earlier age the separation of compensation and punishment was not so clear-cut, but as tort gradually became weaned away from crime and as, much later, the idea of no liability without fault became undermined by principles of strict liability, so the idea that damages might be based on punishment as well as compensation waned.”); cf. Peter Lee, *Distinguishing Damages Paid from Compensation Received: A Thought Experiment*, 26 TEX. INTELL. PROP. L.J. (forthcoming 2018), <https://ssrn.com/abstract=3013793> (arguing that the amount the infringer pays could be different from the amount the patentee receives in order to calibrate the deterrence and innovation inducement functions of compensatory damages).

damages is dominant would be helpful because that framing could shape the standards for awarding them.²⁹

But the fact that the common law has not supplied ready answers for enhanced damages in patent law is, unfortunately, not a surprise. The very idea of awarding more than make-whole damages in civil cases has been controversial, and the theory of punitive damages — a potential tort-law analog of patent treble damages that courts and scholars have often looked to for content when dealing with this issue in patent law³⁰ — is widely debated and appears rather unsettled, as evidenced by the prodigious amount of scholarship devoted to this field.³¹ Nonetheless, as I argue in this Article, there is much useful

²⁹ For example, compensatory damages can be readily awarded without proof of fault on the part of the losing defendant, while punitive damages generally require some form of fault. See, e.g., *Thiry v. Armstrong World Indus.*, 661 P.2d 515, 516-17 (Okla. 1983); David G. Owen, *Punitive Damages in Products Liability Litigation*, 74 MICH. L. REV. 1257, 1268-71 (1976) [hereinafter Owen, *Punitive Damages in Products Liability Litigation*].

³⁰ See *supra* notes 22–26 and accompanying text.

³¹ See, e.g., Bruce Chapman & Michael Trebilcock, *Punitive Damages: Divergence in Search of a Rationale*, 40 ALA. L. REV. 741 (1989); Thomas B. Colby, *Clearing the Smoke from Philip Morris v. Williams: The Past, Present, and Future of Punitive Damages*, 118 YALE L.J. 392, 395 (2008) [hereinafter Colby, *Clearing the Smoke*]; Thomas B. Colby, *Beyond the Multiple Punishment Problem: Punitive Damages as Punishment for Individual, Private Wrongs*, 87 MINN. L. REV. 583 (2003); Robert D. Cooter, *Economic Analysis of Punitive Damages*, 56 S. CAL. L. REV. 79 (1982); Dan B. Dobbs, *Ending Punishment in “Punitive” Damages: Deterrence-Measured Remedies*, 40 ALA. L. REV. 831 (1989); Dorsey D. Ellis, Jr., *Fairness and Efficiency in the Law of Punitive Damages*, 56 S. CAL. L. REV. 1 (1982); Marc Galanter & David Luban, *Poetic Justice: Punitive Damages and Legal Pluralism*, 42 AM. U. L. REV. 1393 (1993); Thomas C. Galligan, Jr., *Augmented Awards: The Efficient Evolution of Punitive Damages*, 51 LA. L. REV. 3 (1990); Mark F. Grady, *Punitive Damages and Subjective States of Mind: A Positive Economic Theory*, 40 ALA. L. REV. 1197 (1989); David D. Haddock et al., *An Ordinary Economic Rationale for Extraordinary Legal Sanctions*, 78 CALIF. L. REV. 1 (1990); Angela P. Harris, *Rereading Punitive Damages: Beyond the Public/Private Distinction*, 40 ALA. L. REV. 1079 (1989); Keith N. Hylton, *Punitive Damages and the Economic Theory of Penalties*, 87 GEO. L.J. 421 (1998) [hereinafter Hylton, *Economic Theory of Penalties*]; Alexandra B. Klass, *Punitive Damages and Valuing Harm*, 92 MINN. L. REV. 83 (2007); Jill Wieber Lens, *Justice Holmes’s Bad Man and the Depleted Purposes of Punitive Damages*, 101 KY. L.J. 789 (2013) [hereinafter Lens, *Bad Man*]; Jill Wieber Lens, *Punishing for the Injury: Tort Law’s Influence in Defining the Constitutional Limitations on Punitive Damage Awards*, 39 HOFSTRA L. REV. 595 (2011); Dan Markel, *Retributive Damages: A Theory of Punitive Damages as Intermediate Sanction*, 94 CORNELL L. REV. 239 (2009); David G. Owen, *Civil Punishment and the Public Good*, 56 S. CAL. L. REV. 103 (1982) [hereinafter Owen, *Civil Punishment and the Public Good*]; Owen, *Punitive Damages in Products Liability Litigation*, *supra* note 29; A. Mitchell Polinsky & Steven Shavell, *Punitive Damages: An Economic Analysis*, 111 HARV. L. REV. 869 (1988); Martin H. Redish & Andrew L. Mathews, *Why Punitive Damages Are Unconstitutional*, 53 EMORY L.J. 1 (2004); Michael Rustad, *In Defense of Punitive Damages in Products Liability: Testing Tort Anecdotes with*

guidance that courts deciding patent cases can still glean from a close examination of the historical developments that brought forth the modern law of punitive damages in tort.³² Indeed, tort law can help courts develop a standard for awarding treble damages for patent infringement that is more rational than the one currently in place.³³

The need for clarity in this area has not diminished after the Supreme Court handed down *Halo Electronics, Inc. v. Pulse Electronics, Inc.*, a recent decision addressing treble damages in patent cases.³⁴ Although it roundly rejected a rigid, multi-part test that the Court of Appeals for the Federal Circuit imposed on plaintiffs wishing to obtain enhanced damages,³⁵ the Supreme Court seemingly equivocated with respect to the approach that is to take the place of the discarded rule. The Court did offer some guidance: after looking to several old precedents, it focused on the punishment rationale of enhanced patent damages. The Court explained that such awards are reserved for “egregious cases typified by willful misconduct”³⁶ and for infringer conduct that is “willful, wanton, malicious, bad-faith, deliberate, consciously wrongful, flagrant, or — indeed — characteristic of a pirate.”³⁷ Nonetheless, the Court also held that such damages are available for a “full range of culpable behavior”³⁸ that, in addition to the epithets quoted in the previous sentence, also encompasses the elusive mental state called “recklessness.”³⁹ What are we to make of

Empirical Data, 78 IOWA L. REV. 1 (1992); Schwartz, *supra* note 27; Anthony J. Sebok, *Punitive Damages: From Myth to Theory*, 92 IOWA L. REV. 957 (2007); Anthony J. Sebok, *What Did Punitive Damages Do? Why Misunderstanding the History of Punitive Damages Matters Today*, 78 CHI.-KENT L. REV. 163 (2003) [hereinafter Sebok, *What Did Punitive Damages Do?*]; Sharkey, *Economic Analysis of Punitive Damages*, *supra* note 3; Catherine M. Sharkey, *Punitive Damages as Societal Damages*, 113 YALE L.J. 347, 357 (2003) [hereinafter Sharkey, *Punitive Damages as Societal Damages*]; Benjamin C. Zipursky, *A Theory of Punitive Damages*, 84 TEX. L. REV. 105 (2005).

³² See *infra* Part II.

³³ See *infra* Part III.

³⁴ 136 S. Ct. 1923 (2016).

³⁵ *Id.* at 1934. The Federal Circuit has exclusive jurisdiction over cases that arise under the Patent Act. See 28 U.S.C. § 1295(a)(1) (2018).

³⁶ *Halo*, 136 S. Ct. at 1933-34.

³⁷ *Id.* at 1932.

³⁸ *Id.* at 1933.

³⁹ *Id.* at 1933. For representative work on recklessness in the law, see generally FINDLAY STARK, *CULPABLE CARELESSNESS: RECKLESSNESS AND NEGLIGENCE IN THE CRIMINAL LAW* (2016); Kimberly Kessler Ferzan, *Opaque Recklessness*, 91 J. CRIM. L. & CRIMINOLOGY 597 (2001) (analyzing culpability in cases when the defendant was unaware of reasons why the conduct at issue was dangerous); Geoffrey Christopher Rapp, *The Wreckage of Recklessness*, 86 WASH. U. L. REV. 111 (2008) (discussing modern courts' continued struggles with recklessness); Kenneth W. Simons,

this apparent divergence, and what does it mean for enhanced damages in patent law going forward? In this Article, I draw on tort underpinnings of the *Halo* opinion in search for an answer.

The answer that tort law points to, and which I will explore in this Article, differs in significant respects from that given by the Federal Circuit in the months following *Halo*. Specifically, the Federal Circuit has adhered to its pre-*Halo* rule that a victorious patent plaintiff cannot receive damages beyond the compensatory baseline unless it can prove, at a minimum, that the defendant had actual knowledge of the patent-in-suit.⁴⁰ Apparently, nothing less will suffice — not even so-called “willful blindness”⁴¹ or constructive knowledge⁴² that might be imputed based on,⁴³ for example, the fact that the infringer copied a product marked with a notation that a patent application with claims covering the product is on file,⁴⁴ or even with an actual patent number.⁴⁵ The lower courts, to be sure, have followed *Halo*’s teachings to the extent of allowing plaintiffs to prove up willful infringement by showing that the defendant behaved recklessly or in bad faith based, for example, on a failure to develop a theory of noninfringement or

Rethinking Mental States, 72 B.U. L. REV. 463 (1992) [hereinafter Simons, *Rethinking Mental States*] (providing a taxonomy of different kinds of recklessness).

⁴⁰ See *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1341-42 (Fed. Cir. 2016).

⁴¹ *Glob.-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. 754, 766 (2011).

⁴² See 58 AM. JUR. 2D NOTICE § 4 (2015) (explaining that “[a]ctual notice rests upon personal information or knowledge while constructive notice is notice that the law imputes to a person not having personal information or knowledge”).

⁴³ A different issue implicating imputation arises when plaintiffs claim willful infringement and courts must determine whether actual knowledge of a patent by a low-level employee could be attributed to the corporate defendant. See generally Robert O. Bolan & William C. Rooklidge, *Imputing Knowledge to Determine Willful Infringement*, 24 AIPLA Q.J. 157 (1996). In this Article, though, I focus on whether (and when) the corporate defendant can be charged with willful infringement when the patent-in-suit was not actually known to any corporate employees (e.g., under willful blindness or recklessness principles).

⁴⁴ *State Indus., Inc. v. A.O. Smith Corp.*, 751 F.2d 1226, 1236 (Fed. Cir. 1985).

⁴⁵ *Imonex Servs., Inc. v. W.H. Munzprufer Dietmar Trenner GmbH*, 408 F.3d 1374, 1377 (Fed. Cir. 2005); see Christopher A. Harkins, *A Budding Theory of Willful Patent Infringement: Orange Books, Colored Pills, and Greener Verdicts*, 6 DUKE L. & TECH. REV. 1, 25 (2007) (challenging the Federal Circuit’s actual knowledge rule in a specific regulatory context and maintaining that “[i]f precautions by a defendant are intentionally deficient, then courts ought to adjust accountability, not to deny the opportunity to prove willfulness altogether”); see also Michael J. McKeon, *The Patent Marking and Notice Statute: A Question of “Fact” or “Act”?*, 9 HARV. J.L. & TECH. 429, 436 (1996) (contrasting notice requirements for obtaining compensatory damages under 35 U.S.C. § 287(a), which requires a plaintiff to mark a product with a patent number, with those for obtaining enhanced damages under 35 U.S.C. § 284).

invalidity after learning of the patent.⁴⁶ But that analysis is done with respect to specific patents whose existence the infringer actually knew about — and the possibility of treble damages arises only for the time period that the infringer possessed that knowledge.

Intuitively, this rule seems questionable. After all, just as one can be reckless with respect to patents of which one is aware, one can also be reckless in failing to learn about the existence of a particular patent in the first place.⁴⁷ More generally, the very idea of drawing a line at actual knowledge is strange. As courts have recognized even in patent cases dealing with the related issue of mental states for indirect infringement, willful blindness is legally equivalent to actual knowledge, and the basic concept of imputed or constructive knowledge appears throughout the law.⁴⁸ Based on general legal principles, then, some forms of “ignorance”⁴⁹ could be sufficiently “egregious” within the meaning of *Halo* as to exhibit “willful misconduct.”⁵⁰

In this Article, I examine where actual knowledge of the patent as a trigger for treble damages comes from, and probe whether it is consistent with the goals of the patent system. I conclude that the elevated status of this subjective mental state can be traced to the tort law standard for punitive damages prevalent in the nineteenth century and demonstrate that today, it is anachronistic.⁵¹ A study of the early history of punitive damages in tort reveals a key goal of sanctioning, and perhaps ensuring full compensation for unquantifiable (e.g., dignitary) injuries caused by,⁵² reprehensible interpersonal behaviors

⁴⁶ See *WesternGeco L.L.C. v. ION Geophysical Corp.*, 837 F.3d 1358, 1362-63 (Fed. Cir. 2016) (discussing “subjective willfulness” and “objective reasonableness” as possible routes to proving up the level of scienter needed to recover enhanced damages for infringement of a known patent), *cert. granted on other grounds*, 138 S. Ct. 734 (2018).

⁴⁷ See Alexander F. Sarch, *Beyond Willful Ignorance*, 88 U. COLO. L. REV. 97, 138-52 (2017) (discussing the concept of reckless ignorance).

⁴⁸ See *supra* notes 41–43 and accompanying text.

⁴⁹ *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1928 (2016) (citation omitted).

⁵⁰ *Id.* at 1934.

⁵¹ See *infra* Part II; cf. *Seymour v. McCormick*, 57 U.S. (16 How.) 480, 488 (1854) (applying contemporary tort law principles to enhanced damages under the patent damages section then in force).

⁵² See Sebok, *What Did Punitive Damages Do?*, *supra* note 31, at 200. Professor Sebok explained, though, that the harms that punitive damages could “compensate” for in the nineteenth century are different from compensable emotional distress as it is conceived of today. *Id.* at 204-05; cf. *Molzof v. United States*, 502 U.S. 301, 306-07, 309-10 (1992) (tracing the goals of punitive damages throughout the history of tort law).

revealing the defendant's extreme disregard for the rights of a specific victim. Examples include actions for assault, defamation, seduction, and other "insults," with early tort law playing the criminal-law-like functions of providing an avenue for retribution of the wronged victim and preserving the public order.⁵³ Given these goals, an enhanced damages standard concentrated on the defendant's subjective culpability makes sense.⁵⁴

While tort cases today still allow for punitive damages for intentional or knowing misconduct directed toward individual targets,⁵⁵ they also — in line with the admittedly limited guidance in *Halo* — award such damages for reckless indifference toward the rights of others generally. A more objective "reason to know"-type standard and its cognates have been added to the list of mental states that can make a defendant eligible for punitive damages.⁵⁶ Awareness of a specific victim, or actual knowledge that harm will eventuate to someone in particular, is no longer absolutely required to increase damages from the compensatory baseline.⁵⁷ Particularly in tort cases with corporate defendants, such as those involving products liability, punitive damages have been assessed for failures to discover hidden effects and for other reckless omissions that expose people in the world at large to probable injuries.⁵⁸ In some cases, this calculus has justified enhanced damages awards when the defendant did not adequately test a product before putting it out on the market.⁵⁹ In all, the scope of punitive damages in tort has expanded from actual knowledge and intent to imputed knowledge and recklessness, and from victim specificity to non-specificity.⁶⁰

These shifts can be difficult to explain and theorize in a definitive manner, and extensive literature on punitive damages reflects great

⁵³ See *infra* Section II.B.1.

⁵⁴ See generally David G. Owen, *The Moral Foundations of Punitive Damages*, 40 ALA. L. REV. 705 (1989).

⁵⁵ See, e.g., *Bailey v. Graves*, 309 N.W.2d 166, 169 (Mich. 1981) (allowing punitive damages in an intentional tort case upon proof of some aggravation beyond the elements of the tort itself); *Burnett v. Griffith*, 769 S.W.2d 780, 787-90 (Mo. 1989) (similar).

⁵⁶ RESTATEMENT (SECOND) OF TORTS § 500 (AM. LAW INST. 1965).

⁵⁷ See *infra* Section II.B.2.

⁵⁸ Victor E. Schwartz et al., *Reining in Punitive Damages "Run Wild": Proposals for Reform by Courts and Legislatures*, 65 BROOK. L. REV. 1003, 1008 (1999) ("Beginning in the late 1960s, American courts began to depart radically from the historical 'intentional tort' moorings of punitive damages.").

⁵⁹ See *infra* notes 405–06 and accompanying text.

⁶⁰ See generally *infra* Part II.

complexity of this area of law.⁶¹ But to some degree, the greater role of somewhat more objective inquiries in punitive damages determinations today, as opposed to the nineteenth century, must reflect tort law's increasing preoccupation with economic analysis over time.⁶² Indeed, while the modern law of punitive damages is not in line with economic models by a long shot,⁶³ some scholars have argued that the evolving standards for punitive damages have, in recent times, at least shifted somewhat toward serving "the efficiency-based goal of economic deterrence."⁶⁴ In some products liability cases in particular, courts have framed punitive damages inquiries in explicitly economic terms, addressing cost-optimization and balancing precautions against the risks and gravity of harm, and giving only limited weight to the defendant's subjective mental state.⁶⁵ Courts' changing treatment of punitive damages is in line with the observation that "objective standards are endemic in tort law, and the cases generally insist on their superiority to subjective standards."⁶⁶

In contrast, the older, narrower conception of punitive damages focused mainly on intent and other subjective factors and reflected primarily moral, rather than economic, considerations. Although modern commentators have developed post-hoc economic justifications for awarding punitive damages for intentional torts,⁶⁷ it remains difficult to resist the conclusion that liability based on subjective culpability fits uneasily into economic models of law.⁶⁸

⁶¹ See *supra* note 31.

⁶² See *infra* Section II.C.

⁶³ See Polinsky & Shavell, *supra* note 31, at 873; see also Sergey Budylin, *Punitive Damages as a Social Harm Measure: Economic Analysis Continues*, 31 OKLA. CITY U. L. REV. 457, 458 (2006) ("[T]here seems to be no clear-cut economic way to either define the notion of reprehensibility, or, most importantly, to calculate the optimal amount of punitive damages.").

⁶⁴ Sharkey, *Punitive Damages as Societal Damages*, *supra* note 31, at 450; see also Ariel Porat, *Misalignments in Tort Law*, 121 YALE L.J. 82, 95-96 (2011) (explaining how the "reprehensibility" criterion for constitutional limits on punitive damages could serve an economic function); Jill Wieber Lens, *An Undetectable Constitutional Violation*, 106 KY. L.J. (forthcoming 2018) (manuscript at 14-15), <https://ssrn.com/abstract=3006036> (similar).

⁶⁵ See, e.g., *Thiry v. Armstrong World Indus.*, 661 P.2d 515, 518-20 (Okla. 1983).

⁶⁶ Gregory C. Keating, *Reasonableness and Rationality in Negligence Theory*, 48 STAN. L. REV. 311, 339 (1996).

⁶⁷ See Hylton, *Economic Theory of Penalties*, *supra* note 31, at 456-58; William M. Landes & Richard A. Posner, *An Economic Theory of Intentional Torts*, 1 INT'L REV. L. & ECON. 127, 127 (1981); see also Grady, *supra* note 31, at 1200; Richard A. Posner, *An Economic Theory of the Criminal Law*, 85 COLUM. L. REV. 1193, 1199 (1985).

⁶⁸ See Dorsey D. Ellis, Jr., *An Economic Theory of Intentional Torts: A Comment*, 3

Consistent with this intuition, statements from nineteenth-century decisions allowing enhanced damages brimmed with moral opprobrium for subjectively bad behaviors, and said nothing about economic considerations.⁶⁹

In view of this brief tort background, the weight given to the subjective mental state of actual knowledge for enhanced damages in patent infringement cases is difficult to countenance. Although there are prominent dissenting voices,⁷⁰ “[t]here is widespread agreement that the reason we have a patent system is utilitarian,”⁷¹ and, particularly, economic-utilitarian. This orientation of patent law suggests that, in addition to sanctioning subjectively culpable behaviors, courts in patent cases should — as in tort cases — sometimes award enhanced damages for failings that reflect more objective forms of blameworthiness, such as reckless failures to search for relevant patents. But this intuition is not reflected in the Federal Circuit’s standard for enhanced damages post-*Halo*. Patent law today deviates from modern tort law by requiring actual, subjective knowledge of the plaintiff’s patent⁷² and, in so doing, it in effect clings

INT’L REV. L. & ECON. 45, 49-53 (1983) (exposing flaws in the Landes-Posner theory and criticizing their 1981 article for insufficiently accounting for modern developments in the law of punitive damages). Of course, sanctions targeting conduct accompanied by subjectively culpable mental states can play an economic role of deterrence. But, as even Professor Landes and Judge Posner conceded, “‘Intent’ is not a normal part of the economist’s vocabulary and does not appear to correspond to any concept in economics.” Landes & Posner, *supra* note 67, at 127. In addition, what such sanctions would deter is conduct accompanied by culpable mental states. *See also* Simons, *Rethinking Mental States*, *supra* note 39, at 510-11 (“Shavell is more willing than Posner to accept that ‘intent to do harm may be associated with the absence of social benefits, for . . . society often appears reluctant to value private benefits that are based on the enjoyment of harm.’ But this concession only underscores a principal problem with his economic approach: can we really define a ‘social harm,’ or specify its magnitude, independently of the mental state associated with the harm? A murder is a more blameworthy crime than a negligent homicide; it is not simply a killing that is more difficult to deter, therefore requiring a higher sanction.” (quoting Steven Shavell, *Criminal Law and the Optimal Use of Nonmonetary Sanctions as a Deterrent*, 85 COLUM. L. REV. 1232, 1248 (1985))).

⁶⁹ *See, e.g.*, *Hawk v. Ridgway*, 33 Ill. 473, 475 (1864) (citing *Foot v. Nichols*, 28 Ill. 486, 488 (1862)); *McWilliams v. Bragg*, 3 Wis. 424, 430-31 (1854).

⁷⁰ *See, e.g.*, ROBERT P. MERGES, JUSTIFYING INTELLECTUAL PROPERTY 41 (2011) (advocating an approach to intellectual property rooted in moral, labor-theory foundations).

⁷¹ David S. Olson, *Taking the Utilitarian Basis for Patent Law Seriously: The Case for Restricting Patentable Subject Material*, 82 TEMP. L. REV. 181, 182 (2009). *See generally* Mark A. Lemley, *Property, Intellectual Property, and Free Riding*, 83 TEX. L. REV. 1031 (2005).

⁷² *See supra* notes 40–45 and accompanying text.

to the old interpersonal-animus and moral-opprobrium models of punitive damages. If anything, eligibility for treble damages in patent law is determined based on the standard resembling one that courts have today adopted for criminal, as opposed to civil, recklessness.⁷³

In this Article, I argue that this is a problem for several reasons. First, the actual-knowledge limit seems to be a failure of statutory interpretation. Relying on Supreme Court cases that dealt with the question of the proper mental state for punitive damages in other contexts, I argue that it is unlikely that Congress intended for courts today to look to the nineteenth-century standard for tort punitive damages when figuring eligibility for treble damages in patent cases.⁷⁴ It is significantly more probable that Congress would have expected for courts to modify mental-state standards for treble damages along with evolving tort standards, rather than keep them frozen in time. In addition, the fact that total damages in patent cases are capped at a maximum of treble the compensatory damages, rather than uncapped, further points to the fact that civil recklessness, as opposed to more culpable mental states like criminal recklessness and beyond, should be the threshold of eligibility for such damages.⁷⁵ Accordingly, I maintain that the “generalized recklessness toward the rights of others” standard for enhanced damages in patent cases reflects a better interpretation of the Patent Act than the current one, which can be characterized as “recklessness or intent with respect to infringement of specific known patents.” The former is the standard that I propose and develop in this Article.⁷⁶ As I will show, this standard would result in a recalibration of enhanced damages, allowing for such awards in some cases in which they are not possible under the present approach, but also rendering defendants ineligible for them under some circumstances in which enhanced liability is allowed today.⁷⁷

A second, closely related point is that acceptance of the modern tort standard in patent law would heed the Supreme Court’s general guidance that patent law is not to be an outlier that adopts rules that

⁷³ See *infra* Section II.B.2. Other commentators have, likewise, criticized the incoherency of focusing on morally-grounded criminal-style standards for corporate acts constituting patent infringement, and questioned the very idea of subjective culpability in this setting. See generally Rantanen, *An Objective View*, *supra* note 15; Jacob S. Sherkow, *Patent Infringement as Criminal Conduct*, 19 MICH. TELECOMM. & TECH. L. REV. 1 (2012).

⁷⁴ See *infra* Section II.A.

⁷⁵ See *infra* Section I.B.2.

⁷⁶ See *infra* Part III.

⁷⁷ See *infra* Section III.C.

are exceptional or disconnected from the larger legal system,⁷⁸ and the specific guidance that trial courts must be allowed to exercise discretion in awarding enhanced damages.⁷⁹ As to the former, although at times the Federal Circuit appeared to look to non-patent sources when it adopted a standard for treble damages that it called “objective recklessness,”⁸⁰ the Federal Circuit’s version did not actually resemble what objective recklessness looks like in other areas of law.⁸¹ As to the latter, the actual knowledge threshold looks like a rigid rule of the sort that, as the Supreme Court told us in *Halo*, the Federal Circuit should generally avoid.⁸² Under a more flexible approach, courts can, for example, allow juries to base their willful infringement decisions on the characteristics of the industry in which the parties operate, whether the infringement is concealed or open, and other factors that allow for awards of enhanced damages in economically justifiable scenarios.⁸³ This result would follow the guidance *Halo*, which sought — consistent with other areas of law⁸⁴ — to increase the range of the trial courts’ discretion in awarding treble damages.

Third, if one accepts the proposition — not uncontroversial, to be sure — that punitive damages in tort today reflect economic analysis to a greater extent than they did in the nineteenth century,⁸⁵ then perhaps policy reasons also support the conclusion that patent law should give up exclusive reliance on the old tort standard and incorporate the modern approach into doctrine. As noted above, the moral opprobrium model of punitive damages is an uneasy fit for patent law, so it is no surprise that reliance on that model has led to results that are inconsistent with the utilitarian goals of the patent system. For example, because it sometimes discourages firms from searching for and reading relevant patents, the Federal Circuit’s actual-knowledge framework is opposed to the patent law’s fundamental

⁷⁸ See *supra* note 16.

⁷⁹ *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1931-34 (2016).

⁸⁰ *In re Seagate Tech., LLC*, 497 F.3d 1360, 1371 (Fed. Cir. 2007) (en banc), *abrogated by Halo*, 136 S. Ct. 1923.

⁸¹ See *infra* Section II.B.

⁸² *Halo*, 136 S. Ct. at 1934-35.

⁸³ See *infra* Part III.

⁸⁴ In particular, the Court made clear that the *Seagate* standard was an outlier in allowing litigation-created defenses as an escape hatch from liability for enhanced damages. *Halo*, 136 S. Ct. at 1933.

⁸⁵ See *infra* Section II.C.

purpose of encouragement of dissemination and disclosure of information.⁸⁶

Worse yet, and in tension with notions of fundamental fairness, the current rule can treat potential infringers who make good-faith attempts to ascertain the nature of the patent landscape in the fields where they operate — by, for example, looking for patents that they may be infringing in the United States Patent and Trademark Office (“PTO”) database — less favorably than those that decide to bury their heads in the sand and do no patent searching whatsoever.⁸⁷ Because the current rule effectively rewards firms for refusing to search for patents, it can promote socially wasteful behaviors of holdout and “contractual bypass,”⁸⁸ which entail infringers’ avoidance of negotiation with patentees, and in turn leads to undesirable reliance on litigation. Of course, extensive patent searching would not be socially efficient for all industries and in all contexts, which is yet another reason for courts to take industry characteristics (and other relevant factors) into account when deciding whether the infringer’s non-search was reckless enough to justify eligibility for an award of treble damages. Under my proposed standard, courts can do so.

The remainder of the Article proceeds in five parts. Part I traces the development of enhanced damages standards in patent law and pinpoints how the misguided actual knowledge rule was adopted. It catalogues the problems with this rule and notes that, although *Halo* carried the potential of resetting the jurisprudence of enhanced damages, lower courts continue to adhere to the old approach. Part II begins by situating the role of common-law principles in matters of interpretation of federal statutes, and then discusses how tort law and other areas of civil litigation deal with supra-compensatory damages with an eye to what patent law can (and should) learn from them. In particular, this Part describes the move toward objective standards of culpability for enhanced damages throughout the law. Part III returns to patent law, applying this learning and providing an approach for implementing the recklessness standard for treble damages in patent infringement cases. This Part shows that, if courts take industry

⁸⁶ See *infra* Section I.E.1. But see Lisa Larrimore Ouellette, *Who Reads Patents?*, 35 NATURE BIOTECH. 421, 421 (2017) [hereinafter Ouellette, *Who Reads Patents?*] (providing empirical evidence that few researchers in biotechnology and chemistry fields are deterred from reading patents by the threat of legal liability).

⁸⁷ See *infra* Section I.E.2.

⁸⁸ Haddock et al., *supra* note 31, at 17-18, 27; see also Michael Abramowicz, *A Unified Economic Theory of Noninfringement Opinions*, 14 FED. CIR. B.J. 241, 281-84 (2004).

characteristics and other economic factors into account in setting the standard for enhanced damages, willful infringement doctrine will more effectively serve the patent law's goal of promoting innovation than under the current rule. Further, this Part supplies the procedural mechanics of this Article's proposal, clarifying the allocation of power between judges and juries in the enhanced damages determination. Part IV addresses several objections, including administrative costs of the proposal, concerns about overdeterrence, and skepticism about whether the harms of patent infringement justify enhanced damages awards. The Article then concludes.

I. ENHANCED DAMAGES IN PATENT LAW: HISTORY, DOCTRINAL DEVELOPMENT, AND PROBLEMS

Section 284, the damages section of the Patent Act, is exceedingly simple. Among other things, it says that “upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer,” and that “[i]n either event the court may increase the damages up to three times the amount found or assessed.”⁸⁹ The former provision authorizes awards of compensatory damages and the latter, supra-compensatory damages up to an amount equal to three times the compensatory baseline. The statute is silent with respect to the purpose of supra-compensatory damages — are they punitive, or do they have another role? — and it does not say what showings, in addition to those needed to recover compensatory damages, are required.⁹⁰ Therefore, the answers to these questions had to be worked out by courts.⁹¹

⁸⁹ 35 U.S.C. § 284 (2018).

⁹⁰ Note that liability for direct patent infringement is a form of strict liability, which means that the plaintiff is not required to provide any proof of the defendant's culpable mental state to recover compensatory damages. *See* *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1523 (Fed. Cir. 1995) (en banc), *rev'd on other grounds*, 520 U.S. 17 (1997); *cf.* *Oswald*, *supra* note 15, at 1013-14 (criticizing this nomenclature).

⁹¹ *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 780 F.3d 1357, 1358 (Fed. Cir. 2015) (Taranto, J., concurring in denial of rehearing en banc) (“Section 284 is close to content free in what it expressly says about enhanced damages . . .”).

A. Halo's Tort Underpinnings: Treble Damages as Punitive Damages

In some early iterations of the Patent Act, treble damages were mandatory.⁹² The Patent Act of 1836 changed this rule, declaring that “it shall be in the power of the court to render judgment for any sum above the amount found by such verdict as the actual damages sustained by the plaintiff, not exceeding three times the amount thereof, according to the circumstances of the case.”⁹³ Whatever the purpose of the enhanced damages provision of the Patent Act, its language has not changed much since 1836. As explained by Matthew Powers and Steven Carlson, “[s]ubsequent amendments to the patent laws maintained the provision of the Patent Act of 1836 that trial judges should have the discretion to increase a damages award by up to three times the jury verdict.”⁹⁴ There were other important changes to the damages section of the Patent Act — for example, Congress in 1946 eliminated accounting as a potential measure of damages — but the permissive language with respect to monetary enhancements beyond compensatory damages remained throughout.⁹⁵ Importantly, one early version of the patent damages section stated that “the court shall have the same power to increase such damages, in its discretion, as is given to increase the damages found by verdicts in actions in the nature of actions of trespass upon the case,”⁹⁶ thus explicitly tying patent suits to tort-type actions claiming money damages.⁹⁷ Although this specific language was removed in 1946, there is no evidence that

⁹² Patent Act of Feb. 21, 1793, ch. 11, § 5, 1 Stat. 318, 322 (stating that the infringer “shall forfeit and pay to the patentee, a sum, that shall be at least equal to three times the price, for which the patentee has usually sold or licensed to other persons, the use of the said invention”); see also Act of Apr. 17, 1800, ch. 25, § 3, 2 Stat. 37, 38; Matthew D. Powers & Steven C. Carlson, *The Evolution and Impact of the Doctrine of Willful Patent Infringement*, 51 SYRACUSE L. REV. 53, 66-68 (2001); Jon E. Wright, Comment, *Willful Patent Infringement and Enhanced Damages — Evolution and Analysis*, 10 GEO. MASON L. REV. 97, 99-100 (2001). But see Patent Act of Apr. 10, 1790, ch. 7, § 4, 1 Stat. 109 (repealed 1793) (referring only to “such damages as shall be assessed by a jury” without any mention of trebling).

⁹³ Patent Act of July 4, 1836, ch. 357, § 14, 5 Stat. 117, 123.

⁹⁴ Powers & Carlson, *supra* note 92, at 66.

⁹⁵ See Act of Aug. 1, 1946, Pub. L. No. 79-587, 60 Stat. 778.

⁹⁶ Act of July 8, 1870, ch. 230, § 55, 16 Stat. 198, 206 (codified at REV. STAT. § 4921, U.S. COMP. STAT. 1901, p. 3395); see also *Birdsall v. Coolidge*, 93 U.S. 64, 69 (1876).

⁹⁷ See Oswald, *supra* note 15, at 1000-01 (describing the role of the writs of trespass and trespass on the case in the development of modern tort law and noting the connection between the trespass writs and patent infringement). Trespass on the case is considered to be the precursor to the modern tort of negligence. See also *Brown v. Kendall*, 60 Mass. 292, 295 (1850).

Congress sought to sever the connection between patent infringement remedies and remedies for trespass.⁹⁸

The very first Supreme Court case to interpret the permissive-enhancement amendment to the formerly mandatory treble damages provision, *Hogg v. Emerson*, assumed that treble damages still represented the baseline award, but noted that “a fair ground existed for a mitigation below that amount, if the maker of the [infringing] machine appeared in truth to be ignorant of the existence of the patent right, and did not intend any infringement.”⁹⁹ This language strongly implies that the responsibility of showing that no enhanced damages are due rests with the defendant, who could avoid treble damages by demonstrating that the infringement was innocent or at least unintentional. Although *Hogg* has never been explicitly overruled, the judicial attitude has changed, and the burden is now on the patentee to show entitlement to enhanced damages.¹⁰⁰

Another key early case to address treble damages for patent infringement, and one on which *Halo* relied to a significant degree, was *Seymour v. McCormick*.¹⁰¹ The Court in *Seymour* opined that the pre-1836 rule mandating the trebling of damages no matter what the circumstances was “manifestly unjust,” for it subjected to the “same penalty” both “the defendant who acted in ignorance or good faith” and “the wanton and malicious pirate.”¹⁰² The Court then held that “where the injury is wanton or malicious, a jury may inflict vindictive or exemplary damages, not to recompense the plaintiff, but to punish the defendant.”¹⁰³ *Seymour* cited no authority for this conclusion, but the phrases the Court used are telling. The rhetoric reveals an

⁹⁸ See *Recovery in Patent Infringement Suits: Hearing on H.R. 5231*, *supra* note 17, at 9 (statement of Mr. Conder C. Henry, Assistant Commissioner of Patents) (“[The bill] provides that the court can increase the damages in its discretion in the same manner as it is given to increase the damages found by verdicts in actions in the nature of actions of trespass upon the case. This, though, is not a new provision since it is in the present law.”).

⁹⁹ 52 U.S. 587, 607 (1850) (emphasis added).

¹⁰⁰ See *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1934 (2016); *cf.* *Knorr-Bremse Systeme Fuer Nutzfahrzeuge GmbH v. Dana Corp.*, 383 F.3d 1337, 1349-50 (Fed. Cir. 2004) (en banc) (Dyk, J., concurring-in-part and dissenting-in-part) (contending, but without citing *Hogg*, that the pre-*Seagate* approach to willfulness at the Federal Circuit contravened Supreme Court precedent by essentially shifting the burden to defendants who have learned of a patent to avoid liability for treble damages).

¹⁰¹ 57 U.S. (16 How.) 480 (1854).

¹⁰² *Id.* at 488.

¹⁰³ *Id.* at 489.

unmistakable connection between treble damages in patent law and punitive damages in tort.

The Connecticut Supreme Court of Errors, for example, used similar linguistic formulations in *Linsley v. Bushnell*,¹⁰⁴ an action involving trespass on the case. The court noted “that vindictive damages, or smart money, may be, and is, awarded, by the verdicts of juries, in cases of wanton or malicious injuries.”¹⁰⁵ Such rhetoric, including a reference to “smart money” and an explicit nod to the common law, was also used by the United States Supreme Court itself just three years before *Seymour* in *Day v. Woodworth*.¹⁰⁶ In addition, describing the principles the courts relied on in *Day*, *Seymour*, and *Linsley* in somewhat more contemporary-sounding language, Theodore Sedgwick situated enhanced damages in civil litigation in his leading contemporary treatise on damages as follows:

[I]n all cases of civil injury, or breach of contract, with the exception of those cases of trespasses or torts, accompanied by oppression, fraud, malice, or negligence so gross as to raise the presumption of malice, where the jury have a discretion to award exemplary or vindictive damages; in all other cases the declared object is to give compensation to the party injured, for the actual loss sustained.¹⁰⁷

Fast forward to 2016. As in the early cases, the Supreme Court in *Halo v. Pulse* was faced with the question of standards for the exercise of trial court discretion to enhance damages in patent cases, aiming to set limits on that decision because, as the Court succinctly explained, “discretion is not whim.”¹⁰⁸ The Court in *Halo* trained its focus on the nineteenth-century framework, relying heavily on *Seymour* and adopting a decidedly tort-style punitive damages conception of enhanced damages in patent law. Indeed, some of the language that the Court chose to describe behaviors that qualify for treble damages is not very different from that found in the sources from the 1840s and 1850s quoted earlier:

¹⁰⁴ 15 Conn. 225 (1842).

¹⁰⁵ *Id.* at 236.

¹⁰⁶ 54 U.S. (13 How.) 363, 371 (1851).

¹⁰⁷ THEODORE SEDGWICK, A TREATISE ON THE MEASURE OF DAMAGES, OR AN INQUIRY INTO THE PRINCIPLES WHICH GOVERN THE AMOUNT OF COMPENSATION RECOVERED IN SUITS AT LAW 27-28 (1847) (emphasis added).

¹⁰⁸ *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1931 (2016) (citations and alterations omitted).

Awards of enhanced damages . . . are . . . designed as a “punitive” or “vindictive” sanction for egregious infringement behavior. The sort of conduct warranting enhanced damages has been variously described in our cases as willful, wanton, malicious, bad-faith, deliberate, consciously wrongful, flagrant, or — indeed — characteristic of a pirate.¹⁰⁹

This string of epithets links treble damages in patent cases to punitive damages in tort, and seems to reflect nineteenth-century emphasis on awarding such damages for conduct accompanied by subjectively bad mental states.¹¹⁰ But there is more to the *Halo* opinion. For example, the Court stated that “Section 284 allows district courts to punish the *full range* of culpable behavior” and “eschew[ed] any rigid formula for awarding enhanced damages under § 284.”¹¹¹ Moreover, the Court noted that “‘willfully’ is a word of many meanings whose construction is often dependent on the context in which it appears.”¹¹² Elaborating on the meaning of willfulness, the Court mentioned the recklessness standard for awarding punitive damages, quoting the *Restatement of Torts* formulation stating that “a person is reckless if he acts ‘knowing or having reason to know of facts which would lead a reasonable man to realize’ his actions are unreasonably risky.”¹¹³ The Court, unfortunately, did not say much more about recklessness.

Given the Court’s limited discussion of what it means to be reckless, a detailed analysis of tort law sources and other non-patent precedents is necessary to flesh out how the standard works. In spite of *Halo*’s extensive reliance on *Seymour*, that early case alone cannot give us a full understanding of *Halo* because “[r]ecklessness was not a word in the common law’s standard lexicon, nor an idea in its conceptual framework; only in the mid- to late-1800’s did courts begin to address reckless behavior in those terms.”¹¹⁴ To build up a conception of

¹⁰⁹ *Id.* at 1932.

¹¹⁰ See Michael Feldman & Mark A. Lemley, “Characteristic of a Pirate”: Willfulness and Treble Damages (Stanford Pub. Law, Working Paper No. 2811773, 2016), <https://ssrn.com/abstract=2811773>; see also Karen Sandrik, *Punishing the Malicious Pirate in Patent Law*, 36 REV. LITIG. (forthcoming 2018), https://static1.squarespace.com/static/54c31bf9e4b02f4c0b4203e6/t/5a45b7cc0852292beed21203/1514518488638/Sandrik_draft.pdf (analyzing *Halo*’s focus on deliberate wrongdoing).

¹¹¹ *Halo*, 136 S. Ct. at 1933-34 (emphasis added).

¹¹² *Id.* at 1933 n.* (quoting *Safeco Ins. Co. of Am. v. Burr*, 551 U.S. 47, 57 (2007)).

¹¹³ *Id.* at 1933 (quoting *Safeco*, 551 U.S. at 69 (quoting RESTATEMENT (SECOND) OF TORTS § 500 (AM. LAW INST. 1965))).

¹¹⁴ *Voisine v. United States*, 136 S. Ct. 2272, 2281 (2016).

recklessness relevant for interpreting *Halo*, I examine modern developments in the law of enhanced damages in Part II, but the remainder of Part I continues focusing on patent law so as to provide additional context for that more general discussion of mental state standards for awarding supra-compensatory damages in civil litigation. In particular, sections I.C through I.E are intended to reveal the full complexity of patent law's treatment of treble damages over the years, to explain the framework that the Supreme Court in *Halo* rejected and the rule that the Court put in its place, and to sketch out and critique the Federal Circuit's approach to treble damages in *Halo*'s wake. In the section that immediately follows, though, I examine some rationales for treble damages that *Halo* apparently discarded, and take a short detour into other areas of law to address the significance of the cap on supra-compensatory damages in patent law.

B. Can Multiple Damages Have a Role Other than Punishment for Egregious Infringement? A Look at Alternative Approaches and the Role of the Cap

1. Litigation-sanction and Quasi-remedial Roles of Multiple Damages

Halo's tenor is to treat treble damages in patent law as punishment for the infringement. But history reveals some alternative conceptions. For example, a significant line of precedent leading up to *Halo* suggested that enhanced damages in patent cases can play the role of sanctioning vexatious litigation conduct. In *Day v. Woodworth*, for example, the Supreme Court noted that damages might be increased in a patent case when the defendant "has been stubbornly litigious, or has caused unnecessary expense and trouble to the plaintiff."¹¹⁵ To a similar effect was *Clark v. Wooster*, in which the Court opined that "the expense and trouble the plaintiff has been put to by the defendant, and any special inconvenience he has suffered from the wrongful acts of the defendant" could be remedied "by the court under the authority given to it to increase the damages."¹¹⁶ The *Halo* Court, however, rejected such conceptions of enhanced damages in patent law. Specifically, it explained that monetary awards in connection with the infringer's bad-faith litigation conduct are now

¹¹⁵ 54 U.S. (13 How.) 363, 372 (1851).

¹¹⁶ 119 U.S. 322, 326 (1886).

primarily the province of 35 U.S.C. § 285, the attorney's fees section of the Patent Act.¹¹⁷

The references to the plaintiff's "expense and trouble" in *Day* and *Clark* — and particularly in *Clark*, which actually does not mention any sanctionable litigation behavior, but implies that "wrongful acts of the defendant" are simply acts of infringement forcing the patentee to litigate the case — also point to quasi-remedial functions of treble damages. In other words, treble damages under this view could make up for the patentee's losses associated with having to pursue the case, and perhaps to provide for additional consequential damages beyond the amount of compensatory damages found by the jury.¹¹⁸ There is plenty of precedent for such schemes in civil litigation. For example, the Lanham Act provides for permissive treble damages for trademark infringement that are explicitly non-punitive.¹¹⁹ But there is no need to leave patent law, because courts have characterized patent treble damages this way as well. In *Stockwell v. United States*, a customs case decided in 1871, the Supreme Court used patent law as an example of a regime in which "a party injured is allowed to recover in a civil action double or treble damages" and noted that "[i]t will hardly be claimed that these are penal actions requiring the application of different rules of evidence from those that prevail in other actions for indemnity."¹²⁰ This case, not cited in *Halo*, appeared to take it for granted that enhanced damages in patent law are not "penal," or punitive.

Stockwell is not an outlier. In the middle of the twentieth century, a district court in *Activated Sludge v. Sanitary District of Chicago*, relying in part on a nineteenth-century Supreme Court copyright case, likewise concluded that the enhanced damages provision of the Patent Act is "remedial and not penal."¹²¹ This interpretation was cited with

¹¹⁷ See *Halo*, 136 S. Ct. at 1929.

¹¹⁸ Cf. Judith A. Morse, *Treble Damages Under RICO: Characterization and Computation*, 61 NOTRE DAME L. REV. 526, 528, 528 n.13 (1986) (describing multiple damages as compensating for "accumulative harm," noting that "[w]hile courts refer to the award of single damages as actual damages, they are more accurately labeled 'legal' damages" because "[a] plaintiff may suffer actual harm for which the law will not provide damages," and concluding that "accumulative damages compensate plaintiffs for actual harm not otherwise recoverable as legal damages").

¹¹⁹ 15 U.S.C. § 1117(a) (2018) (stating that permissive treble damages "shall constitute compensation and not a penalty").

¹²⁰ 80 U.S. (13 Wall.) 531, 547 (1871).

¹²¹ 64 F. Supp. 25, 35 (N.D. Ill.) (citing *Brady v. Daly*, 175 U.S. 148 (1899)), *aff'd*, 157 F.2d 517 (7th Cir. 1946) (mem.). *But see* *Union Carbide Corp. v. Graver Tank & Mfg. Co.*, 282 F.2d 653, 673-75 (7th Cir. 1960) (making the case that the court in

approval in contemporary court decisions and law review articles.¹²² For example, a note titled *Exemplary Damages in the Law of Torts* distinguished enhanced damages in patent law from punitive damages in tort, noting that “in patent infringement and antitrust cases, in which the actual injury to the plaintiff may be significantly more than he can establish, double- or treble-damage awards provide the plaintiff with a rough measure of compensation for these additional injuries.”¹²³ The general idea behind these authorities is that damages capped at a small multiple of compensatory damages are still basically compensatory, granting some additional damages beyond quantifiable compensation for the violation of the right at issue. The mandatory treble damages provision of the early Patent Act¹²⁴ likely reflected this attitude.¹²⁵

The view that treble damages in patent law can have a compensatory function appeared as late as 1981: In *Trio Process Corp. v. L. Goldstein's Sons, Inc.*,¹²⁶ the Court of Appeals for the Third Circuit explained that enhanced damages are not limited to “willfulness,” however defined, thereby suggesting an additional, non-punitive function of such damages.¹²⁷ On the facts before it, the court concluded that the enhancement was punitive “because of defendant’s bad faith,” but made it clear that “the enhancement provision of the statute is designed to permit, *inter alia*, adequate compensation for an infringement where strict legal rules would not afford it.”¹²⁸ In his leading treatise on patent law, Professor Donald Chisum addressed cases like *Activated Sludge* and *Trio Process*, noting that “[w]hether the purpose of an increased damage award should be exemplary (i.e., to

Activated Sludge did not actually award enhanced damages).

¹²² See, e.g., *Armstrong v. Allen B. Du Mont Labs., Inc.*, 137 F. Supp. 659, 665 (D. Del. 1955) (“The mere fact that Congress has allowed the Court to assess additional damages, does not make the cause of action as for a penalty and this is rather clearly shown by the statute itself and by a number of adjudicated cases.” (citations omitted)); *Armstrong v. Emerson Radio & Phonograph Corp.*, 132 F. Supp. 176, 179 (S.D.N.Y. 1955) (“Public policy dictates that where the injury is to property, intangible aspects of the damage claim which relate to the complexities of our industrial society be satisfied by the imposition of additional damages, which though in some aspects punitive, are inherently remedial.”).

¹²³ Note, *Exemplary Damages in the Law of Torts*, 70 HARV. L. REV. 517, 521 (1957).

¹²⁴ See *supra* note 92 and accompanying text.

¹²⁵ See *Morse*, *supra* note 118, at 528, 528 n.13; see also *Blakey*, *supra* note 3, at 106-11 & nn.47-51; *Hylton*, *Enhanced Damages for Patent Infringement*, *supra* note 26, at 439.

¹²⁶ 638 F.2d 661 (3d Cir. 1981).

¹²⁷ See *id.* at 662-63.

¹²⁸ *Id.* at 663-64.

punish and deter flagrant acts of patent infringement) or compensatory (i.e., to compensate the patent owner for immeasurable expenses and losses) is a longstanding controversy in the law.”¹²⁹ Nonetheless, *Halo* said little about this line of authority, or the controversy described by Professor Chisum.¹³⁰

2. Possible Significance of the Cap for Culpability Levels

Is this history now completely irrelevant in view of *Halo*'s punitive-damages orientation? Likely so, but I wish to sound a cautionary note. Significant authority suggests that we should still be careful to distinguish schemes involving *uncapped* punitive damages, limited only by the Due Process Clause of the Fourteenth Amendment,¹³¹ from those that provide for supra-compensatory damages capped at a fixed amount or a small multiple of compensatory damages. The idea is that damages with an upper limit — and particularly, “multiplier” enhanced damages dictated by statute — ensure for at least numerical proportionality between compensatory and enhanced damages.¹³² As a result, even if treble damages are not exactly quasi-compensatory, they are at least closely tied to compensatory damages and are thus reserved for behaviors that are less culpable than those sanctioned by uncapped damages.¹³³

Professor Kenneth Mann captured these intuitions in a well-known article. He contended that because supra-compensatory civil sanctions constitute the remedial “middle ground” between criminal and civil cases, the level of substantive and procedural protections (e.g., elevated burdens of proof) for those defending against such sanctions should fall somewhere between what is accorded to criminal defendants as opposed to defendants in civil cases with only compensatory damages at stake.¹³⁴ Moreover, Professor Mann argued

¹²⁹ DONALD S. CHISUM, CHISUM ON PATENTS § 20.03[4][b][iii], at 20-344 (2017).

¹³⁰ *But see In re Seagate Tech., LLC*, 497 F.3d 1360, 1382-84 (Fed. Cir. 2007) (en banc) (Gajarsa, J., concurring).

¹³¹ For the leading case on constitutional limits on uncapped punitive damages, see *State Farm Mut. Auto. Ins. Co. v. Campbell*, 538 U.S. 408 (2003). *See also* *BMW of N. Am., Inc. v. Gore*, 517 U.S. 559 (1996).

¹³² *See supra* notes 121–25 and accompanying text; *cf.* *Capitol Records, Inc. v. Thomas-Rasset*, 692 F.3d 899, 907-09 (8th Cir. 2012) (discussing the proportionality concept in the context of statutory damages for copyright infringement).

¹³³ For example, Oklahoma imposes caps on punitive damages for reckless conduct, but not for intentional conduct. *See* OKLA. STAT. ANN., tit. 23, § 9.1 (2018); *see also* *Exxon Shipping Co. v. Baker*, 554 U.S. 471, 509 (2008).

¹³⁴ *See* Kenneth Mann, *Punitive Civil Sanctions: The Middleground Between Criminal*

that the protections should fall on a continuum — the closer to a criminal sanction, the greater the protections.¹³⁵ Because of potential exposure to virtually unlimited monetary liability, uncapped punitive damages in tort are much closer to criminal sanctions than capped damages, such as treble damages.¹³⁶ Therefore, it stands to reason to reserve the highest levels of culpability for defendant's eligibility for damages that are uncapped and subject only to constitutional proportionality review.¹³⁷

The continuum approach is reflected in states in which the extent of exposure to punitive tort damages corresponds to the level of a defendant's culpability. In Arkansas, for example, punitive damages for reckless misconduct are capped, but punitive damages for intentional tortious acts are not.¹³⁸ The Supreme Court in *Exxon Shipping Co. v. Baker*,¹³⁹ a federal admiralty case, endorsed the continuum approach as well. The Court concluded that, because the behavior at issue was reckless rather than purposeful, the punitive damages award had to be capped at the "reasonable limit" of the 1:1 ratio of compensatory to enhanced damages, but implied that higher ratios would be available upon proof of greater culpability.¹⁴⁰ Because tort cases under the federal admiralty jurisdiction are a matter of federal common law, the Court reached this conclusion with no statutory guidance as to the maximum permissible magnitude of enhanced damages or the standard for awarding them. Following the pattern that we will see again,¹⁴¹ the Court relied heavily on state common law of punitive damages, and even on state statutes capping punitive damages, to fill the gap.¹⁴²

It is worth noting in this vein that, under settled interpretations of § 284, a trial judge in a patent case *does not have to award full treble*

and Civil Law, 101 YALE L.J. 1795, 1799 (1992).

¹³⁵ See *id.* at 1837-38.

¹³⁶ Although courts had not yet set Due Process limits on the amount of punitive damages at the time Professor Mann published his article, see *infra* notes 476-80 and accompanying text, he did explore potential constitutional limitations on civil punishment based on the degree of punitiveness, see Mann, *supra* note 134, at 1842-43.

¹³⁷ *State Farm Mut. Auto. Ins. Co. v. Campbell*, 538 U.S. 408, 416-18 (2003).

¹³⁸ ARK. CODE ANN. § 16-55-208 (2018).

¹³⁹ *Exxon Shipping Co. v. Baker*, 554 U.S. 471 (2008).

¹⁴⁰ *Id.* at 510-11. The reckless behavior resulting in the award of punitive damages in *Exxon* involved a tanker captain's decision to operate the tanker while drunk, ultimately causing a collision with a reef off the Alaskan coast and spillage of "millions of gallons of crude oil into Prince William Sound." *Id.* at 475-79.

¹⁴¹ See *infra* Section II.A.

¹⁴² *Exxon*, 554 U.S. at 509-14; see also Baude & Sachs, *supra* note 15, at 1133-34.

damages even if the jury finds that the defendant possessed the necessary mental state to make the defendant eligible for them.¹⁴³ Treble damages are a ceiling, not a floor, and trial judges can and have awarded no enhanced damages, as well as double damages and other, fractional multiples after a jury willfulness finding opened the door for enhanced damages.¹⁴⁴ As I explain in Part III,¹⁴⁵ in which I work out the details of my proposal, trial courts could adopt the continuum model by modulating enhanced-damages sanctions for a “full range of culpable behavior”¹⁴⁶ depending on, for example, whether the infringement was bad-faith or malicious as opposed to merely reckless. Under the continuum model, the presence of the multiplier cap, and the possibility of modulation of supra-compensatory damages within it, reinforces the point that a requirement of proving an elevated level of culpability to make a defendant eligible for any enhanced damages may not be appropriate.¹⁴⁷ In Part II, I provide further support for my contention that this is how *Halo*’s “full range of culpable behavior” reference should be understood, but for now I return to patent law to sketch out the Federal Circuit’s pre-*Halo* approach to treble damages.

C. Treble Damages at the Federal Circuit Before *Halo*

1. The Birth of the Actual Knowledge Rule and the “Duty of Care”

As noted in the previous section, there was a diversity of views with respect to whether enhanced damages in patent law were punitive or quasi-compensatory, or could possibly play both roles, prior to the creation of the Federal Circuit. Given the availability of these potential alternatives, the approach in *Underwater Devices, Inc. v. Morrison-Knudsen Co.*, the Federal Circuit’s first enhanced damages case, leaves

¹⁴³ See *Grp. One Ltd. v. Hallmark Cards, Inc.*, 407 F.3d 1297, 1308 (Fed. Cir. 2005).

¹⁴⁴ See, e.g., *Sociedad Española de Electromedicina y Calidad, S.A. v. Blue Ridge X-Ray Co.*, 226 F. Supp. 3d 520, 529-33 (W.D.N.C. 2016), *appeal docketed*, No. 17-1551 (Fed. Cir. Jan. 31, 2017); *Datoscope Corp. v. SMEC, Inc.*, 14 U.S.P.Q.2d (BNA) 1071, 1074 (D.N.J. 1990) (“A fifty-percent enhancement of damages is appropriate here. Although SMEC’s infringement was willful, it was not blatant.”). The Federal Circuit held, though, that a trial court should provide convincing reasons for no enhancement of damages after a jury finding of willful infringement. *Jurgens v. CBK, Ltd.*, 80 F.3d 1566, 1572 (Fed. Cir. 1996); see also *WCM Indus., Inc. v. IPS Corp.*, Nos. 2016-2211, 2016-2268, 2018 WL 707803, at *10 (Fed. Cir. Feb. 5, 2018) (nonprecedential).

¹⁴⁵ See *infra* Section III.D.

¹⁴⁶ See *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1933 (2016).

¹⁴⁷ See *Mann*, *supra* note 134, at 1837-38.

much to be desired. Without addressing the split of authority on the issue, the court simply picked a Court of Appeals for the Tenth Circuit case that assumed that enhanced damages could be awarded only for “willful infringement,”¹⁴⁸ thus essentially deciding that such damages were punitive. The lack of analysis is surprising given that the Federal Circuit also relied on *Trio Process*, and even noted that the Third Circuit “concluded that the enhanced portion [of the damages that were allowed] was punitive in character”¹⁴⁹ on the specific facts of that case. *Underwater Devices*, however, ignored the language from *Trio Process* suggesting that enhanced damages in patent law could serve a compensatory purpose.¹⁵⁰

More significant for the goals of this Article, *Underwater Devices*, again without analysis, assumed that “actual notice of another’s patent rights”¹⁵¹ was required for enhanced damages. A study of the citation chain from *Underwater Devices* dead-ends in a 1950s district court decision which, itself without citation, used the formulation “intentional, willful and deliberate.”¹⁵² In Part II, I endeavor to show that this phrasing, highlighting the significance of subjective mental states, is rooted in the nineteenth-century conception of punitive damages as sanctioning opprobrious interpersonal behavior, when tort law was still much closer to its criminal law roots than it is today.¹⁵³ But a tentative point can be made now that, based on the lineage of *Underwater Devices*, the actual knowledge rule as the *sine qua non* of enhanced damages appears to be drawn from that old tort law conception.

Given that proof of subjective mental states is generally challenging, the Federal Circuit’s actual knowledge requirement might lead one to predict that *Underwater Devices* would have drawn the scorn of plaintiffs in patent cases. But in fact, it was patent defendants who had bigger problems with *Underwater Devices*. This is because this case also concluded that awareness of the patent would trigger an “affirmative duty . . . to seek and obtain competent legal advice from

¹⁴⁸ *Underwater Devices, Inc. v. Morrison-Knudsen Co.*, 717 F.2d 1380, 1389-90 (Fed. Cir. 1983).

¹⁴⁹ *Id.* at 1389 (citing *Trio Process Corp. v. L. Goldstein’s Sons, Inc.*, 638 F.2d 661, 663 (3d Cir. 1981)).

¹⁵⁰ See *supra* notes 126–28 and accompanying text.

¹⁵¹ *Underwater Devices*, 717 F.2d at 1389.

¹⁵² *Bristol Labs., Inc. v. Schenley Labs., Inc.*, 117 F. Supp. 67, 80, 81 (S.D. Ind. 1953) (cited in *Coleman Co. v. Holly Mfg. Co.*, 269 F.2d 660, 666 (9th Cir. 1959) (cited in *Milgo Elec. Corp. v. United Bus. Commc’ns, Inc.*, 623 F.2d 645, 666 (10th Cir. 1980) (cited in *Underwater Devices*, 717 F.2d at 1389-90))).

¹⁵³ See *infra* Section II.B.

counsel before the initiation of any possible infringing activity.”¹⁵⁴ What is more, juries under this regime were instructed that they could draw an adverse inference of willfulness against the infringer if it did not produce such an opinion-of-counsel letter.¹⁵⁵

These features of the willfulness doctrine, therefore, forced patent defendants to generate significant expenses associated with opinion letters to counter claims for enhanced damages.¹⁵⁶ Perhaps more perniciously, production of the letter would sometimes entail waiver of uncertain scope with respect to attorney-client communications related to the defendant’s legal positions, potentially even including communications with trial as opposed to merely opinion counsel.¹⁵⁷ To avoid waiver in any event, trial and opinion counsel had to be rigorously separated, multiplying expenses.¹⁵⁸ Numerous commentators criticized the “unfair dilemma” of either giving up privilege or becoming a presumptive willful infringer, and called for the abandonment of the adverse inference rule.¹⁵⁹

Substantively, the Federal Circuit’s guidance with respect to what sorts of conduct would fail the “affirmative duty of care” was muddled. In one case, the court ruefully noted that “various criteria have been stated for determining ‘willful infringement,’”¹⁶⁰ and an article co-authored by a well-known patent attorney, William Lee, referred to a “plethora of willfulness formulations.”¹⁶¹ Some cases came close to articulating a negligence-type standard of willful infringement (though, to be sure, negligence evaluated with respect to a patent whose existence was actually known to the defendant), while others appeared to require a higher level of culpability.¹⁶² This

¹⁵⁴ *Underwater Devices*, 717 F.2d at 1390 (emphasis omitted).

¹⁵⁵ See *Kloster Speedsteel AB v. Crucible, Inc.*, 793 F.2d 1565, 1579 (Fed. Cir. 1986).

¹⁵⁶ See Lemley & Tangri, *supra* note 26, at 1092.

¹⁵⁷ Cf. *In re EchoStar Commc’ns Corp.*, 448 F.3d 1294, 1300 (Fed. Cir. 2006).

¹⁵⁸ See generally Christopher A. Harkins, *Choosing Between the Advice of Counsel Defense to Willful Patent Infringement or the Effective Assistance of Trial Counsel: A Bridge or the Troubled Waters?*, 5 NW. J. TECH. & INTELL. PROP. 210, 238 (2007).

¹⁵⁹ See William F. Lee & Lawrence P. Cogswell, III, *Understanding and Addressing the Unfair Dilemma Created by the Doctrine of Willful Patent Infringement*, 41 HOUS. L. REV. 393, 419-20 (2004); Lemley & Tangri, *supra* note 26, at 1115.

¹⁶⁰ *SRI Int’l, Inc. v. Adv. Tech. Labs., Inc.*, 127 F.3d 1462, 1464-65 (Fed. Cir. 1997).

¹⁶¹ Lee & Cogswell, *supra* note 159, at 427.

¹⁶² *Compare Graco, Inc. v. Binks Mfg. Co.*, 60 F.3d 785, 793-94 (Fed. Cir. 1995) (addressing reasonableness of the defendant’s reliance on an opinion letter), with *Gustafson, Inc. v. Intersys. Indus. Prods., Inc.*, 897 F.2d 508, 510 (Fed. Cir. 1990) (“Whether an act is ‘willful’ is by definition a question of the actor’s *intent*”

uncertainty exacerbated the practical problems created by the adverse inference rule and the ill-defined scope of waiver, generating further dissatisfaction with the willfulness doctrine.¹⁶³ The Federal Circuit eventually responded to some of these critiques, abrogating the adverse inference rule and limiting the scope of the attorney-client privilege waiver as well as of the waiver of work-product immunity.¹⁶⁴

2. *In re Seagate*

But then, the Federal Circuit went much further, completely changing the substantive standard to establish entitlement to enhanced damages. In the en banc *In re Seagate* decision, the court adopted a multi-layer framework for proving willfulness.¹⁶⁵ The court held that, as a threshold matter, the plaintiff would need to show that the infringer “acted despite an objectively high likelihood that its actions constituted infringement of a valid patent.”¹⁶⁶ The court explained that “[t]he state of mind of the accused infringer is not relevant to this objective inquiry,” which was to be judged “by the record developed in the infringement proceeding.”¹⁶⁷ In practice, this approach enabled defendants to avoid liability for enhanced damages as long as they could develop an objectively reasonable — essentially, non-frivolous — legal theory of patent noninfringement or invalidity in the course of litigation, often long after infringement began.¹⁶⁸

Moreover, this “objective recklessness” prong came to be treated as a pure question of law, making it amenable to summary judgment

(alteration omitted)).

¹⁶³ See *supra* notes 157–59 and accompanying text.

¹⁶⁴ See *Knorr-Bremse Systeme Fuer Nutzfahrzeuge GmbH v. Dana Corp.*, 383 F.3d 1337, 1340–41 (Fed. Cir. 2004) (en banc) (abrogating *Kloster Speedsteel*); see also *In re EchoStar Commc’ns Corp.*, 448 F.3d 1294, 1305 (Fed. Cir. 2006) (defining the scope of privilege waiver of attorney-client communications and of waiver of work product immunity in cases in which advice of in-house counsel has been asserted as a defense against a claim of willful infringement). With respect to the adverse inference rule, Congress later went further and added a section to the Patent Act stating that “[t]he failure of an infringer to obtain the advice of counsel with respect to any allegedly infringed patent, or the failure of the infringer to present such advice to the court or jury, may not be used to prove that the accused infringer willfully infringed the patent” 35 U.S.C. § 298 (2018).

¹⁶⁵ *In re Seagate Tech., LLC*, 497 F.3d 1360, 1370–72 (Fed. Cir. 2007) (en banc).

¹⁶⁶ *Id.* at 1371.

¹⁶⁷ *Id.*

¹⁶⁸ In Section II.B, I will show that this take on objective recklessness is at odds with the way this concept is defined in other areas of law.

grants¹⁶⁹ and ready appellate reversals on de novo review.¹⁷⁰ In one case, the Federal Circuit vacated an award of enhanced damages when an attorney for the plaintiff-appellee admitted *in appellate oral argument* that his opponent had a non-frivolous defense of nonobviousness of the asserted claims.¹⁷¹ Because patent cases in which the infringer lacks non-frivolous defenses are rare, this prong made enhanced damages more difficult for prevailing patentees to recover than it was prior to *Seagate*.¹⁷²

Objective recklessness was not the only requirement plaintiffs would have to meet to qualify for enhanced damages. Under the *Seagate* formulation, plaintiffs also had to show that the risk of infringement “was either known or so obvious that it should have been known to the accused infringer.”¹⁷³ Subsequent cases held that proof of this second prong, which would normally be decided by a jury if the plaintiff overcame the “objective” threshold, typically turned on subjective factors.¹⁷⁴ Like the first prong, subjective bad faith had to be proven by clear and convincing evidence.¹⁷⁵ And, needless to say, actual knowledge of the relevant patent’s existence continued to be the *sine qua non* of treble damages. Once all of these elements were established, the court would enter judgment that the infringement was willful, making the defendant eligible for enhanced damages.¹⁷⁶ As noted above, though, the trial judge still had the discretion, subject to deferential appellate review, not to award full treble damages, or even any enhanced damages at all.¹⁷⁷

¹⁶⁹ See Paul R. Gugliuzza, *Quick Decisions in Patent Cases*, 106 GEO. L.J. 619, 678 (2018); Christopher B. Seaman, *Willful Patent Infringement and Enhanced Damages After In re Seagate: An Empirical Study*, 97 IOWA L. REV. 417, 439-41 (2012).

¹⁷⁰ *Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc.*, 682 F.3d 1003, 1005 (Fed. Cir. 2012).

¹⁷¹ *Lee v. Mike’s Novelties, Inc.*, 543 F. App’x 1010, 1017 (Fed. Cir. 2013) (nonprecedential).

¹⁷² *But cf.* Seaman, *supra* note 169, at 417 (showing a relatively small decrease in the number of cases in which willfulness was found after *Seagate*).

¹⁷³ *In re Seagate Tech., LLC*, 497 F.3d 1360, 1371 (Fed. Cir. 2007) (en banc).

¹⁷⁴ See, e.g., *SSL Servs., LLC v. Citrix Sys., Inc.*, 769 F.3d 1073, 1091-93 (Fed. Cir. 2014).

¹⁷⁵ See *Seagate*, 497 F.3d at 1371.

¹⁷⁶ See *id.* at 1368.

¹⁷⁷ See *supra* notes 143-44 and accompanying text; see also *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 828 (Fed. Cir. 1992) (stating that “a finding of willful infringement does not mandate enhancement of damages” and that a trial judge should take several factors into account “in determining whether to exercise its discretion to award enhanced damages and how much the damages should be increased”).

The *Seagate* framework did unburden patent defendants by making it possible to defeat allegations of willfulness without opinion letters — or, really, without any positions on invalidity or noninfringement prior to litigation. But it also became a target of numerous critiques. First, because *Seagate* made it quite difficult to obtain enhanced damages, some commentators contended that even blatant infringement was underdeterred as a result.¹⁷⁸ Second, *Seagate* aberrantly turned quintessentially factual questions of culpability into questions of law, subjecting enhanced damages to tight appellate control and resulting in frequent reversals of willfulness decisions of trial judges who lived with the case and made fact findings with respect to the conduct and mental state of the defendant.¹⁷⁹ Third, *Seagate* did not rest on stable doctrinal foundations. Other than some discrete provisions to deter sham litigation,¹⁸⁰ there was little precedent for the *Seagate* framework anywhere in the law — in patent law prior to *Seagate*, in other areas of intellectual property, or in tort.¹⁸¹ The *Seagate* court did cite several copyright cases and even relied on a Fair Credit Reporting Act (“FCRA”) case, *Safeco Insurance Co. of America v. Burr*, in support of its approach to willfulness generally and objective recklessness specifically.¹⁸² But, as *Halo* concluded with respect to *Safeco*¹⁸³ and I conclude with respect to the

¹⁷⁸ See, e.g., Rachel L. Emsley, *Copying Copyright’s Willful Infringement Standard: A Comparison of Enhanced Damages in Patent Law and Copyright Law*, 42 SUFFOLK U. L. REV. 157, 178 (2008) (“A lower standard for enhancement of damages is appropriate in patent law where lost profits or a reasonable royalty can undercompensate and underdeter patent infringement.”); see also Sarah J. Garber, *Copycats, Relax! The Federal Circuit Lightens Up on Willful Patent Infringement*, 73 MO. L. REV. 817, 832 (2008) (stating that *Seagate* was “squarely in favor of patent litigation defendants”).

¹⁷⁹ Cf. *Highmark, Inc. v. Allcare Health Mgmt. Sys., Inc.*, 701 F.3d 1351, 1356-59 & n.1 (Fed. Cir. 2012) (Moore, J., dissenting from denial of rehearing en banc).

¹⁸⁰ See *Profl Real Estate Inv’rs, Inc. v. Columbia Pictures Indus., Inc.*, 508 U.S. 49, 60-61 (1993); *CRST Van Expedited, Inc. v. Werner Enters., Inc.*, 479 F.3d 1099, 1111-12 (9th Cir. 2007).

¹⁸¹ See *infra* Section II.B; see also Brief of Amici Curiae Independent Inventor Groups in Support of Petitioners at 10, *Stryker Corp. v. Zimmer, Inc.*, 136 S. Ct. 356 (2015) (No. 14-1520), 2015 WL 4883187, at *10 (“The [*Seagate*] ‘willfulness’ test for patent infringement now looks nothing like the traditional tort doctrine in civil cases.”).

¹⁸² *In re Seagate Tech., LLC*, 497 F.3d 1360, 1370-71 (Fed. Cir. 2007) (en banc) (citing *Safeco Ins. Co. of Am. v. Burr*, 551 U.S. 47, 69-70 & n.20 (2007)).

¹⁸³ *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1933 (2016) (quoting *Safeco*, 551 U.S. at 69).

copyright cases,¹⁸⁴ these authorities did not support the Federal Circuit's test.

D. Halo and Its Aftermath

1. Halo

The Supreme Court eventually overturned the *Seagate* framework. The writing was on the wall when, in two unanimous companion opinions issued in 2014, the Court rejected an analogous approach the Federal Circuit adopted for awarding attorney's fees in patent cases under 35 U.S.C. § 285.¹⁸⁵ After the lower court refused to take an opportunity for course-correction of its willfulness doctrine,¹⁸⁶ the Supreme Court granted certiorari in a pair of § 284 cases and, again, unanimously vacated the Federal Circuit's judgments, putting an end to *Seagate*.¹⁸⁷

Halo, one of the § 284 cases that made it to the Supreme Court, turned on the "objective recklessness" prong of *Seagate*.¹⁸⁸ In *Halo*, the patents-in-suit were directed to modular pieces for producing electronic circuits, and plaintiff and defendant were direct competitors in the field of surface-mounting technology for making the circuits.¹⁸⁹ The defendant, Pulse, was aware of the relevant patents as far back as 1998 and received letters from Halo offering to license them in 2002.¹⁹⁰ According to Halo, at that point, "although a Pulse engineer conducted a 'cursory' invalidity analysis and determined the patents were invalid, there was no evidence that a decision maker at Pulse relied on that engineer's analysis to make a decision to continue

¹⁸⁴ See *infra* Section II.B.2.c.

¹⁸⁵ *Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749, 1752-53 (2014); *Highmark Inc. v. Allcare Health Mgmt. Sys., Inc.*, 134 S. Ct. 1744, 1746 (2014). *But cf.* Tyler A. Hicks, Note, *Breaking the "Link" Between Awards for Attorney's Fees and Enhanced Damages in Patent Law*, 52 CAL. W. L. REV. 191 (2016) (arguing that the Supreme Court's decisions in the § 285 cases do not have to control the seemingly parallel issues in the § 284 cases).

¹⁸⁶ *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 769 F.3d 1371 (Fed. Cir. 2014), *reh'g en banc denied*, 780 F.3d 1357 (Fed. Cir. 2015) (mem.).

¹⁸⁷ *Stryker Corp. v. Zimmer, Inc.*, 782 F.3d 649 (Fed. Cir. 2014), *vacated sub. nom.* *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923 (2016); *Halo*, 769 F.3d 1371, *vacated*, 136 S. Ct. 1923.

¹⁸⁸ *Halo*, 136 S. Ct. at 1931. *Stryker*, the other case on which certiorari was granted, likewise turned on this prong of *Seagate*.

¹⁸⁹ *Halo*, 769 F.3d at 1374-75.

¹⁹⁰ See *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, No. 2:07-cv-00331-PMP-PAL, 2013 WL 2319145, at *16 (D. Nev. May 28, 2013).

selling the accused products.”¹⁹¹ Based in part on this evidence, a jury found Pulse’s infringement to be willful.¹⁹²

The trial court, however, granted judgment as a matter of law of no willfulness because Pulse had a non-frivolous litigation position that Halo’s asserted claims should have been found obvious and therefore invalid under 35 U.S.C. § 103.¹⁹³ If Pulse had prevailed on this invalidity defense, it would of course have escaped all liability. But even though “Pulse did not prove obviousness by clear and convincing evidence, [it] presented enough evidence of obviousness such that this defense was not objectively baseless, or a ‘sham,’”¹⁹⁴ thereby avoiding enhanced damages. The court held that, under *Seagate*, the fact that Pulse ignored Halo’s patent demand “does not undermine Pulse’s reasonable obviousness defense” because it was “relevant [only] to the subjective element of [willful] infringement,”¹⁹⁵ as opposed to the other, “objective recklessness” element. The Federal Circuit agreed, concluding that although “[t]he record shows that . . . Pulse was ultimately unsuccessful in challenging the validity of the Halo patents, Pulse did raise a substantial question as to the obviousness of the Halo patents.”¹⁹⁶

In its opinion vacating the Federal Circuit’s judgment in *Halo* and the companion case of *Stryker v. Zimmer*, the Supreme Court abrogated the *Seagate* standard.¹⁹⁷ First, the Court characterized the

¹⁹¹ *Id.*

¹⁹² *Id.* at *1.

¹⁹³ *Id.* at *2.

¹⁹⁴ *Id.* at *15 (citation omitted).

¹⁹⁵ *Id.* at *16.

¹⁹⁶ *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 769 F.3d 1371, 1382 (Fed. Cir. 2014).

¹⁹⁷ On remand in *Halo*, the district court ultimately concluded that, even though the jury verdict of willfulness was proper under the Supreme Court’s new standard, no enhancement of damages was warranted. *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 281 F. Supp. 3d 1087, 1093 (D. Nev. 2017) (“Considering all of the evidence submitted by the parties, I do not find that Pulse’s infringement was so egregious and unusual that enhanced damages are needed here.”). In contrast, the trial court in *Stryker* enhanced the damages to the maximum allowable treble damages limit. *Stryker Corp. v. Zimmer, Inc.*, No. 1:10-cv-1223, 2017 WL 4286412, at *11 (W.D. Mich. July 12, 2017) (“While perhaps more egregious cases exist, the test is not whether this case is the worst possible that can be imagined. Zimmer’s conduct was more egregious than most, and Zimmer is precisely the type of egregious infringer the Supreme Court had in mind when it relaxed the *Seagate* standard to provide district courts with the freedom to exercise their discretion to enhance damages in cases of willful infringement.”), *appeal docketed*, No. 17-2541 (Fed. Cir. Sept. 13, 2017). See *infra* Section III.D (discussing the respective roles of judge and jury in the damages enhancement).

Seagate approach as requiring three separate inquiries subject to “trifurcated appellate review”: “objective recklessness,” “subjective knowledge,” and “the ultimate decision — whether to award enhanced damages.”¹⁹⁸ The Court then launched into a critique of *Seagate* by pointing to *Octane Fitness*, one of the § 285 cases it decided just two years before. The Court explained that in *Octane*, it rejected a test “requiring that the claim asserted be both objectively baseless and brought in subjective bad faith.”¹⁹⁹ The Court noted that the issue of standards for awarding attorney’s fees “arose in a different context but points in the same direction” and, following *Octane*, it eliminated the Federal Circuit’s “rigid formula” for willfulness.²⁰⁰

The Court held that “[t]he principal problem with *Seagate*’s two-part test is that it requires a finding of objective recklessness in every case before district courts may award enhanced damages.”²⁰¹ This approach, therefore, removed from the ambit of enhanced damages the core, subjectively bad behaviors that were subject to such damages dating back to the early tort cases.²⁰² Emphasizing that the Federal Circuit’s treatment of willfulness impermissibly interfered with the trial courts’ discretion,²⁰³ the Court concluded that “[t]he subjective willfulness of a patent infringer, intentional or knowing, may warrant enhanced damages, without regard to whether his infringement was objectively reckless.”²⁰⁴

As noted, the Court indicated that enhanced damages could also be collected based on recklessness, but said very little about this route to willfulness.²⁰⁵ At the very least, the Court rejected the Federal Circuit’s litigation-timed approach to recklessness when it observed that “[n]othing in *Safeco*,” the case from which *Seagate* principally drew its objective standard, “suggests that we should look to facts that the defendant neither knew nor had reason to know at the time he acted.”²⁰⁶ The Court thus held that litigation was not the correct time to evaluate the defendant’s mental state. In doing so, the Court

¹⁹⁸ *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1930 (2016).

¹⁹⁹ *Id.* at 1932. By “claim” here, the Court is referring to the accused infringer’s defenses and counterclaims.

²⁰⁰ *Id.* at 1932-34.

²⁰¹ *Id.* at 1932.

²⁰² *See infra* Section II.A.

²⁰³ *Halo*, 136 S. Ct. at 1930.

²⁰³ *Id.* at 1931-32, 1934-35.

²⁰⁴ *Id.* at 1933.

²⁰⁵ *See supra* notes 111-14 and accompanying text.

²⁰⁶ *Halo*, 136 S. Ct. at 1933.

approvingly cited *Safeco's* formulation that a reckless person “acts ‘knowing or having reason to know of facts which would lead a reasonable man to realize’ his actions are unreasonably risky,”²⁰⁷ which *Safeco* in turn quoted from the *Restatement of Torts*. The “having reason to know” language plainly suggests something less than actual knowledge, but it is not clear whether this phrase refers to reason to know of infringement or reason to know of the patent’s existence.²⁰⁸ Furthermore, the reference to “a reasonable man” connotes an objective inquiry²⁰⁹ — but again, “the reasonable man’s” apprehension of risk may or may not refer to a known patent.

Additional, though not decisive, hints of how *Halo* is best interpreted come from *Farmer v. Brennan*,²¹⁰ the case that *Safeco* relied on in turn. *Farmer* distinguished civil recklessness from criminal recklessness,²¹¹ and *Safeco* held — sensibly enough for a case involving civil penalties for inaccurate credit reporting — that it is the civil version of recklessness that should be adopted as the standard for willfulness under the FCRA.²¹² What is the difference between the two? The basic idea is that while criminal recklessness entails indifference to a known risk, civil recklessness involves indifference to a risk that is “objectively high,” or one of which — as stated in the *Restatement* — the defendant had reason to know, but not necessarily one of which the defendant actually knew.²¹³ As Professor Kenneth Simons explained, civil recklessness does not hinge on “advertence to risk,” but might instead “require both indifference to risk and a greater departure from the standard of care than negligence requires.”²¹⁴

²⁰⁷ *Id.* (quoting *Safeco Ins. Co. of Am. v. Burr*, 551 U.S. 47, 69 (2007) (quoting RESTATEMENT (SECOND) OF TORTS § 500 (AM. LAW INST. 1965))).

²⁰⁸ *Cf.* *Glob.-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. 754, 760-61 (2011) (dealing with a similar problem in the setting of indirect infringement).

²⁰⁹ *See generally* Keating, *supra* note 66.

²¹⁰ *Farmer v. Brennan*, 511 U.S. 825 (1994).

²¹¹ *Id.* at 836-37.

²¹² *Safeco*, 551 U.S. at 57-58 & n.9, 68-69; *see* Tejas N. Narechania, *Certiorari, Universality, and a Patent Puzzle*, 116 MICH. L. REV. (forthcoming 2018) (manuscript at 28), <https://ssrn.com/abstract=3044035>.

²¹³ *See Farmer*, 511 U.S. at 836-37.

²¹⁴ Kenneth W. Simons, *Dimensions of Negligence in Criminal and Tort Law*, 3 THEORETICAL INQUIRIES L. 283, 293 & n.26 (2002); *see also* Simons, *Rethinking Mental States*, *supra* note 39, at 471-72 & nn.31-32 (“[T]he test of recklessness is more subjective than the test of negligence. Yet tort recklessness, unlike Model Penal Code criminal recklessness, does not specifically require awareness of a risk. ‘Reason to know’ suffices.” (citing RESTATEMENT (SECOND) OF TORTS §§ 12, 500 (AM. LAW INST. 1965))); *cf.* Kenneth W. Simons, *Statistical Knowledge Deconstructed*, 92 B.U. L. REV. 1, 15 (2012) [hereinafter Simons, *Statistical Knowledge Deconstructed*] (explaining that,

Although these definitions do not fully resolve the question of which form of recklessness should be adopted by patent law, the distinction at least supplies a starting point for further discussion. While Part II will explore the difference between the two forms of recklessness in more detail, the sections that follow focus on the lower courts' actual interpretations of *Halo*.

2. Post-*Halo*: Actual Knowledge or Bust

In *WBIP, LLC v. Kohler Co.*, the first case in which it had to apply *Halo*, the Federal Circuit concluded that “[k]nowledge of the patent alleged to be willfully infringed continues to be a prerequisite to enhanced damages.”²¹⁵ Although the court did not qualify the noun “knowledge” with the adjective “actual,” district courts have so far generally held that *Halo* did not abrogate the actual knowledge threshold for willfulness. For example, the United States District Court for the Northern District of California concluded in *Apple Inc. v. Samsung Electronics Co.* that, even though Samsung copied Apple’s product, “because Samsung had no knowledge of the [asserted patent] before the instant suit was filed, Samsung’s conduct before the instant suit . . . does not constitute willful patent infringement.”²¹⁶ The *Apple* court relied on a case from the same district explaining that “[a]t the time that the defendant allegedly analyzed the product embodying the patent to introduce a competing product around 2002, the plaintiff had not received any patents on infringed technology.”²¹⁷ Although it cannot be a surprise to an infringer that a patent on a successful product that it copied may be forthcoming, *Apple* concluded that the actual knowledge requirement is unbending. It noted that “the defendant’s sales of the competing product for a decade without any notice that the competing product infringed any plaintiff [sic] patent cannot support a finding of willfulness,”²¹⁸ even if that product was copied not long before the patent covering it issued. The approach in

to be criminally reckless, an actor must “(a) believe that the risk of the relevant legal fact is substantial and (b) take a risk that society considers unjustifiable” (citing MODEL PENAL CODE § 2.02(c) (AM. LAW INST. 1962))).

²¹⁵ 829 F.3d 1317, 1341 (Fed. Cir. 2016) (citing *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1932-33 (2016)).

²¹⁶ 258 F. Supp. 3d 1013, 1024 (N.D. Cal. 2017).

²¹⁷ *Id.* at 1025 (quoting *Radware, Ltd. v. F5 Networks, Inc.*, 5:13-cv-02024-RMW, 2016 WL 4427490, at *3 (N.D. Cal. Aug. 22, 2016)) (some alterations omitted).

²¹⁸ *Id.* (quoting *Radware*, 2016 WL 4427490, at *3).

Apple is typical,²¹⁹ and courts have not yet attempted to parse the “reason to know” language from *Halo*.²²⁰

Admittedly, Federal Circuit cases prior to *Halo* did converge on the actual knowledge rule.²²¹ And although *Halo* overruled *Seagate*, it did not specifically speak to actual knowledge. There is other authority undermining that standard, to be sure. For example, it is difficult to reconcile actual-knowledge primacy with the Supreme Court’s decision in *Global-Tech*, in which — as noted in the Introduction²²² — the Court concluded that willful blindness is legally equivalent to actual knowledge in the context of indirect infringement, over a dissent on that very point.²²³ In addition, in the nineteenth-century case of *Topliff v. Topliff*, the Supreme Court allowed an award of enhanced damages seemingly without any evidence that the defendant had actual knowledge of the patent-in-suit.²²⁴ But *Halo* did not

²¹⁹ See, e.g., *Adidas Am., Inc. v. Skechers USA, Inc.*, No. 3:16-cv-1400-SI, 2017 WL 2543811, at *3 (D. Or. June 12, 2017) (“Knowledge of the patent by the alleged infringer is . . . a prerequisite to proving willful infringement.”); *Greatbatch Ltd. v. AVX Corp.*, 121 U.S.P.Q.2d (BNA) 1786, 2016 WL 7217625, at *2-3 (D. Del. 2016) (“The key inquiry in this case is whether there is evidence in addition to AVX’s pre-suit knowledge of the patents that could show that AVX’s infringement was ‘egregious,’ ‘deliberate,’ ‘wanton,’ or otherwise characteristic of the type of infringement that warrants the Court exercising its discretion to impose the ‘punitive’ sanction of enhanced damages.” (citing *Halo*, 136 S. Ct. at 1932) (some emphasis omitted)). *But cf.* *Intel Corp. v. Future Link Sys., LLC*, 268 F. Supp. 3d 605, 623 (D. Del. 2017) (refusing to grant summary judgment of no willfulness based in part on evidence that “Intel’s own engineers concede that they avoid reviewing other, non-Intel patents so as to avoid willfully infringing them” and allegations of “corporate atmosphere encouraging employees to ‘turn a blind eye’ to patents”); see also *Adidas*, 2017 WL 2543811, at *5 (“It is unclear . . . that the doctrine of willful blindness as articulated in *Global-Tech*, an induced infringement case, applies in the direct infringement analysis context.”). Interestingly, *Greatbatch* and *Intel* were decided by the same district judge.

²²⁰ In a recently decided nonprecedential case, the Federal Circuit suggested that actual knowledge of the patent’s existence is not necessary for willfulness, while at the same time observing that the plaintiff provided evidence from which actual knowledge could be inferred. See *WCM Indus., Inc. v. IPS Corp.*, Nos. 2016-2211, 2016-2268, 2018 WL 707803, at *8-9 (Fed. Cir. Feb. 5, 2018) (nonprecedential).

²²¹ See *supra* notes 44–45 and accompanying text.

²²² See *supra* notes 48–50 and accompanying text.

²²³ See *Glob.-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. 754, 769 (2011) (defining “willful blindness” as follows: “(1) the defendant must subjectively believe that there is a high probability that a fact exists and (2) the defendant must take deliberate actions to avoid learning of that fact”).

²²⁴ 145 U.S. 156, 174 (1892) (cited in Brief of Amici Curiae Small Inventors in Support of Petitioners at 18, *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923 (2016) (Nos. 14-1513, 14-1520), 2015 WL 9245248, at *18).

highlight that aspect of *Topliff*, nor attempted to square its rules for mental states for indirect infringement with those for willfulness.²²⁵ In fact, the *Commil* case, which clarified the relevance of the defendant's knowledge and beliefs about asserted patents for indirect liability just a year before *Halo* issued, was not even cited in *Halo*.²²⁶ Thus, panels of the Federal Circuit are probably correct in maintaining the actual knowledge threshold which, given *Halo*'s lack of endorsement of it, the court could nonetheless modify if it decided to take up the issue en banc.²²⁷

As I argue in this Article, tort law sources discussed principally in Part II can help in determining the right mental state for eligibility for treble damages in patent cases. But before delving deep into tort law, an argument can be advanced that even an internal analysis of the Patent Act casts doubt on the actual knowledge rule. Subsection 154(d), which governs compensatory damages for so-called "provisional" patent rights (i.e., damages for infringement of patents that have not yet issued) and is cross-referenced in § 284, requires "actual notice of the published patent application."²²⁸ The marking subsection, § 287(a), also addresses notice, mentioning the requirement of "proof that the infringer was notified of the infringement and continued to infringe thereafter"²²⁹ in order to

²²⁵ In a copyright case, the Court of Appeals for the Fourth Circuit recently held that, while willful blindness is the minimum mental state requirement for contributory copyright infringement, willful copyright infringement can be established upon proof of recklessness. *BMG Rights Mgmt. (US) LLC v. Cox Commc'ns, Inc.*, 881 F.3d 293, 312-13 (4th Cir. 2018). Given "the historic kinship between patent law and copyright law," *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 439 (1984), and the *BMG* court's extensive reliance on the Supreme Court's patent law precedents, 881 F.3d at 308-10, this result might have informative value for patent cases going forward.

²²⁶ *Commil USA, LLC v. Cisco Sys., Inc.*, 135 S. Ct. 1920, 1926-28 (2015). See generally Nate Ngerebara, *Commil v. Cisco: Implications of the Intent Standard for Inducement Liability on Willfulness*, 31 *BERKELEY TECH. L.J.* 535 (2016) (examining tensions between mental state standards for indirect infringement as opposed to willfulness).

²²⁷ See *Troy v. Samson Mfg. Co.*, 758 F.3d 1322, 1325-27 (Fed. Cir. 2014).

²²⁸ 35 U.S.C. § 154(d) (2018); see *Rosebud LMS Inc. v. Adobe Sys. Inc.*, 812 F.3d 1070, 1073-74 (Fed. Cir. 2016) (interpreting the "actual notice" provision of § 154(d) and noting that "'actual notice' is synonymous with knowledge" (quoting 58 *AM. JUR. 2D NOTICE* § 4 (2015))).

²²⁹ 35 U.S.C. § 287(a) (2018). The marking subsection, to be sure, has been interpreted to require "an affirmative act by the patentee to notify infringers." See *McKeon*, *supra* note 45, at 466. In addition, the marking subsection limits damages only when the infringer copies a commercially available product, and does not apply to method claims even when the patentee markets a product embodying such claims.

collect past damages where the product at issue was not marked with a patent number. Although § 154(d) came into existence in 1999,²³⁰ § 284 and § 287(a) both have a long history in the Patent Act.²³¹ Congress knew how to address notice explicitly, but chose not to add any such language to § 284. Nonetheless, the requirement persists.

A fair question to ask at this point, however, is why should we care? Even if courts are getting the law wrong, perhaps some mistakes are not significant enough to fix. This response, however, is not a satisfying one when it comes to willfulness. As Professor Keith Hylton explained in a recent article, a miscalibrated enhanced damages doctrine can lead to diminished incentives to innovate,²³² and getting damages right is a critically important challenge in patent law as a general matter.²³³ The specific problems with the actual knowledge rule, though, are worth addressing at some level of granularity. The next section sets forth policy rationales for relaxing this rule because it is, in fact, causing problems for patent law.

E. Problems with the Actual Knowledge Rule

1. It Discourages Reading of Patents

The “knowledge of the patent” gloss on the enhanced patent damages provision is problematic for a variety of reasons. One, although there is some evidence that the threat of willful infringement does not deter researchers in at least some fields from looking at patents,²³⁴ actual knowledge as the trigger of enhanced liability can discourage patent search and analysis.²³⁵ Commentators have voiced

See *Crown Packaging Tech., Inc. v. Rexam Beverage Can Co.*, 559 F.3d 1308, 1316 (Fed. Cir. 2009); see also Tun-Jen Chiang, *The Reciprocity of Search*, 66 VAND. L. REV. 1, 55 (2013) (criticizing this rule).

²³⁰ Act of Nov. 29, 1999, Pub. L. No. 106-113, § 4402, 113 Stat. 1501, 1536 (amending § 154 to add § 154(d)).

²³¹ See Act of July 8, 1870, ch. 230, §§ 38, 55, 16 Stat. 198, 203, 206.

²³² Hylton, *Enhanced Damages for Patent Infringement*, *supra* note 26, at 425.

²³³ See *supra* notes 1–10 and accompanying text.

²³⁴ See Ouellette, *Who Reads Patents?*, *supra* note 86; see also Lisa Larrimore Ouellette, *Do Patents Disclose Useful Information?*, 25 HARV. J.L. & TECH. 545, 546-47 (2012) (concluding that researchers use patents as a source of technical information in certain fields).

²³⁵ Colleen V. Chien, *Opening the Patent System: Diffusionary Levers in Patent Law*, 89 S. CAL. L. REV. 793, 833-34 (2016) [hereinafter Chien, *Opening the Patent System*]; Jeanne C. Fromer, *Patent Disclosure*, 94 IOWA L. REV. 539, 588 (2009) (“[T]o improve the incentive to read patent documents, which is a critical aspect of operational disclosure, it is vital to remove — if not reverse — the penalty of willful infringement

this concern with respect to Federal Circuit doctrine in this area over the course of the previous decade,²³⁶ and the concern persisted, if not increased, after the Supreme Court issued its decision in *Halo*. Thus, in the wake of *Halo*, Professor Lisa Ouellette suggested that “as lower courts flesh out the meaning of *Halo*, they recognize the potential harm from firms deciding that the risks of enhanced liability from reading patents outweigh the teaching benefit those patents could otherwise provide.”²³⁷ Professor Ouellette’s comments echo, for example, the Federal Trade Commission’s observation, particularly salient before *Seagate*,²³⁸ that exposure to treble damages triggered by reading patents interferes with the various benefits that flow from the disclosure function of patent law:

Some Hearings participants explained that they do not read their competitors’ patents out of concern for such potential treble damage liability. Failure to read competitors’ patents can jeopardize plans for a noninfringing business or research strategy, encourage wasteful duplication of effort, delay follow-on innovation that could derive from patent disclosures, and discourage the development of competition.

It is troubling that some businesses refrain from reading their competitors’ patents because they fear the imposition of treble damages for willful infringement.²³⁹

as applied to reviewing patents to inform follow-up innovation.”); Timothy R. Holbrook, *Possession in Patent Law*, 59 SMU L. REV. 123, 142 (2006) (“The doctrine of willful infringement provides another structural infirmity to the ability of patents to perform a teaching function.”); Mark A. Lemley, *Ignoring Patents*, 2008 MICH. ST. L. REV. 19, 21-22; Michael Risch, *The Failure of Public Notice in Patent Prosecution*, 21 HARV. J.L. & TECH. 179, 213 (2007) (“[K]nowledge of a patent can lead to a finding of willful infringement, so there is a disincentive for competitors to review others’ patents to learn of the latest technology.”); see also Ryan T. Holte, *Patent Submission Policies*, 50 AKRON L. REV. 637, 657-58, 687-88 (2016).

²³⁶ See *supra* note 235.

²³⁷ Lisa Larrimore Ouellette, *Halo v. Pulse and the Increased Risks of Reading Patents*, STAN. L. SCH.: BLOGS (June 16, 2016), <https://law.stanford.edu/2016/06/16/halo-v-pulse-and-the-increased-risks-of-reading-patents>.

²³⁸ *Seagate*, to be sure, reduced some of the disincentives for reading patents by allowing an escape from enhanced damages liability based on defenses developed in litigation. See Sean B. Seymore, *The Teaching Function of Patents*, 85 NOTRE DAME L. REV. 621, 625 (2010). Still, *Seagate* continued to treat actual knowledge as the *sine qua non* of enhanced damages, maintaining the incentive to avoid learning of patents.

²³⁹ FED. TRADE COMM’N, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY 16-17 (2003), <https://www.ftc.gov/sites/default/files/documents/reports/promote-innovation-proper-balance-competition-and->

I share these critics' views that enhanced damages doctrine structured so as to discourage rather than promote patent search and analysis disserves the purposes of patent law. While the disclosure function of patents is far from perfect,²⁴⁰ information-transfer benefits of the patent document can be substantial, and should not be undermined by patent law's treble damages rules.²⁴¹ Patents transfer technical information, inform inventors and firms about research that has already been done, and encourage inventive design-arounds.²⁴² With the caveat that the relevance of personal anecdotes to scholarly work may be limited, I note that during my time as a scientist working in Silicon Valley, a supervisor once criticized me for finding, through a Google search, a patent that was arguably relevant to my project. At the time, it seemed odd to me that intellectual curiosity would be suppressed rather than rewarded. Now that I know some patent law, I see that my supervisor was in the right, but the rule still seems strange. And other legal scholarship shows that my experience with patent searching was far from exceptional.²⁴³

One could argue that, if patent disclosure were so valuable, firms would search for and read patents anyway, even if that meant having to deal with allegations of aggravated conduct sufficient for imposition of enhanced damages. Nonetheless, when actual knowledge is made to be the *sine qua non* of added liability, the decision to avoid searching is tempting to make — and, in turn, would become much less attractive when a standard that is not so strongly tied to actual knowledge is adopted.²⁴⁴ It therefore stands to reason to have a standard for

patent-law-and-policy/innovationrpt.pdf.

²⁴⁰ See, e.g., Note, *The Disclosure Function of the Patent System (or Lack Thereof)*, 118 HARV. L. REV. 2007, 2017-23 (2005); see also Fromer, *supra* note 235, at 539; Seymore, *supra* note 238, at 628-41.

²⁴¹ See Dmitry Karshedt, *Photocopies, Patents, and Knowledge Transfer: "The Uneasy Case" of Justice Breyer's Patentable Subject Matter Jurisprudence*, 69 VAND. L. REV. 1739, 1743-44 (2016) [hereinafter Karshedt, *Photocopies, Patents, and Knowledge Transfer*]; Jason Rantanen, *Peripheral Disclosure*, 74 U. PITT. L. REV. 1, 14-15 (2012).

²⁴² See Karshedt, *Photocopies, Patents, and Knowledge Transfer*, *supra* note 241, at 1745-46.

²⁴³ See, e.g., Lemley, *supra* note 235, at 19-20; Risch, *supra* note 235, at 213.

²⁴⁴ Cf. Chien, *Opening the Patent System*, *supra* note 235, at 849 ("The criterion of 'knowledge of the patent' that the willfulness doctrine is connected to is arguably both overinclusive and underinclusive with respect to what the patent system is trying to deter. For example, an innovator who studies and reverse-engineers a patentee's product or website should not be less subject to a finding of willfulness than one who happens to read a patentee's patent among many others in the course of doing routine research. At the same time, innovators should not be punished for being comprehensive in checking different sources of technical knowledge by reading

enhanced damages that rewards, or at least does not punish, patent searching.²⁴⁵ This is so because search and analysis of patents might sometimes produce benefits to society that would outweigh the social costs and burdens of searching.²⁴⁶ Although it has been suggested that properly calibrated compensatory damages should generally be adequate to promote socially optimal behaviors,²⁴⁷ it is difficult to explain the practice of ignoring patents, described further in the next section, even in scenarios in which even a search could have been performed in a socially cost-effective manner. The problem could, therefore, be with the legal standards that discourage searches,²⁴⁸ not with the costs and benefits of search in the abstract.

A common response to the argument that legal doctrine should not inhibit patent searching is that patents in certain industries provide little in the way of technically valuable information and serve primarily as a tax on innovation.²⁴⁹ According to this narrative, search and analysis of patents has little social value, and entails great costs.²⁵⁰ Maybe so — and such considerations, if accurate, should be taken into account in the enhanced damages inquiry. As I argue in Part III, reasons like these further point to introducing a greater degree of industry-specificity in making the threshold determination as to whether enhanced damages should be available to the prevailing

patents if there is no evidence that the patentee actually derived anything from the patent. But the current law leads to both outcomes.”); Lee & Melamed, *supra* note 5, at 460-61 (suggesting that “guilty infringement” is possible without actual knowledge of the patent); *see also id.* at 441-42. *But see* Randy R. Micheletti, *Willful Patent Infringement after In re Seagate: Just What Is Objectively Reckless Infringement?*, 84 CHI.-KENT L. REV. 975, 1008 (2010) (“Knowledge of the patent at issue should remain a critically important factor in the *Seagate* analysis, however, because such knowledge may create an inference that the defendant knew or should have known of the risk of infringement. Conversely, proving an infringer should have known of the risk that he would infringe the patent at issue becomes very difficult — if not impossible — if the defendant had no knowledge of the patent at all.”).

²⁴⁵ *See infra* notes 567-68 (exploring the notion of a safe harbor from willfulness for firms that perform adequate searches). Another way to formulate the problem is to say that the current approach, which is focused on actual knowledge, does not sufficiently induce firms to engage in patent searching.

²⁴⁶ *See* Johnathan M. Jackson, *If It Ain't Broke, Don't Fix It: The Pitfalls of Major Reform of the Doctrine of Willful Patent Infringement in the Wake of Knorr-Bremse*, 15 U. BALT. INTELL. PROP. L.J. 37, 63-64 (2006).

²⁴⁷ *See, e.g.,* Love, *supra* note 5, at 943-48.

²⁴⁸ *See id.* at 936-41.

²⁴⁹ *See* JAMES BESSEN & MICHAEL J. MEURER, *PATENT FAILURE: HOW JUDGES, BUREAUCRATS, AND LAWYERS PUT INNOVATORS AT RISK* 233-24 (2009).

²⁵⁰ *Id.* at 49-50.

plaintiff, and this goal can best be accomplished by discarding the inflexible actual knowledge rule.

2. It Promotes Holdout

Recent literature has noted a “hold-out” problem in the patent system. As Professor Colleen Chien contended, “[i]n many cases, manufacturers fail to take steps to clear products prior to their release even though they are arguably in the best position to determine whether any patents read on their plans.”²⁵¹ As discussed above, this happens in part because “reading the patents of others results in a manufacturer knowing about a patent, and knowledge of a patent makes it easier for a court to enhance a damages award based on a defendant’s knowing infringement.”²⁵² Eventually, though, a patentee might learn about a possible infringement, approach the defendant with a demand letter, but then end up getting the proverbial cold shoulder. Professor Chien explained that, “[f]rom the patentee’s perspective . . . when companies resist patent demands, they shirk their responsibilities as willing participants in the patent economy.”²⁵³

But, as Professor Chien’s comments about patent clearance suggest, the shirking of responsibility can manifest itself not only through resistance of licensing demands, but possibly also through the failure to perform patent searches.²⁵⁴ In cases in which it would be relatively inexpensive for the potential infringer to find and analyze relevant patents, a non-search can become a form of “hold-out” that in substance is not very different from the refusal to negotiate a license over a known patent. If the infringer could have easily found the relevant patents and readily concluded that they cover its products, the salient difference from actual knowledge is difficult to pin down.²⁵⁵ Conversely, “a manufacturer’s good faith clearance search should be

²⁵¹ Colleen V. Chien, *Holding Up and Holding Out*, 21 MICH. TELECOMM. & TECH. L. REV. 1, 23 (2014) [hereinafter Chien, *Holding Up and Holding Out*].

²⁵² *Id.* at 24; cf. Colleen V. Chien, *Contextualizing Patent Disclosure*, 69 VAND. L. REV. 1849, 1887 (2016) (contending that if courts “clarify that mere knowledge of the patent, without indicia that the patentee took advantage of the knowledge within the patent, won’t trigger treble damages, this could further reduce the risks associated with reading patents”).

²⁵³ Chien, *Holding Up and Holding Out*, *supra* note 251, at 24.

²⁵⁴ See F. Scott Kieff & Anne Layne-Farrar, *Incentive Effects from Different Approaches to Holdup Mitigation and Surrounding Patent Remedies and Standard-Setting Organizations*, 9 J. COMPETITION L. & ECON. 1091, 1102 (2013) (discussing the “socially optimal level of due diligence searching”).

²⁵⁵ See *supra* note 244 and accompanying text.

respected, and indeed encouraged.”²⁵⁶ Patent searches can have a great deal of social value because they could, besides transferring technical information, help firms avoid duplicative research²⁵⁷ and promote the formation of a market for patent rights²⁵⁸ — and, with it, development and commercialization of patented inventions.²⁵⁹ And yet, we have a rule that encourages the opposite.

The theory of punitive damages supports these intuitions. One set of circumstances in which courts have not hesitated to award punitive damages in other areas of law involves violations that could have been avoided via negotiation with the rights-holder.²⁶⁰ As Professors David Haddock, Fred McChesney, and Menachem Spiegel explained in a well-known article, *An Ordinary Economic Rationale for Extraordinary Legal Sanctions*, “a legal remedy must leave a defendant who takes

²⁵⁶ Kieff & Layne-Farrar, *supra* note 254, at 1122; *see also* Shubha Ghosh, *Patents and the Regulatory State: Rethinking the Patent Bargain Metaphor After Eldred*, 19 BERKELEY TECH. L.J. 1315, 1348 (2004) (noting that “patent law seeds a norm of innovation and aids in instituting such social practices as searching a field before beginning one’s research and development”).

²⁵⁷ *Cf.* Stephen Yelderman, *The Value of Accuracy in the Patent System*, 84 U. CHI. L. REV. 1217, 1267 (2017) (“[I]n cases in which a reasonable amount of searching would have revealed a known solution, it is preferable for the prospective inventor to search and find that solution rather than waste time and money re-creating it.” (citing ROBERT PATRICK MERGES & JOHN FITZGERALD DUFFY, *PATENT LAW AND POLICY: CASES AND MATERIALS* 401-02 (6th ed. 2013))). Although Professor Yelderman discussed this dynamic in the context of novelty and patentability generally, concerns over duplication of work equally apply to infringers who do not patent. *See supra* note 239 and accompanying text. Moreover, the world is not divided neatly into patentees and infringers, and those who search for patents in order to clear a product might obtain information relevant for their own patents. Unfortunately, leaving aside clearance issues, there is also no duty to search the prior art before filing a patent application. *See generally* Thomas Schneck, *The Duty to Search*, 87 J. PAT. & TRADEMARK OFF. SOC’Y 689 (2005). Arguments in this Article indirectly support the imposition of such a duty, which, besides encouraging information transfer, would also lead to stronger patents.

²⁵⁸ *See* Kieff & Layne-Farrar, *supra* note 254, at 1106; *see also* F. Scott Kieff, *Coordination, Property and Intellectual Property: An Unconventional Approach to Anticompetitive Effects and Downstream Access*, 56 EMORY L.J. 327, 349, 366-67 (2006); F. Scott Kieff, *Property Rights and Property Rules for Commercializing Inventions*, 85 MINN. L. REV. 697, 733 (2001). *But see* Robin Feldman & Mark A. Lemley, *Do Patent Licensing Demands Mean Innovation?*, 101 IOWA L. REV. 137, 137 (2015) (“We find that very few patent license demands actually lead to new innovation; most demands simply involve payment for the freedom to keep doing what the licensee was already doing.”).

²⁵⁹ Kieff & Layne-Farrar, *supra* note 254, at 1107; Ted Sichelman, *Commercializing Patents*, 62 STAN. L. REV. 341, 345 (2010); *see also* Holte, *supra* note 235, at 660.

²⁶⁰ *See, e.g.,* *Jacque v. Steenberg Homes, Inc.*, 563 N.W.2d 154 (Wis. 1997).

with no advantage vis-a-vis a defendant who bargains.”²⁶¹ Accordingly, “punitive rather than merely compensatory damages is a desirable response to many property violations.”²⁶² Patents may fit into this framework because they are considered to be property rights whose utilization can, at least in theory, be negotiated over provided that the search, information, and transaction costs are not prohibitive. These assumptions sometimes do not hold, but there are some circumstances — like proceeding with making an infringing product after failing to investigate the patents of close competitors, or even copying others’ products — when an infringement after non-search might also be a welfare-diminishing “contractual bypass” of the sort described in *An Ordinary Economic Rationale*.²⁶³

²⁶¹ Haddock et al., *supra* note 31, at 18; Lee & Melamed, *supra* note 5, at 461 (“[A] guilty infringer should be required to pay more than an innocent infringer . . .”); see also Henry E. Smith, *Property and Property Rules*, 79 N.Y.U. L. REV. 1719, 1723 (2004). An argument has been made that an injunction against continued infringement could function as a punitive remedy, Paul J. Heald, *Permanent Injunctions as Punitive Damages in Patent Infringement Cases*, in INTELLECTUAL PROPERTY AND THE COMMON LAW 514-29 (Shyamkrishna Balganeshe ed., 2013); see also Dan L. Burk, *Punitive Patent Liability: A Comparative Examination*, 36 REV. LITIG. (forthcoming 2018) (manuscript at 1), https://static1.squarespace.com/static/54c31bf9e4b02f4c0b4203e6/t/5a46ddfb9140b7ea14ca1868/1514593788683/Burk_draft.pdf, but the traditional view is that, while the issuance of an injunction might sometimes depend on fault as judges often take the tortfeasor’s state of mind into account in performing equitable balancing, see MacLeod, *supra* note 15 (manuscript at 67), generally speaking the injunction is not a punitive remedy, see *Metzler v. IBP, Inc.*, 127 F.3d 959, 963 (10th Cir. 1997); Zygmunt J.B. Plater, *Statutory Violations and Equitable Discretion*, 70 CALIF. L. REV. 524, 540 (1982) (“Injunctions, in their multiple variety, are merely remedial directives designed to implement the court’s determinations on threshold questions, substantive liability, and future conduct . . .”). A related question is whether, when an injunction is denied, ongoing royalties as an equitable remedy for future (i.e., post-judgment) infringement could take on punitive character. See Layne S. Keele, *Enhanced Ongoing Royalties: The Inequitable Remedy*, 119 W. VA. L. REV. 469, 517 (2016) (“In most cases, courts should award only compensatory ongoing royalties. Nevertheless, there may be times in which supracompensatory awards are appropriate. One such example would be cases in which the infringer engaged in intentional misconduct before incurring significant prospective switching costs. Another example may be a case in which the court believes that the infringer’s inadequate pre-infringement patent clearance activities prevented the parties from reaching a negotiated license.”). Although the availability of punitive damages for past harm presents questions that are conceptually separate from issues relating to prospective relief via an injunction or ongoing royalties, a combination of punitive damages and an injunction (or ongoing royalties) could overdeter. See Haddock et al., *supra* note 31, at 30-32. If a trial judge concludes that this may happen, he or she could decide not to enhance past damages. See *infra* Section III.D.

²⁶² Haddock et al., *supra* note 31, at 41.

²⁶³ *Id.* at 18.

While re-imagining punitive damages as a new kind of remedy called “retributive damages,” Professor Dan Markel made a similar argument. Professor Markel contended that “the availability of retributive damages encourages parties to use market transactions instead of misconduct that violates property rules — that is, those rules that require parties to negotiate over the transfer of legal entitlements prior to their exchange.”²⁶⁴ This is particularly true when “detecting complex wrongdoing occurring in private is difficult and where people may not even know they have been victimized,” as is often true for patent infringements.²⁶⁵ Of course, in cases where the infringement is “open and notorious,”²⁶⁶ the burden of coming to the infringer should lie squarely on the patentee. But in a number of important fact situations, infringement can be extremely difficult to detect, resulting in the undercompensation of the patentee — as well as underdeterrence of the infringer relative to a purely compensatory regime.²⁶⁷ To deal with underdeterrence, patent law already recognizes the notion of a culpable infringer in cases in which the infringer was aware of the patent,²⁶⁸ but it is not clear why the infringer who opted not to do any searching at all should fare better when launching an infringing product under circumstances in which the relevant patents could have been readily found and analyzed.²⁶⁹

To be sure, underenforcement of patents is not necessarily a bad thing, as large-scale assertion of patents in litigation would bring the economy to a halt.²⁷⁰ But searching need not equal mandatory contact with the patentee followed by a lawsuit. For example, a firm may reasonably ignore a discovered patent because it is probably not infringed or invalid, side-step enforcement by designing around the claims, or even acquire or license the patent at issue if the price is right. In addition, even diligent searches can sometimes miss a patent, perhaps resulting ultimately in no enforcement, and some patentees — for various reasons, including cost, desire to preserve commercial

²⁶⁴ Markel, *supra* note 31, at 320.

²⁶⁵ *Id.* at 285; see also Jonathan S. Masur, *Patent Liability Rules as Search Rules*, 78 U. CHI. L. REV. 187, 194-95 (2011).

²⁶⁶ *Wanlass v. Gen. Elec. Co.*, 148 F.3d 1334, 1339 (Fed. Cir. 1998) (discussing this issue in analyzing laches).

²⁶⁷ *Cf.* Masur, *supra* note 265, at 191-92.

²⁶⁸ Lee & Melamed, *supra* note 5, at 443, 461-65.

²⁶⁹ *Cf. id.* at 411-12 & n.112 (“Current law distinguishes between ordinary and willful infringement. We propose a different distinction, between ‘guilty’ and ‘innocent’ infringement.”); see also *supra* note 244 and accompanying text.

²⁷⁰ Chien, *Holding Up and Holding Out*, *supra* note 251, at 14.

relationships, fear of invalidation, and so on — do not assert their patents even when they know that infringement is occurring.²⁷¹ In some cases, relevant patents or applications might simply not exist at the time that a clearance search is made, and the (eventual) infringer would have no reason to believe that a relevant patent will appear.²⁷² More generally, in some industries, the underenforcement story could be a positive one as a general matter given the social costs and benefits involved. But, because there are also industries for which an approach that would diminish the number of uncompensated infringements can provide social benefits that justify the costs of patent search,²⁷³ this insight may again point toward introducing industry-specificity in the enhanced damages analysis and, thus, to rejecting the uniformly applicable actual knowledge rule.²⁷⁴

In some cases, moreover, the possibility of increased patent enforcement could bring with it various positive spillover effects. Patent litigation can be socially beneficial in numerous ways even if the underlying patents are weak — for example, it can lead to invalidation of such patents.²⁷⁵ This result is more readily accomplished by manufacturers or suppliers, who have greater capacity than other potential defendants, such as end users who sometimes end up being targeted instead, to search for patents and develop successful defenses.²⁷⁶ Professor Chien explained that “[t]he manufacturer is more likely to be more ‘patent-sophisticated,’ have better access to potentially invalidating prior art, and be more invested in establishing a reputation for toughness lest they be targeted by other patent asserters.”²⁷⁷ But for these very reasons, infringers falling into this category “are often left off the case” in lawsuits brought by

²⁷¹ See Clark D. Asay, *Patent Pacifism*, 85 GEO. WASH. L. REV. 645, 711 (2017).

²⁷² I explain that not searching under these circumstances should not be generally considered reckless. See *infra* notes 556–58 and accompanying text.

²⁷³ See *infra* notes 535–57 and accompanying text; see also *infra* notes 383–86 and accompanying text.

²⁷⁴ See *infra* Section III.C.

²⁷⁵ See Brian J. Love & James C. Yoon, *Expanding Patent Law’s Customer Suit Exception*, 93 B.U. L. REV. 1605, 1620–21 (2013); see also Timothy R. Holbrook, *The Supreme Court’s Quiet Revolution in Induced Patent Infringement*, 91 NOTRE DAME L. REV. 1007, 1010, 1034 (2016) (explaining how the rules governing mental states for indirect infringement could affect market entry and patent validity challenges). But see Stephen Yelderman, *Do Patent Challenges Increase Competition?*, 83 U. CHI. L. REV. 1943 (2016) (arguing that patent invalidation does not always result in pro-competitive effects).

²⁷⁶ Love & Yoon, *supra* note 275, at 1618.

²⁷⁷ Chien, *Holding Up and Holding Out*, *supra* note 251, at 29.

“enterprising” plaintiffs.²⁷⁸ If, however, there were a greater “stick” in place to force manufacturers to search for patents, they would have a greater likelihood of approaching the patentee, often triggering litigation against firms actually in position to defend the case successfully and thus improving the chances of the patent’s invalidation as opposed to a nuisance settlement.²⁷⁹

3. It Reinforces Excessive Focus on Individual Patents

The actual knowledge approach excuses ignorance of the larger patent landscape, but makes up for that by creating the expectation that the patents of which the defendant becomes aware are analyzed in exhaustive detail. The now-discarded adverse inference rule embodied this attitude, practically forcing accused infringers to spend a great deal of resources on formal opinion of counsel letters to avoid or at least counter charges of willfulness.²⁸⁰ Although the rule has been eliminated, opinion letters continue to play an important role in dealing with willfulness accusations.²⁸¹ Of course, formal opinions can always be helpful for accused infringers defending the charge of willfulness in front of a jury. But given the high cost and resulting social burdens associated with such opinions, a willfulness standard that makes them critical would be misguided. For example, in cases where the theory of infringement is unclear, where there is invalidating prior art that looks on-point to an engineer analyzing the patent,²⁸² or perhaps where the potential defendant is too small to

²⁷⁸ *Id.*

²⁷⁹ Karshtedt, *Causal Responsibility and Patent Infringement*, *supra* note 15, at 627-41 (discussing the relative responsibilities of end users and manufacturers for infringement); *see also* Masur, *supra* note 265, at 200 (criticizing a rule under which “search responsibilities will not necessarily wind up in the hands of the most efficient party”).

²⁸⁰ *See supra* notes 155–64 and accompanying text.

²⁸¹ Lynda J. Oswald, *The Evolving Role of Opinions of Counsel in Patent Infringement Cases*, 52 IDEA: INTELL. PROP. L. REV. 1, 13 (2012); Timothy M. O’Shea, *New Rule for Proving Willful Infringement and Why Opinions from Patent Counsel Still Matter After Patent Reform*, LEXOLOGY (Jan. 28, 2013), <http://www.lexology.com/library/detail.aspx?g=afac3f58-f817-4b00-a32e-04a93708bd33>; Charles T. Steenburg, *Do Opinions of Counsel Still Matter After Patent Reform? Absolutely!*, WOLF GREENFIELD (Apr. 2, 2012), <http://www.wolfgreenfield.com/publications/articles/2012/opinions-after-patent-reform-steenburg>. For an example of a post-*Halo* case discussing the value of invalidity opinions in countering allegations of bad-faith infringement, *see* Greatbatch Ltd. v. AVX Corp., 121 U.S.P.Q.2d (BNA) 1786, 2016 WL 7217625, at *4-5 (D. Del. 2016).

²⁸² *See, e.g.,* Trs. of Bos. Univ. v. Everlight Elecs. Co., Ltd., 212 F. Supp. 3d 254, 257-58 (D. Mass. 2016) (relying on the testimony of the defendant’s director of the

afford a formal letter and must rely on whatever resources it has, lack of willfulness may be readily established even without any formal invalidity or noninfringement opinions.²⁸³ Nonetheless, opinion letters remain important for countering willfulness and are thought to have become more so after *Halo* stripped infringers of “objective recklessness” defenses developed during litigation.²⁸⁴ The outsized role of opinions of counsel in the enhanced damages determination is a natural consequence of the actual knowledge rule, which limits the universe of patents that the accused infringer must deal with, but then holds them to a very high standard with respect to those patents.

Justice Breyer’s concurrence in *Halo*, joined by two other Justices, addressed the issue of expensive opinions of counsel.²⁸⁵ Justice Breyer maintained that mere receipt of a “demand” letter from a patent owner indicating the serial numbers of possibly relevant patents may not be enough to justify an award of enhanced damages starting from the date of receipt, even in some cases in which the infringer has not acquired an opinion of counsel.²⁸⁶ He argued that companies cannot always be faulted “simply for failing to spend considerable time, effort, and money obtaining expert views about whether some or all of the patents described in the letter apply to its activities.”²⁸⁷ The concurrence further noted that “the risk of treble damages can encourage the company to settle, or even abandon any challenged activity,” leading to the possibility that “a patent will reach beyond its lawful scope to discourage lawful activity.”²⁸⁸ Accordingly, Justice

intellectual property division, a person without a law degree, to conclude that a reasonable basis to believe that the defendant did not infringe existed), *appeal docketed*, No. 16-2576 (Fed. Cir. Aug. 29, 2016). *But cf.* *SSL Servs., LLC v. Citrix Sys., Inc.*, 769 F.3d 1073, 1092 (Fed. Cir. 2014) (affirming, on abuse of discretion review, a district court’s decision to exclude an engineer’s “personal beliefs regarding non-infringement” because “they were beliefs formed by a lay person without the benefit of the court’s claim construction,” and therefore were “of little probative value and potentially prejudicial”). It is worth noting that patent examiners, who decide whether claims in patent applications comply with requirements of patentability and should be allowed, have technical training, but typically no law degrees.

²⁸³ *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1936 (2016) (Breyer, J., concurring); *see infra* Sections III.B–C (arguing that courts should be lenient toward end users in the enhanced damages calculus).

²⁸⁴ *See* Erik R. Puknys & Yanbin Xu, *Willful Infringement After Halo*, FINNEGAN (Sept. 14, 2016), <https://www.finnegan.com/en/insights/willful-infringement-after-halo.html>.

²⁸⁵ *Halo*, 136 S. Ct. at 1937–38 (Breyer, J., concurring).

²⁸⁶ *Id.* at 1937.

²⁸⁷ *Id.*

²⁸⁸ *Id.*

Breyer concluded that courts, in their exercise of discretion whether to award enhanced damages, must account for the specific circumstances of each case, which “make[] all the difference.”²⁸⁹ It would surely be undesirable from a social welfare perspective to require a company to deplete its legal budget, and maybe its whole operating budget, in order to examine thousands of patents and initiate licensing negotiations over many of them. In contrast, a more limited search and analysis may not be excessively burdensome, and would be consistent with what could be reasonably expected for certain types of defendants.²⁹⁰

What is even less defensible, however, is a state of affairs in which a complete non-search often ends up being preferred to a search, even for well-resourced, sophisticated defendants practicing in the relevant, well-circumscribed technology space.²⁹¹ Indeed, although Justice Breyer proceeded from the assumption “that the infringer knew of the patent”²⁹² before it could be eligible for enhanced damages, his “all-circumstances” insight actually points the other way. While it sometimes may be non-reckless to do very little about a patent one knows about, the converse could also be true — failing to discover and address a patent that one could have readily found and analyzed could be a hallmark of recklessness, making the infringer a “guilty” one.²⁹³ But under the Federal Circuit’s willfulness doctrine, if a company adopted a policy of never searching for patents, never opening a demand letter, and instructing outside counsel to never inform it of any relevant patents, it would still be “innocent.”²⁹⁴ As colorfully described by a patent lawyer I know, this “would be the patent equivalent of a driver putting on a blindfold and later claiming (truthfully) he had no actual knowledge of all the pedestrians he ran over.”²⁹⁵ An alternative rule that would induce companies to spend some of their legal budgets on learning the broader patent landscape, as opposed to analyzing a few patents they learned about from a demand letter, would in turn discourage head-in-the-sand behavior

²⁸⁹ *Id.* at 1936.

²⁹⁰ *See infra* Section III.B.

²⁹¹ *See supra* notes 260–63 and accompanying text.

²⁹² *Halo*, 136 S. Ct. at 1936.

²⁹³ *Lee & Melamed*, *supra* note 5, at 461.

²⁹⁴ *But see* *Glob.-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. 754, 766 (2011) (concluding that, in the context of mental states for indirect infringement, willful blindness equals actual knowledge).

²⁹⁵ Attributed with permission to Andrew Baluch.

and align with the disclosure and information-dissemination functions of the patent system.

The foregoing considerations suggest that the actual knowledge rule is a poor fit as a threshold for enhanced damages in patent law, and is potentially wrong in view of *Halo* and other authority. In the next Part, I look to tort law and other areas of civil litigation to see how analogous issues are handled. The aim of this analysis is manifold. First, I maintain that, as a matter of statutory interpretation, evolving common-law standards for enhanced damages should inform analogous questions of patent law.²⁹⁶ I examine a Supreme Court case, *Smith v. Wade*, that endorsed this methodology in a context of a different federal statute.²⁹⁷ Second, adopting this interpretive approach, I look to changes in mental state standards for enhanced damages in other areas of law to supply content for awarding patent treble damages, and, more generally, to see what patent law can learn from the accumulated wisdom on enhanced damages in civil litigation. This discussion fills the gaps left open by *Halo*, which embraced the rationale that treble damages in patent law are like punitive damages, but did not fully hash out the issue of what mental states must be proven to obtain such damages. In particular, history provides a grounding for *Halo*'s seemingly ambivalent treatment of treble damages, which allows for sanctions against behaviors that are "consciously wrongful" and "characteristic of a pirate," but also those that are reckless.²⁹⁸ Third, I focus on the claim, particularly controversial in the area of punitive damages, that tort law has moved toward the goal of economic efficiency over time and examine the

²⁹⁶ See Baude & Sachs, *supra* note 15, at 1083; see also Karshedt, *Causal Responsibility and Patent Infringement*, *supra* note 15, at 586. Professor Ted Sichelman questioned the value of tort principles for patent damages, Sichelman, *supra* note 6, at 554-60, but conceded that the Patent Act would need to be amended for his proposal to be adopted, *id.* at 567-68. But in this Article, I take § 284, and its interpretation in *Halo*, as givens and operate within these constraints. For an analysis of the tensions between the goals of tort law and those of copyright law, raising issues similar to those one encounters in developing the tort-patent connection, see generally Wendy J. Gordon, *Of Harms and Benefits: Torts, Restitution, and Intellectual Property*, 21 J. LEGAL STUD. 449 (1992).

²⁹⁷ 461 U.S. 30, 46-50 (1983). *Smith* was cited, but not analyzed, in *Seagate*. See *In re Seagate Tech., LLC*, 497 F.3d 1360, 1371 (Fed. Cir. 2007) (en banc).

²⁹⁸ *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1932-33 (2016).

relevance of this argument for the correct standard for treble damages in patent cases.

II. SUPRA-COMPENSATORY DAMAGES OUTSIDE PATENT LAW

A. Methodological Considerations

When Congress has been silent on the standards to apply for awarding supra-compensatory damages, how should courts go about filling in those standards? Fortunately for the purposes of this Article, the Patent Act is not unique among federal statutes in setting forth no standards for the recovery of supra-compensatory damages, so courts have faced this general problem in other contexts. A well-known example is 42 U.S.C. § 1983, a statute that creates a civil cause of action for those who have suffered “the deprivation of any rights, privileges, or immunities secured by the Constitution and laws”²⁹⁹ at the hands of state officers. This section says little about remedies, stating only that the losing defendant “shall be liable to the party injured in an action at law, suit in equity, or other proper proceeding for redress.”³⁰⁰ Nonetheless, the Supreme Court readily concluded that, among other remedies, Congress implicitly provided for punitive damages against those found to have violated § 1983.³⁰¹

As to the mental state standard for awarding such damages, the Supreme Court explained that a two-stage analysis is in order.³⁰² A court should first ascertain the requirements for this remedy in the developing tort law and, second, determine whether overriding policy considerations in the specific statutory context would support a departure from the dominant tort approach. While, in this section, I focus on the first step of the analysis as set forth by the Court in an important § 1983 case, I undertake a deeper exploration of the trajectory of the tort punitive damages standard in the section that follows, further hashing out the appropriate mental state that the *Wade* Court has gleaned from the case law. Finally, in section II.C, I examine whether policy considerations should override the tort approach to mental states for enhanced damages in the context of the Patent Act.

²⁹⁹ 42 U.S.C. § 1983 (2018).

³⁰⁰ *Id.*

³⁰¹ See *Carlson v. Green*, 446 U.S. 14, 22 (1980). Because § 1983 does not speak to punitive damages, they are uncapped and limited only by the Due Process Clause of the Fourteenth Amendment.

³⁰² See *infra* note 326 and accompanying text.

In *Smith v. Wade*,³⁰³ the Supreme Court faced the question of what a defendant's minimal level of culpability should be for a plaintiff to collect punitive damages in a successful suit under § 1983. Daniel Wade, confined in a reformatory for youthful first offenders in Missouri, successfully sued William Smith, a guard who had placed Wade in a cell with other inmates who ended up assaulting Wade.³⁰⁴ After the district court instructed the jury that it “may assess punitive or exemplary damages” upon showing that Smith exhibited “a reckless or callous disregard of, or indifference to, the rights or safety of others,” the jury “awarded [Wade] \$25,000 in compensatory damages and \$5,000 in punitive damages.”³⁰⁵ The Court of Appeals for the Eighth Circuit affirmed, and the Supreme Court granted certiorari and affirmed the Eighth Circuit in turn.³⁰⁶ Although parallels between patent infringement and deprivations of civil rights are difficult to draw based on the differences in the interests at stake, the case is nonetheless useful and instructive for its statutory interpretation methodology. As in *Halo*, the Court dealt with a relatively old statute whose language did not say very much. Accordingly, the Court turned to tort law to deal with the problem before it, and made some significant jurisprudential points.

In determining the appropriate mental state standard for § 1983 punitive damages, the Court looked “to the common law of torts (both modern and as of 1871 [the year that § 1983 was signed into law]), with such modification or adaptation as might be necessary to carry out the purpose and policy of the statute.”³⁰⁷ Moreover, the Court explicitly defended its reliance on modern tort law. It explained that, while “we have found useful guidance in the law prevailing at the time when § 1983 was enacted[,] it does not follow that that law is absolutely controlling, or that current law is irrelevant.”³⁰⁸ The Court noted that “if the prevailing view on some point of general tort law had changed substantially in the intervening century . . . , we might be highly reluctant to assume that Congress intended to perpetuate a now-obsolete doctrine.”³⁰⁹

³⁰³ 461 U.S. 30 (1983).

³⁰⁴ *Id.* at 32-33.

³⁰⁵ *Id.* at 33 (citation omitted).

³⁰⁶ *Id.* at 33, 56.

³⁰⁷ *Id.* at 34.

³⁰⁸ *Id.* at 34 n.2.

³⁰⁹ *Id.*; see Hillel Y. Levin & Michael L. Wells, *Qualified Immunity and Statutory Interpretation: A Response to William Baude*, CALIF. L. REV. ONLINE (forthcoming 2018) (manuscript at 8-9, 25), <https://ssrn.com/abstract=3131242> (arguing that statutes such

Canvassing both modern and historical sources, the Supreme Court ultimately settled on the standard of recklessness as opposed to intent for punitive damages under § 1983. The Court initially determined that

[m]ost cases under state common law, although varying in their precise terminology, have adopted more or less the same rule, recognizing that punitive damages in tort cases may be awarded not only for actual intent to injure or evil motive, but also for recklessness, serious indifference to or disregard for the rights of others, or even gross negligence.³¹⁰

Based on this interpretive approach, the Court's distillation of state common-law developments led it to conclude tentatively that punitive damages in § 1983 actions could be awarded for behaviors beyond those that exhibited subjective intent to harm a particular victim. In other words, the Court adopted the recklessness mental state as a kind of a presumptive minimal standard for punitive damages based on the common law, and then noted that "the purpose and policy" of § 1983 did not override this default.³¹¹ Specifically, the court determined that Smith "has not shown why § 1983 should give higher protection from punitive damages than ordinary tort law" by way of adopting the intent, as opposed to recklessness, standard to open the door for such damages.³¹²

Justice Rehnquist's thoughtful dissent, joined by two other Justices, nicely captured the distinction between intent and recklessness. He explained that the "distinction between acts that are intentionally harmful and those that are very negligent, or unreasonable, involves a basic difference of kind, not just a variation of degree."³¹³ But what is the precise nature of that difference? "The former typically demands inquiry into the actor's subjective motive and purpose, while the latter ordinarily requires only an objective determination of the relative risks

as the Lanham Act and § 1983 should be interpreted under the "common law method" and enumerating factors pointing to the conclusion that the Patent Act likely does as well).

³¹⁰ *Smith*, 461 U.S. at 47-48.

³¹¹ *Id.* at 34; see Edward F. Mahoney, Casenote, *Punitive Damages and the Use of Modern Common Law in Construing Section 1983: Smith v. Wade*, 25 B.C. L. REV. 1001, 1004-10 (1984) (discussing the genesis of this analytical approach).

³¹² *Smith*, 461 U.S. at 50.

³¹³ *Id.* at 64 (Rehnquist, J., dissenting) (first citing WILLIAM J. PROSSER, LAW OF TORTS § 34, at 185 (4th ed. 1971); then citing RESTATEMENT (SECOND) OF TORTS § 500, cmt. f (AM. LAW INST. 1965)).

and advantages accruing to society from particular behavior.”³¹⁴ Justice Rehnquist believed that the subjective standard was more historically defensible than recklessness for punitive damages under § 1983, as well as more appropriate from a policy perspective.³¹⁵

Justice Rehnquist’s reasoning has merit.³¹⁶ In suits against government officers engaged in abusive behaviors under color of law, the coherence of a primarily subjective standard can be reasonably defended. Here, it might make sense for juries to focus mainly on punishing wardens and guards for consciously neglecting (and perhaps showing disdain for) their duties toward prisoners in their charge.³¹⁷ Indeed, because § 1983 actions might be viewed as quasi-criminal,³¹⁸ a mainly objective, cost-benefit evaluation of the defendant’s conduct leaves one uneasy in this context.³¹⁹ In this vein, there was some ambiguity with respect to the precise basis on which punitive damages in *Smith* were imposed. While the case’s facts are consistent with the guard’s laziness or desire to save money and time, they also suggest that he subjectively held the lives of the prisoners in his custody in low regard,³²⁰ and punitive damages were properly awarded to sanction and deter such an immoral attitude and associated conduct.³²¹ Perhaps it stands to reason, then, that courts applying *Smith* eventually settled on the criminal version of the recklessness standard for punitive damages under § 1983.³²² Justice Rehnquist may have lost the battle in *Smith*, but he arguably won the

³¹⁴ *Id.* at 64 (citing RESTATEMENT (SECOND) OF TORTS § 282).

³¹⁵ *Id.*

³¹⁶ See Gary B. Brewer, *A Recklessness Standard for Punitive Damages in Section 1983 Actions*, 49 MO. L. REV. 815, 816-20 (1984) (criticizing the *Smith* majority and defending Justice Rehnquist’s view).

³¹⁷ See *id.* (providing various rationales for limiting the availability of punitive damages in § 1983 actions).

³¹⁸ See Taylor Van Hove, *Fraud, Mistake, and Section 1983 Prison Claims: Why the Federal Rules of Civil Procedure Should Be Amended to Require Heightened Pleading for Section 1983 Inmate Litigation*, 65 DEPAUL L. REV. 213 (2015); cf. Rachel A. Harmon, *The Problem of Policing*, 110 MICH. L. REV. 761, 765-77 (2012). To the extent that we wished to make it easier to punish these violations, though, a civil recklessness standard may be appropriate. See *infra* notes 371-74 and accompanying text (suggesting that this dynamic may be behind the development of the law of punitive damages for drunk driving).

³¹⁹ See *infra* Section II.C.

³²⁰ *Smith*, 461 U.S. at 32-33.

³²¹ *Id.* at 49-54.

³²² See *Kolstad v. Am. Dental Ass’n*, 527 U.S. 526, 535-36 (1999) (construing *Smith* to have held that subjective recklessness is the standard for punitive damages under § 1983).

war in that future decisions adopted this more morally-grounded type of recklessness which, like intent, has strongly subjective features.

The difference between the two forms of recklessness is worth exploring further. Echoing Justice Rehnquist's dissent in *Smith*, the Supreme Court in *Farmer v. Brennan* distinguished them as follows: While "[t]he criminal law . . . generally permits a finding of recklessness only when a person disregards a risk of harm of which he is aware," "[t]he civil law generally calls a person reckless who acts . . . in the face of an unjustifiably high risk of harm that is either known or so obvious that it should be known."³²³ In *Safeco v. Burr*, the Court explained that in contrast to criminal recklessness, "[s]ubjective knowledge on the part of the offender"³²⁴ is not required for civil recklessness. While § 1983 actions today call for a criminal version of recklessness as a prerequisite for punitive damages awards, perhaps most other civil actions, like claims for compensation under the FCRA addressed in *Safeco*, sensibly demand proof of only civil recklessness before enhanced damages can be imposed.³²⁵

Leaving aside the details of *Smith*, the case's methodology for setting the standard for awarding punitive damages under a federal statute is worth recapping. The Court looked to developing tort law to fill the gaps in the statute, and only then, as a second line of analysis, considered whether the tort standard made sense for § 1983 actions as a policy matter.³²⁶ *Smith* is not unique in its focus on the common law.

³²³ 511 U.S. 825, 836-37 (1994). It is notable that even cases like *Farmer*, which explicitly adopted the criminal version of recklessness as the standard for establishing Eighth Amendment violations in prisoner suits, have been interpreted by some courts to allow liability with proof of something less than actual knowledge. See, e.g., *Makdessi v. Fields*, 789 F.3d 126, 136 (4th Cir. 2015) (vacating the judgment of a district court against the plaintiff in an Eighth Amendment prisoner suit because the lower court "failed to appreciate that the subjective 'actual knowledge' standard required to find deliberate indifference may be proven by circumstantial evidence that a risk was so obvious that it had to have been known"); see also *Brice v. Va. Beach Corr. Ctr.*, 58 F.3d 101, 105 (4th Cir. 1995) ("Nevertheless, even under this subjective standard, a prison official cannot hide behind an excuse that he was unaware of a risk, no matter how obvious.").

³²⁴ *Safeco Ins. Co. of Am. v. Burr*, 551 U.S. 47, 68 n.18 (2007).

³²⁵ *Id.* at 68; cf. *supra* note 73 and accompanying text (noting critiques of subjective standards in patent law by other commentators). Interestingly, *Safeco* also held that punitive damages under the FCRA are *not* available for bad-faith conduct in the absence of a showing of objective recklessness, obliquely referring to "history and current thinking," 551 U.S. at 70 n.20. But the Supreme Court distinguished this aspect of *Safeco* in view of patent-specific precedents allowing for enhanced damages for bad-faith infringement. *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1933 n.* (2016); see *Narechania, supra* note 212 (manuscript at 48).

³²⁶ See Michael L. Wells, *Punitive Damages for Constitutional Torts*, 56 LA. L. REV.

To give another example, the Supreme Court in *Exxon Shipping Co. v. Baker*, a case involving punitive damages for torts under the admiralty jurisdiction of the federal courts,³²⁷ likewise drew upon state law sources. The *Exxon* Court emphasized the importance of “understanding of the place of punishment in modern civil law and reasonable standards of process in administering punitive law,” and accordingly provided “a brief account of the history behind today’s punitive damages” before settling on the proper standard.³²⁸ The Court’s characterization of the mental states relevant for punitive damages was not far off from that of Justice Rehnquist’s dissent in *Smith*: *Exxon* noted that “under the umbrellas of punishment and its aim of deterrence, degrees of relative blameworthiness are apparent,” and explained that “[r]eckless conduct is not intentional or malicious, nor is it necessarily callous toward the risk of harming others, as opposed to unheedful of it.”³²⁹ Notably, *Exxon* dealt only with the issue of the proper cap on punitive damages, and did not question the availability of this remedy in admiralty cases for behaviors falling under the rubric of civil recklessness.³³⁰

Halo, like *Smith* and *Exxon*, looked to the common law of punitive damages when it interpreted § 284, and flagged intent and recklessness as the relevant culpability levels as well.³³¹ The general approach is ubiquitous: as Professors William Baude and Stephen Sachs argued in a recent article, the common law routinely provides unwritten “substantive rules” for interpreting federal legislation.³³² But to fully understand what *Halo* meant, an exploration of relevant tort precedents is in order.

B. Punitive Damages in Tort

1. Historical Developments

For a significant period of time in Anglo-American legal history, torts and crimes were essentially undifferentiated.³³³ Both the state and

841, 844 (1996) (calling this a “two-part approach”).

³²⁷ 554 U.S. 471, 489-90 (2008); see also *supra* notes 138-42 and accompanying text.

³²⁸ *Exxon*, 554 U.S. at 490.

³²⁹ *Id.* at 493.

³³⁰ *Id.* at 493-94.

³³¹ *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1932-33 (2016).

³³² See Baude & Sachs, *supra* note 15, at 1105-07.

³³³ See 1 LINDA L. SCHLUETER, PUNITIVE DAMAGES 5 (7th ed. 2015); Colby, *Clearing the Smoke*, *supra* note 31, at 395. For an early case suggesting a distinction, see

the injured party had a role to play in pursuing the offender in the same case, blurring the functions and procedural aspects of what we today recognize as criminal as opposed to civil actions. In some suits, the injured party had the option of obtaining a monetary judgment from the offender if it principally sought compensation, or of having the offender imprisoned if he or she cared more about revenge.³³⁴ Although actions that we would characterize today as civil eventually became independent from their criminal counterparts, scholars of the common law have noted the historic links between them. For example, “[l]arceny has been regarded as the criminal kin to the civil action for trespass *vi et armis*, that is, by actual or implied violence,” and “[m]ost scholars of English law agree that the writ of trespass is derived from the appeal of felony for larceny.”³³⁵ Even so, the close link between criminal and civil actions remained. Thus, “[a] civil action of trespass as late as 1694 could result in criminal sanctions against the defendant.”³³⁶ The spirit of the historical tort-crime connection persists to this day, and some theorists continue to see some aspects of tort law as carrying out the function of private vengeance, or recourse.³³⁷

Weaver v. Ward (1616) 80 Eng. Rep. 284, 284 (K.B.) (noting that “if a lunatick hurts a man, he shall be answerable in trespass,” but explaining that the killing “shall be no felony”); cf. WILLIAM B. HALE, HANDBOOK ON THE LAW OF DAMAGES 216 (1896). See generally David J. Seipp, *The Distinction Between Crime and Tort in the Early Common Law*, 76 B.U. L. REV. 59, 83-86 (1996).

³³⁴ Colby, *Clearing the Smoke*, *supra* note 31, at 432 (“Victims who preferred compensation could bring an action for a writ of trespass; victims who preferred vengeance could bring an appeal of felony. ‘They could either put their wrongdoers to death and collect nothing [through an appeal of felony], or collect money for themselves and leave their wrongdoers alive with the rest of their wealth intact [through a writ of trespass].’” (quoting Seipp, *supra* note 333, at 84) (alterations in original)).

³³⁵ Michael E. Tigar, *The Right of Property and the Law of Theft*, 62 TEX. L. REV. 1443, 1446 (1984) (citation omitted). Professor Tigar noted that “[m]ost scholars of English law agree that the writ of trespass is derived from the appeal of felony for larceny.” *Id.* (citing THEODORE F.T. PLUCKNETT, A CONCISE HISTORY OF THE COMMON LAW 369-70 (5th ed. 1956)).

³³⁶ Note, *supra* note 123, at 523.

³³⁷ See Keating, *supra* note 66, at 343-44 (setting forth the moral foundations of tort law’s reasonableness standard); see also John C.P. Goldberg & Benjamin C. Zipursky, *Torts as Wrongs*, 88 TEX. L. REV. 917, 974 (2010) (“When the social-contract metaphor is stripped away, the idea of civil recourse becomes clearer. It is a political commitment to the following effect: Individuals who are able to prove that someone has treated them in a manner that the legal system counts as a relational, injurious wrong shall have the authority to hold the wrongdoer accountable to him. This commitment is not founded, in the first instance, on instrumental concerns but on political and moral ones.”). See generally ERNEST WEINRIB, THE IDEA OF PRIVATE LAW

Even as tort law began to embrace the goal of compensation in the nineteenth century,³³⁸ courts' description of punitive damages as a vehicle of vengeance and punishment continued to reflect the tort-crime link. Thus, the Illinois Supreme Court held in 1864 that "where the wrong is wanton, or it is willful, the jury are authorized to give an amount of damages beyond the actual injury sustained, as a punishment, and to preserve the public tranquillity."³³⁹ The reference to "public tranquillity" suggests that punitive damages could reduce the possibility of self-help by fulfilling tort victims' desire for revenge. According to the court, this function was different from that of compensatory damages, which were meant to cover the victims' monetary losses for "the actual injury sustained."³⁴⁰ Some nineteenth-century courts, however, took a different view, arguing that punishment is the exclusive province of criminal law and punitive damages do not belong in civil litigation at all.³⁴¹ While punitive damages remain an integral part of tort law today, the fit continues to be an uneasy one and some commentators have argued that such damages are nothing but criminal-style punishment through the civil litigation backdoor.³⁴²

Still, the Illinois court's reference to "public tranquility" seems jarring to modern ears. Although public-order rationales for punitive damages in tort, and for tort law as a whole, continue to be invoked today, we now generally think of criminal law as playing the dominant role over tort in helping maintain the peace.³⁴³ The law in the

(1995). Indeed, even a claim only for compensatory damages from a defendant, rather than for punitive damages or for the defendant's imprisonment, can be characterized as seeking recourse. See Goldberg & Zipursky, *supra*, at 960-66.

³³⁸ See *supra* note 107 and accompanying text.

³³⁹ *Hawk v. Ridgway*, 33 Ill. 473, 475 (1864) (citing *Foot v. Nichols*, 28 Ill. 486, 488 (1862)); see also *Merest v. Harvey* (1814) 128 Eng. Rep. 761, 761 (C.P.) (Heath J) ("It goes to prevent the practice of duelling, if juries are permitted to punish insult by exemplary damages."); cf. *McNamara v. King*, 7 Ill. (2 Gilm.) 432, 437 (1845) (stating that the function of punitive damages is "not only to compensate the plaintiff, but to punish the defendant"); PUNITIVE DAMAGES AND BUSINESS TORTS: A PRACTITIONER'S HANDBOOK 6-12 (Thomas J. Collin ed., 1998) (summarizing the history of punitive damages).

³⁴⁰ *Hawk*, 33 Ill. at 475.

³⁴¹ *Fay v. Parker*, 53 N.H. 342, 382 (1872).

³⁴² See, e.g., Redish & Mathews, *supra* note 31, at 13-16.

³⁴³ Ellis, *supra* note 31, at 29. To be clear, the functions of revenge and of deterrence of unlawful behavior are not mutually exclusive, and perhaps even complementary. And, particularly in actions for intentional trespass to land, the rationale of prevention of breaches of the peace, as through violent self-help, appears even today. See, e.g., *Jacque v. Steenberg Homes, Inc.*, 563 N.W.2d 154, 209 (Wis. 1997). But the focus on

nineteenth century, however, presented a somewhat different picture. One commentator, Professor Michael Rustad, noted:

The doctrine of exemplary damages was used in nineteenth-century American cases to punish and deter defendants who committed a wide variety of intentional torts with a spirit of malice, fraud, oppression, or insult. The purpose of the remedy was to compensate the plaintiff for the mortification of the injury and deter the defendant from repeating actions which threatened the social order. The overriding function of the remedy was to preserve the social peace and avoid crude forms of self-help such as dueling and the type of destructive social conflict dubbed by historian William Holdsworth as “bastard feudalism.”³⁴⁴

Consistent with these intuitions, enhanced damages functioned to provide redress for reprehensible interpersonal behaviors that embodied the defendant’s extreme disregard for the rights of a specific victim. Examples include cases of assault, seduction, breach of a promise to marry, libel, and other “insults.”³⁴⁵ There are complications in this picture: As Professor Rustad’s reference to “compensat[ing] the plaintiff for the mortification of the injury” suggests,³⁴⁶ “exemplary” or “vindictive” damages were not always completely divorced from the goal of compensation — at least when it came to “dignitary” injuries for which compensatory damages were difficult to quantify. Professor Anthony Sebok, likewise, explained that “compensation for emotional suffering” and “compensation for insult” were two make-whole functions of “exemplary” damages that can be gleaned from nineteenth-century opinions.³⁴⁷

Nonetheless, early understandings of the kinds of torts for which punitive damages were available convey opprobrium of malevolent behavior toward fellow human beings that, according to Professor Sebok, gave this remedy a strong retributive flavor. In the context of a discussion of punitive damages for trespass to chattels and seduction,

revenge as a key reason for awarding punitive damages appears more pronounced in nineteenth-century tort cases as opposed to modern ones.

³⁴⁴ Rustad, *supra* note 31, at 3 & n.7 (quoting 2 SIR WILLIAM S. HOLDSWORTH, 2 HISTORY OF ENGLISH LAW 416-18 (3d ed. 1923)).

³⁴⁵ See Sebok, *What Did Punitive Damages Do?*, *supra* note 31, at 200.

³⁴⁶ Rustad, *supra* note 31, at 3.

³⁴⁷ Sebok, *What Did Punitive Damages Do?*, *supra* note 31, at 197-201; *cf. supra* note 52 and accompanying text (noting that such harms are not remedied by compensatory damages in modern tort law).

Sebok noted that “[o]ne might even describe the phenomenon of exemplary damages as a concrete example of the expressive use of punishment, where punishment is not inflicted to alter criminals’ cost-benefit analysis but to alter criminals’ sense of what would be tolerated by the communities in which they live every day.”³⁴⁸ Thus, in line with early tort law’s close connection with criminal law, punitive damages began as a remedy against those who were acting upon evil motives and exhibited reprehensible interpersonal conduct that would be expected to prompt revenge.

But things have changed, at least to some degree. Professor Catherine Sharkey contended that “[m]odern tort cases . . . have exerted increasing pressure upon this individual-specific harm model”³⁴⁹ that focuses on “retributive punishment.”³⁵⁰ As the advent of the industrial age led to a depersonalization of injury-causing behavior, the doctrine of punitive damages “expanded to punish and deter large corporations which recklessly endangered the public through their misconduct.”³⁵¹ The law, however, was left with an old vocabulary for labeling enhancement-eligible offenses: Professor Rustad noted that “[t]he words most frequently used to describe conduct deserving of punitive damages such as ill-will, evil motive or wanton misconduct are fictitious when applied to organizational deviance.”³⁵²

Indeed, it is difficult to imagine that a corporation, through its officers, would actually seek to harm consumers with its products.³⁵³ More likely, this type of defendant would aim to cut costs and in so doing put out an unsafe product or service — with railroads distinguishing themselves as perhaps the most notable late nineteenth-

³⁴⁸ Sebok, *What Did Punitive Damages Do?*, *supra* note 31, at 203.

³⁴⁹ Sharkey, *Punitive Damages as Societal Damages*, *supra* note 31, at 357.

³⁵⁰ *Id.* at 353.

³⁵¹ Rustad, *supra* note 31, at 3 & n.7.

³⁵² *Id.*; see also Owen, *Civil Punishment and the Public Good*, *supra* note 31, at 119 (arguing that formulation of precise standards for punitive damages awards would help prevent unfair results against corporate defendants).

³⁵³ Cf. Rantanen, *An Objective View*, *supra* note 15 (discussing the incoherency of the notion of subjective mental states of corporations). Interestingly, punitive damages are awarded more frequently for business torts than for personal injuries. See MARK A. FRANKLIN ET AL., *TORT LAW AND ALTERNATIVES: CASES AND MATERIALS* 756 (10th ed. 2016) (“Punitive damages are awarded more frequently and at higher rate in commercial litigation than in tort cases. The only category of personal injury torts in which punitive damages are awarded at a higher rate than the rate in commercial litigation is intentional torts.”).

century corporate miscreant of this sort.³⁵⁴ The law adjusted to these developments, and punitive damages moved beyond the realm of intentional torts against specific persons: “[B]eginning in the mid-nineteenth century, punitive damages were awarded in negligence cases, where the defendant’s conduct was gross or reckless.”³⁵⁵ The “public tranquility” rationale is more difficult to invoke in tort claims alleging corporate misdeeds, as it would seem that one is more likely to duel with or otherwise personally take revenge on an individual who committed assault or libel, or corrupted one’s child, than with the CEO whose product caused an injury due to reckless corporate conduct.³⁵⁶

The twentieth century saw a further shift toward a more objective conception of punitive damages. As Professor Sharkey concluded, “It is no longer the case that malice or wanton conduct is required; increasingly, state legislatures and courts acknowledge that reckless disregard can suffice”³⁵⁷ for the imposition of such damages. In some states, courts continued to use terms like “wanton,” but effectively redefined them to bring them into line with the recklessness framework.³⁵⁸ Professor Jody Kraus noted the linguistic side of this phenomenon in an insightful article, explaining that courts might resort to terms whose semantic purchase might have originally been deontic, but which modern developments have imbued with economic-efficiency connotations at least to some degree.³⁵⁹ The shift has been comprehensive and covers numerous areas of law — from individual negligence to corporate torts, including products liability,

³⁵⁴ See, e.g., *Goddard v. Grand Trunk Ry.*, 57 Me. 202 (1869).

³⁵⁵ Rustad, *supra* note 31, at 3 & n.7.

³⁵⁶ *But see* Zipursky, *supra* note 31, at 107 (“The plaintiff’s right to be punitive constitutes the core of a civil aspect of punitive damages, while the state’s goal of inflicting punishment upon the defendant is the root of a criminal aspect.”); *see also* Goldberg & Zipursky, *supra* note 337, at 974; *cf.* 2 MARSHALL S. SHAPO, SHAPO ON THE LAW OF PRODUCTS LIABILITY § 29.04[I].1 (7th ed. 2017) (“Decisions favoring the award of punitive damages sometimes have an avowedly moral slant.”).

³⁵⁷ Sharkey, *Punitive Damages as Societal Damages*, *supra* note 31, at 358 & n.19.

³⁵⁸ For a leading example, see *Taylor v. Superior Court*, 598 P.2d 854, 863-65 (Cal. 1979) (Clark, J., dissenting) (accusing the majority of twisting statutory language in concluding that reckless conduct was indicative of “malice”), discussed immediately *infra*.

³⁵⁹ Jody S. Kraus, *Transparency and Determinacy in Common Law Adjudication: A Philosophical Defense of Explanatory Economic Analysis*, 93 VA. L. REV. 287, 323-36 (2007). *But see* Schwartz, *supra* note 27, at 141 (“The common law’s criteria governing eligibility for punitive damages — ‘malice,’ ‘recklessness,’ and ‘conscious disregard’ for victim’s rights — . . . seem out of line with the standards one would expect from a deterrence oriented system.”).

and to intellectual property cousins of patent law, copyright and trademark. I consider each in turn in the following sections, hashing out the prevailing modern approach to mental states for punitive damages as I go.

2. Modern Developments

a. *Drunk Driving*

In a well-known case, *Taylor v. Superior Court*,³⁶⁰ the Supreme Court of California was faced with deciding whether a statute that, at the time, allowed recovery of punitive damages “where the defendant has been guilty of oppression, fraud, or malice, express or implied”³⁶¹ applied against a drunk driver. The trial court sustained the defendant’s demurrer to the claim for punitive damages “based upon plaintiff’s failure to allege any actual intent of defendant to harm plaintiff or others.”³⁶² The high court disagreed that this was the appropriate standard and allowed the punitive damages claim to proceed.

Turning to the *Prosser on Torts* treatise, the court explained that one way a plaintiff can establish entitlement to punitive damages is to show that the defendant engaged in “such a conscious and deliberate disregard of the interests of others that his conduct may be called wilful [sic] or wanton.”³⁶³ Canvassing case law authority, it held that “courts have not limited the availability of punitive damages to cases in which . . . an intent [to harm the plaintiff or others] has been shown” and noted that the plaintiff can recover punitive damages if it demonstrates “that the defendant was aware of the probable dangerous consequences of his conduct, and that he wilfully [sic] and deliberately failed to avoid those consequences.”³⁶⁴ The court concluded that this standard was met in *Taylor* based on the fact that the defendant got behind the wheel while intoxicated.³⁶⁵ In doing so, it abrogated a lower-court decision holding that, while drunk driving “is a reckless and wrongful and illegal thing to do . . . , it is not a

³⁶⁰ 598 P.2d 854. See generally Michael H. Whitehill, *Taylor v. Superior Court: Punitive Damages for Nondeliberate Torts — The Drunk Driving Context*, 68 CALIF. L. REV. 911 (1980).

³⁶¹ CAL. CIV. CODE § 3294 (1976).

³⁶² *Taylor*, 598 P.2d at 855 (majority opinion).

³⁶³ *Id.* at 856 (quoting PROSSER, LAW OF TORTS, *supra* note 313, § 2, at 9-10).

³⁶⁴ *Id.*

³⁶⁵ *Id.*

malicious act,”³⁶⁶ and thus redefined “malice” to include reckless conduct.

Relying on an older conception of punitive damages, the lone dissenter in *Taylor* contended that “the evil motive requisite to punitive damage is simply not shown by driving while intoxicated.”³⁶⁷ The dissent noted that “[r]arely will the defendant have been drinking for the purpose of injuring someone, with knowledge that his drinking will injure the plaintiff, or even with knowledge that his drinking will probably injure someone.”³⁶⁸ But the dissent’s attitude has not prevailed. Along with California, most states now allow punitive damages in negligence cases against drunk drivers,³⁶⁹ even though the “malice” in the old sense of the word — an act directed at hurting a specific victim — is not present in these circumstances.

Although driving while intoxicated and similar “aggravated negligence” scenarios embody an expansion of punitive damages theories from sanctioning acts conducted with malicious intent to harm particular individuals into the realm of generalized recklessness, they do involve behavior that we might seek to eliminate completely, rather than optimize.³⁷⁰ To be sure, sober driving is a socially useful activity, but perhaps we should not be too concerned if drunk driving is overdeterred with the recklessness standard of culpability.³⁷¹ In

³⁶⁶ *Id.* (quoting *Gombos v. Ashe*, 322 P.2d 933, 940 (Cal. Dist. Ct. App. 1958)).

³⁶⁷ *Id.* at 864 (Clark, J., dissenting).

³⁶⁸ *Id.*

³⁶⁹ *Johnson v. Rogers*, 763 P.2d 771, 774 (Utah 1988) (“The overwhelming majority of jurisdictions which have considered the issue have ruled that punitive damages are available in drunk driving cases.”). *But see* *Komornik v. Sparks*, 629 A.2d 721 (Md. 1993) (denying punitive damages for drunk driving). Moreover, some states require a previous history of intoxicated driving for the award of punitive damages. *See* *Bolsta v. Johnson*, 848 A.2d 306, 308-09 (Vt. 2004); *see also Taylor*, 598 P.2d at 859-60 (Bird, C.J., concurring). California itself amended the punitive damages statute to include the word “despicable,” CAL. CIV. CODE § 3294 (2018), which makes punitive damages more difficult to obtain. *See* *Lackner v. North*, 37 Cal. Rptr. 3d 863, 880-84 (Cal. Ct. App. 2006).

³⁷⁰ *See* Colby, *Clearing the Smoke*, *supra* note 31, at 470-76; Sharkey, *Economic Analysis of Punitive Damages*, *supra* note 3, at 489, 492; *see also* George G. Stigler, *The Optimum Enforcement of Laws*, 78 J. POL. ECON. 526, 527 (1970) (listing activities that have no social utility). In contrast, overdeterrence of prison guards (for example) might have social costs. *Cf. supra* notes 319-24 and accompanying text (discussing this scenario).

³⁷¹ In other words, there is no need to worry about overdetering conduct that has no or almost no social utility. *Cf.* Frank H. Easterbrook et al., *Contribution Among Antitrust Defendants: A Legal and Economic Analysis*, 23 J.L. & ECON. 331, 367 (1980) (noting that antitrust law sanctions against price fixing might reflect this attitude); Stigler, *supra* note 370.

addition, drunk driving might even fit into the old moral opprobrium model of punitive damages: While the behavior at issue does not involve intentional harm, it is nonetheless highly reprehensible, and might prompt self-help by way of retribution.³⁷² The relaxation of punitive damages standards for injuries caused by intoxicated drivers, then, may just be a legal adaptation that makes it easier to sanction conduct that, although not fully in the mold of the nineteenth-century intentional tort model of punitive damages,³⁷³ seems bad enough to constitute malice in the classical sense.³⁷⁴ Still, the expansion of punitive damages to generalized reckless conduct has ensnared far more than just drunk driving cases.³⁷⁵

b. Products Liability and Other Corporate Torts

Imposition of punitive damages for corporate torts, and particularly against defendants liable for making or selling defective products, presents questions that are more challenging than those involving supra-compensatory awards in cases of assault or drunk driving.³⁷⁶ Unlike excessive damages for behaviors that have no redeeming value, “expansive approaches to liability [for product defects] might damage the innovation infrastructure, and the economy in general might suffer.”³⁷⁷ Even when certain units of the product end up hurting people, product manufacturing activities are, on the whole, socially valuable. For these reasons, the balancing of risk and utility can be particularly important in products liability cases.³⁷⁸ Patent law can

³⁷² Cf. Livingston Hall, *Assault and Battery by the Reckless Motorist*, 31 AM. INST. CRIM. L. & CRIMINOLOGY 133 (1940) (cataloguing the trend of increasing penalties for reckless driving crimes); Lydia Warren, *Father Breaks Down in Tears as He's Found NOT GUILTY of Shooting Dead Drunk Driver Who Killed His Two Young Sons in Car Wreck*, DAILYMAIL.COM (Aug. 27, 2014), <http://www.dailymail.co.uk/news/article-2736066/Dad-ACQUITTED-shooting-dead-drunk-driver-killed-two-sons.html>.

³⁷³ See *supra* Section II.B.1.

³⁷⁴ Shooting into a crowd might be an early example of such behavior — although not directed at a specific person, this sort of conduct could still be eligible for punitive damages. See, e.g., *Bannister v. Mitchell*, 104 S.E. 800, 801 (Va. 1920).

³⁷⁵ Interestingly, the majority and dissent in *Taylor* also disagreed on whether punitive damages against intoxicated drivers made sense from a deterrence perspective. Compare *Taylor v. Superior Court*, 598 P.2d 854, 897, 899 (Cal. 1979) (arguing that punitive damages will deter drunk driving), with *id.* at 903-05, 909-10 (Clark, J., dissenting) (countering that criminal penalties are sufficient to deter this behavior).

³⁷⁶ For a leading early article on punitive damages in products liability cases, see Owen, *Punitive Damages in Products Liability Litigation*, *supra* note 29.

³⁷⁷ Karshedt, *Causal Responsibility and Patent Infringement*, *supra* note 15, at 620.

³⁷⁸ See Aaron D. Twerski & James A. Henderson, Jr., *Manufacturers' Liability for*

present similar challenges, and “policy debates in the law of products liability have resembled in some ways the debates in patent law.”³⁷⁹ Although, as Justice Breyer noted in his concurrence in *Halo*, patent infringement is an “unlawful activity,”³⁸⁰ the proposition that “expansive liability that would squash downstream inventive activity is not desirable”³⁸¹ seems difficult to contest.

As I suggested in a recent article, “compensatory aspects of the two areas of law are different — patent infringement actions are meant to make up for patentees’ forgone royalties (or lost sales, if provable) and encourage innovation by future inventors, while products liability actions typically provide monetary recourse for physical injuries.”³⁸² But although the latter function sounds far more important, it must be remembered that we live in a world of extensive first-party insurance, with tort suits sometimes characterized as an avenue of last resort.³⁸³ In addition, dynamic effects of patent damages cannot be ignored. Thus, as Professor Keith Hylton observed, while actions of future tort victims are unlikely to be affected by damages awards in prior cases, the same assumption might not hold for patent infringement.³⁸⁴ Low awards, particularly those in cases in which the defendant made the decision to accept the possibility of litigation in the event of getting

Defective Product Designs: The Triumph of Risk-Utility, 74 BROOK. L. REV. 1061, 1062-63 (2009) (explaining that products liability for design defects now predominantly involves risk-utility balancing, while liability for manufacturing defects remains close to true strict liability). Regular (i.e., non-willful) patent infringement, to be sure, is a strict-liability offense and therefore does involve this kind of balancing, but there may be good utilitarian reasons for this rule. See Robert P. Merges, *A Few Kind Words for Absolute Infringement Liability in Patent Law*, 31 BERKELEY TECH. L.J. 1, 9 (2016). *But cf.* Samson Vermont, *Independent Invention as a Defense to Patent Infringement*, 105 MICH. L. REV. 475 (2006) (questioning strict liability in patent law). See generally Oswald, *supra* note 15 (criticizing the strict liability nomenclature for patent infringement).

³⁷⁹ Karshtedt, *Causal Responsibility and Patent Infringement*, *supra* note 15, at 620.

³⁸⁰ *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1937 (2016) (Breyer, J., concurring).

³⁸¹ Karshtedt, *Causal Responsibility and Patent Infringement*, *supra* note 15, at 620; see also *Halo*, 136 S. Ct. at 1936-38.

³⁸² Karshtedt, *Causal Responsibility and Patent Infringement*, *supra* note 15, at 620; cf. Sichelman, *supra* note 6 (contending that the tort-law remedial framework should be eliminated from patent law completely).

³⁸³ See John G. Fleming, *The Collateral Source Rule and Loss Allocation in Tort Law*, 54 CALIF. L. REV. 1478, 1546-49 (1966). Conversely, it is notable that patent infringement liability insurance has not become prevalent to the degree that tort liability insurance is. I thank Professor Jacob Sherkow for suggesting that I make this point.

³⁸⁴ Hylton, *Enhanced Damages for Patent Infringement*, *supra* note 26, at 428-29; see also Gordon, *supra* note 296, at 454 (addressing this dynamic in copyright law).

“caught” as a “cost of doing business,”³⁸⁵ could hurt innovation down the line. At the same time, though, incentives for plaintiff opportunism provided by awards that are excessive could also have deleterious social effects.³⁸⁶

The bottom line is that enhanced damages for corporate torts, as for patent infringement, require balance. Even though torts involving product defects cause physical harm, concerns about excessive damages in this area reveal that some amount of injury-causing behavior might well go unremedied, or at least not sanctioned with punitive damages, so as to avoid overdetering socially productive activity. Moreover, and closer to patent law in this particular respect, punitive damages are frequently awarded in suits for tortious interference with contract and other business torts that result only in financial injuries.³⁸⁷ There is no physical injury requirement for enhanced damages. Thus, in addition to examining mental state standards for punitive damages awards in products liability and other corporate tort cases because they are reflective of the evolving common law and therefore relevant for interpreting the Patent Act,³⁸⁸ I look to these areas of tort law because they might provide particularly helpful substantive guidance due to some parallels in the tradeoffs involved.

An examination of cases involving punitive damages in products liability cases yields interesting insights. In many states that award such damages, lack of awareness of a specific victim is a given, and lack of actual knowledge of the injury-causing product defect may not be a barrier either.³⁸⁹ *Thiry v. Armstrong World Industries*, an

³⁸⁵ *Wildlife Express Corp. v. Carol Wright Sales, Inc.*, 18 F.3d 502, 514 (7th Cir. 1994) (addressing this issue in a copyright case).

³⁸⁶ See, e.g., Samuel Chase Means, *The Trouble with Treble Damages: Ditching Patent Law's Willful Infringement Doctrine and Enhanced Damages*, 2013 U. ILL. L. REV. 1999, 2034.

³⁸⁷ See, e.g., *Premix, Inc. v. Zappitelli*, 561 F. Supp. 269, 277-78 (N.D. Ohio 1983); *Cherne Indus., Inc. v. Grounds & Assocs.*, 278 N.W.2d 81, 96 (Minn. 1979); *Empire Trucking Co. v. Reading Anthracite Coal Co.*, 71 A.3d 923, 936-39 (Pa. Super. Ct. 2013); see also Fred S. McChesney, *Tortious Interference with Contract Versus "Efficient" Breach: Theory and Empirical Evidence*, 28 J. LEGAL STUD. 131, 133 (1999); *supra* note 353 and accompanying text; cf. Shyamkrishna Balganes, *Copyright as Market Prospect*, 166 U. PENN. L. REV. 443 (2018) (likening copyright infringement to tortious interference). Even in products liability cases, the harm does not always come in the form of a physical injury. See, e.g., *Hess v. Volkswagen of Am., Inc.*, 341 P.3d 662, 671 (Okla. 2014) (Taylor, J., concurring).

³⁸⁸ See *supra* notes 15–21 and accompanying text.

³⁸⁹ See DAVID G. OWEN & MARY J. DAVIS, *OWEN & DAVIS ON PRODUCTS LIABILITY* § 26.15 (4th ed. 2017) (“Punitive damages . . . may be appropriate when a

Oklahoma asbestos case, provides an informative example.³⁹⁰ In *Thiry*, a plaintiff who developed asbestosis sued an asbestos manufacturer on the theories that “defendants’ products were defective in that they failed to adequately warn of health hazards associated with the use of asbestos” and that “defendant had an obligation to test its products and remain abreast of the medical and scientific knowledge concerning hazards in the use of products.”³⁹¹ In addition, the plaintiff argued that the “defendants knew that exposure to asbestos would cause asbestosis or if defendants did not know such fact it was due to its gross omission, conscious indifference and utter disregard for persons exposed to the product.”³⁹² On these theories, the plaintiff sought “to recover exemplary and punitive damages in such an amount as would deter defendants and others from such conscious indifference and utter disregard for the welfare of users of their products.”³⁹³

In prefatory comments, the Supreme Court of Oklahoma noted that “[b]y removing the negligence requirement for recovery, strict liability expands the legal consequences of fault to the ‘innocent’ manufacturer of defective products.”³⁹⁴ But it explained that “[s]o much attention was devoted to the questions of how innocent manufacturers should be liable for defects in their products that rules applying to the highly blameworthy manufacturer may have been forgotten.”³⁹⁵ Accordingly, the court saw the need to complement the ‘shield’ of compensation provided by strict liability doctrine with a ‘sword’ of punitive damages.³⁹⁶ Importantly, the court observed that while its prior cases used “traditional phrases as ‘willful and wanton, malice, oppression, gross negligence, ill will, actual malice, or under circumstances

manufacturer’s testing or quality control procedures are so grossly inadequate in view of the known risks as to constitute a reckless indifference to public safety.”); *see also* SHAPO, *supra* note 356, § 29.04[J] (“Good general advice to businesses seeking to avoid the risk of punitive damages is to be able to establish that they have taken seriously a potential risk associated with their product.”). *But cf.* *Owens-Illinois, Inc. v. Zenobia*, 601 A.2d 633, 652-53 (Md. 1992) (in a state where punitive damages are uncapped, adopting an actual knowledge approach in products liability cases).

³⁹⁰ 661 P.2d 515, 516 (Okla. 1983).

³⁹¹ *Id.*

³⁹² *Id.*

³⁹³ *Id.*

³⁹⁴ *Id.*

³⁹⁵ *Id.*; *cf.* John M. Golden, *Reasonable Certainty in Contract and Patent Damages*, 30 HARV. J.L. & TECH. 257 (2017) (explaining how the defendant’s blameworthiness could be taken into account in the burden of proof on the plaintiff to establish the amount of damages).

³⁹⁶ *Thiry*, 661 P.2d at 517.

amounting to fraud or oppression,” it maintained that “[a] more clearly defined and articulated standard is needed in the products liability context.”³⁹⁷

The court held that social functions of punitive damages for injuries from defective products would be vindicated when such damages were allowed “if the injury is attributable to conduct that reflects reckless disregard for the public safety.”³⁹⁸ The court explained that “[t]o meet this standard the manufacturer must either be aware of, or *culpably indifferent to*, an unnecessary risk of injury” so as to “fail to determine the gravity of the danger or fail to reduce the risk to an acceptable minimal level.”³⁹⁹ But what, in the court’s view, was the hallmark of “culpable indifference”? Was the court’s approach to culpability concentrated on the subjective mental states of the defendant, or did it include more objective considerations?

In keeping with the somewhat ambivalent nature of punitive damages, the test fashioned by the court revealed that both kinds of considerations matter. The court listed several factors for the lower courts to consider in determining whether punitive damages for product defects should be imposed, including “the gravity of the resulting risk of harm to the public,” “the costs of correcting or reducing the danger,” the level of “awareness of the existence and gravity of the product defect,” and “the nature of steps actually taken to correct the defect.”⁴⁰⁰ Although some of these factors suggest economic cost-benefit analysis, the court also referred to displays of “basic disrespect for the interests of others” as important to the inquiry⁴⁰¹ — implying moral opprobrium of a defendant who has no regard for public safety. In addition, while the court noted that the level of awareness can make a difference in the punitive damages inquiry, it did not explain whether that factor matters because it is cheaper to fix a defect of which one knows as opposed to one that might take some research to discover, or because a defendant who ignores a known defect is subjectively more culpable.⁴⁰² In a similar vein, while no knowledge of specific victims need be proved, “the manufacturer must also fail to determine the gravity of the danger or fail to reduce the risk to an acceptable minimal level” while

³⁹⁷ *Id.* at 518.

³⁹⁸ *Id.* (emphasis removed).

³⁹⁹ *Id.* (emphasis added).

⁴⁰⁰ *Id.* at 519.

⁴⁰¹ *Id.*

⁴⁰² *See id.* at 518-20.

“[k]nowing of this risk.”⁴⁰³ In many states, this mélange of considerations is what “malice” looks like in the context of corporate liability for product defects.⁴⁰⁴

Other states have more explicitly allowed punitive damages for culpable failures to discover defects,⁴⁰⁵ including for claims of inadequate product testing prior to marketing.⁴⁰⁶ Moreover, formulations of a punitive damages standard that sanctions “reckless indifference” or “reckless disregard” toward the rights of others appeared in cases awarding such damages for torts by corporations other than products liability, including trespass (e.g., by developers failing to ascertain the property rights of others)⁴⁰⁷ and false representations.⁴⁰⁸ A hybrid approach that sometimes takes into account objective considerations, and allows enhanced damages for

⁴⁰³ *Id.* at 519.

⁴⁰⁴ Oklahoma has since codified the principle that recklessness is enough for imposing punitive damages, but capped punitive damages available for reckless behavior. See OKLA. STAT. ANN., tit. 23, § 9.1 (2018).

⁴⁰⁵ See Owen, *Punitive Damages in Products Liability Litigation*, *supra* note 29, at 1339-45.

⁴⁰⁶ See, e.g., *Moore v. Jewel Tea Co.*, 253 N.E.2d 636, 648-53 (Ill. App. 1969), *aff'd*, 263 N.E.2d 103 (Ill. 1970) (allowing punitive damages for failure to test bursting point of a drain cleaner bottle); *Sufix, U.S.A., Inc. v. Cook*, 128 S.W.3d 838, 841 (Ky. App. 2004) (“Cook offered testimony by several experts that Sufix could and should have discovered the defect in the course of testing prior to release of the product, but that its testing had been grossly inadequate.”); *Leichtamer v. Am. Motors Corp.*, 424 N.E.2d 568, 578-80 (Ohio 1981) (allowing punitive damages for failure to test car for rollovers); *Wussow v. Commercial Mechanisms, Inc.*, 293 N.W.2d 897, 906-07 (Wis. 1980) (citing the defendant’s lack of a “formal safety review committee” as a piece of evidence in support of allowing punitive damages); *cf. Hillrichs v. Avco Corp.*, 514 N.W.2d 94, 100 (Iowa 1994) (declining to allow punitive damages for failure to test coupled with generalized knowledge of danger, but explaining that such a failure could lead to punitive damages when it constitutes “an act of an unreasonable character in disregard of a risk that was so great as to make it highly probable that harm would follow”). See generally PETER M. GERHART, *TORT LAW AND SOCIAL MORALITY* 210-13 (2010) (discussing duties to monitor in the manufacturing defect context).

⁴⁰⁷ See, e.g., *JCB, Inc. v. Union Planters Bank, NA*, 539 F.3d 862, 872-73 (8th Cir. 2008) (applying Missouri law); *Liberty Bell Gold Mining Co. v. Smuggler-Union Mining Co.*, 203 F. 795, 802 (8th Cir. 1913); *Cumberland Tel. & Tel. Co. v. Poston*, 30 S.W. 1040, 1041 (Tenn. 1895) (“There was also evidence sufficient . . . to raise the question of gross negligence on the part of the company in not exercising more caution to find and obtain the consent of the true owner of the property that the trees might be cut, and also in the manner in which the cutting was done, and in cutting the trees at all.”); see also *Meighan v. U.S. Sprint Commc’ns Co.*, 924 S.W.2d 632, 641 (Tenn. 1996) (reaffirming earlier rule). It is notable that punitive damages for reckless trespass have been awarded even in old cases.

⁴⁰⁸ E.g., *Schmidt v. Pine Tree Land Dev. Co.*, 631 P.2d 1373, 1374-75 (Or. 1981).

highly unreasonable failures to discover defects and other lapses in advertent to the rights of others, is sensible if the goal is to “punish impersonal wrongdoing committed by artificial persons”⁴⁰⁹ who typically do not intend to hurt anyone and may not even engage in actions which, in a reasonable person’s understanding, would be substantially certain to occasion harm.⁴¹⁰ The Oregon Supreme Court explained this adaptation of nineteenth-century “malice”-type punitive damages standards to modern corporate torts in an illuminating way:

In the wide range of situations said to justify punitive damages, the present case [in which plaintiffs alleged that defendants made reckless misrepresentations in the course of a real estate transaction] is not one of giving vent to personal and societal outrage at aggressive or malicious wrongdoing, [such as assault and battery or malicious prosecution]. The large scale of these corporate defendants’ land development and marketing project places the case rather with those in which punitive damages serve the function to deter enterprises from accepting the risks of harming other private or public interests by recklessly substandard methods of operation at the cost of paying economic compensation to those who come forward to claim it. Such operations may well be wholly impersonal with respect to any victim, indeed conducted with the hope that no harm will occur, and they may not involve a culpable attitude on the part of any one person responsible for the management of the enterprise; yet this court has held that such lack of managerial culpability alone does not foreclose punitive damages. Still, to justify punitive damages the conduct must go beyond mere carelessness to a willful or reckless disregard of risk of harm to others of a magnitude evincing a high degree of social irresponsibility.⁴¹¹

The modern frameworks for punitive damages in tort laid out by the supreme courts of Oklahoma and Oregon indicate an expansion of the scope of such damages, which in turn reflects a shift from their function of sanctioning morally reprehensible interpersonal behaviors to a broader goal of fostering deterrence of choices, sometimes made

⁴⁰⁹ Michael L. Rustad, *Happy No More: Federalism Derailed by the Court that Would Be King of Punitive Damages*, 64 MD. L. REV. 461, 469 (2005); see also Rantanen, *An Objective View*, *supra* note 15, 1609-22.

⁴¹⁰ See *infra* note 464 and accompanying text.

⁴¹¹ *Schmidt*, 631 P.2d at 1374-75 (citations omitted); see also *supra* notes 349–52 and accompanying text.

by corporate defendants, that generate high social costs.⁴¹² While moral, deontological considerations remain, they are diminished in prominence relative to older cases, or at least weighed or considered alongside some form of economic cost-benefit analysis. In this frame, awarding punitive damages for behavior that is reckless with respect to the affected group generally, as opposed to intentional or knowing toward specific victims, strikes one as good policy.⁴¹³ Certain conduct, even if not intentional, can still be worth sanctioning — if not on moral grounds, then at least due to high social costs that the conduct imposes relative to its benefits to society. Indeed, this is exactly what we see in copyright and trademark cases as well.

c. *Copyright and Trademark*

Unlike the Patent Act, the Copyright Act actually uses the word “willful,” and has a statutory damages provision that allows for differing amounts of compensation on a per-work-copied basis depending on whether the infringement was willful or not.⁴¹⁴ Although one commentator argued that the word “willful” in the Copyright Act’s civil remedies provision denotes “an intentional violation of a known legal duty,”⁴¹⁵ apparently relying exclusively on criminal willfulness and recklessness cases,⁴¹⁶ the majority view in copyright law is decidedly different. For example, the Court of Appeals for the Second Circuit in *Yurman Design v. PAJ* held that “[w]illfulness in [the copyright] context means that the defendant

⁴¹² See generally *Mathias v. Accor Econ. Lodging, Inc.*, 347 F.3d 672, 676-77 (7th Cir. 2003) (Posner, J.) (applying this reasoning to repeated, but uncompensated, harms that are relatively minor).

⁴¹³ As other commentators noted in the context of patent law, the proper target of punitive damages when economic considerations are paramount must focus not (or at least not only) on the subjective states of mind of the “wrongdoer,” but on behaviors that are, from an objective standpoint, so unreasonable that they impose significant externalities on society. See generally Rantanen, *An Objective View*, *supra* note 15, at 1611-13; Sherkow, *supra* note 73, at 35-36.

⁴¹⁴ See 17 U.S.C. § 504(c) (2018). Notably, the Copyright Act also includes criminal penalties for “[a]ny person who willfully infringes a copyright” with additional aggravating factors, such as infringing “for purposes of commercial advantage or private financial gain.” *Id.* § 506(a)(1)(A). For an analysis of why there are criminal penalties for some forms of copyright and trademark infringement, but not for patent infringement, see generally Irina D. Manta, *The Puzzle of Criminal Sanctions in Intellectual Property Law*, 24 HARV. J.L. & TECH. 469 (2011).

⁴¹⁵ Robert Aloysius Hyde, *A Reckless Disregard of the Ordinary Infringer? Moving Toward a Balanced and Uniform Standard for Willful Copyright Infringement*, 35 U. TOL. L. REV. 377, 377 (2003).

⁴¹⁶ See *id.* at 377 & n.9; see also *supra* notes 210–14, 322–25 and accompanying text.

‘recklessly disregarded’ the possibility that ‘its conduct represented infringement.’ . . . A plaintiff is not required to show that the defendant ‘had knowledge that its actions constitute[d] an infringement.’⁴¹⁷ The court held that while “PAJ testified that it was unaware of Yurman’s copyrights,” the jury was nonetheless “free to discredit that testimony, or to find that PAJ’s ignorance was due to recklessness.”⁴¹⁸

Although the Federal Circuit cited *Yurman* in *Seagate*, the Second Circuit’s standard for willful copyright infringement is different from *Seagate*’s because, for one thing, it does not require actual knowledge of the right at issue.⁴¹⁹ Indeed, in contrast to *Yurman*, *Seagate* conceived of objective recklessness as depending entirely on the merits on the infringer’s legal position, and did not consider whether the defendant’s lack of awareness of the plaintiff’s rights could itself be culpable.⁴²⁰ Thus, in contravention to the *Seagate* standard and to the current Federal Circuit approach requiring actual knowledge of the infringed patent’s existence, but consistent with prevailing tort law standards described earlier, the Second Circuit in *Yurman* upheld a judgment that an infringement was willful based on the defendant’s “‘reckless disregard’ for, or ‘willful blindness’ to, the copyright holder’s rights.”⁴²¹ Of course, a higher level of culpability — that is, a showing that “the defendant was actually aware of the infringing activity”⁴²² — would also be enough for willfulness.

Another Second Circuit case, *Island Software v. Microsoft*, illustrates these standards in operation. In *Island Software*, “a private investigator employed by a company participating in Microsoft’s anti-piracy program” found that Island, “a small software retailer and computer

⁴¹⁷ *Yurman Design, Inc. v. PAJ, Inc.*, 262 F.3d 101, 112 (2d Cir. 2001) (citations omitted); see also *In re Barboza*, 545 F.3d 702, 707-08 (9th Cir. 2008) (relying on cases from the Second, Seventh, and Eighth Circuits to hold that “recklessness is sufficient for a finding of willful copyright infringement”); *Wildlife Express Corp. v. Carol Wright Sales, Inc.*, 18 F.3d 502, 511-12 (7th Cir. 1994) (same standard); *RCA/Ariola Int’l, Inc. v. Thomas & Grayston Co.*, 845 F.2d 773, 779 (8th Cir. 1988) (same standard). *But cf.* *Dolman v. Agee*, 157 F.3d 708, 715 (9th Cir. 1998) (suggesting that willfulness requires knowledge that actions constitute infringement).

⁴¹⁸ *Yurman Design*, 262 F.3d at 113; see also *Broad. Music, Inc. v. Star Amusements, Inc.*, 44 F.3d 485, 488 (7th Cir. 1995) (providing three times the unpaid licensing fees as a remedy for copyright infringement in a non-punitive context).

⁴¹⁹ See *In re Seagate Tech., LLC*, 497 F.3d 1360, 1370 (Fed. Cir. 2007) (en banc).

⁴²⁰ See *id.*

⁴²¹ *Island Software & Comput. Serv., Inc. v. Microsoft Corp.*, 413 F.3d 257, 263 (2d Cir. 2005) (citations omitted).

⁴²² *Id.*

repairer,” was selling “counterfeit” or unauthorized copies of certain Microsoft software acquired from a supplier.⁴²³ The district court granted Microsoft’s motion for summary judgment that Island willfully infringed Microsoft’s copyrights based in part on an affidavit in which an Island employee stated that he was “suspicious of the authenticity” of the supplier’s products, but “did not take extensive measures to prevent the receipt and sale of high-quality counterfeit merchandise.”⁴²⁴ Instead, “Island’s employees . . . would conduct a relatively quick visual inspection of goods,”⁴²⁵ if any at all.

The Second Circuit vacated the summary judgment order and remanded the case for trial on willfulness in part because Island “dispute[d] the inferences to be drawn from that evidence.”⁴²⁶ The court held that, based on the affidavit proffered by Microsoft, “[a] jury could, without a doubt, conclude that [the Island employee’s] statements reveal willful blindness, or establish a pattern of conduct so unreasonable as to constitute reckless disregard.”⁴²⁷ But, crucially, the court also opined that “a jury could infer that additional inspections were, for any number of reasons, not mandated,”⁴²⁸ explaining that “only an individual with specialized training . . . could discern the difference between authentic products and high-quality counterfeits of the sort at issue in this case.”⁴²⁹ The court noted that “the hiring of such experts could be found by a jury to be beyond what could reasonably be expected of small companies.”⁴³⁰

Notably, the *Island Software* opinion was authored by Judge Guido Calabresi, who was a leading torts scholar in the law-and-economics tradition before being confirmed as a circuit judge.⁴³¹ The tenor of the opinion is, not surprisingly, economic. *Island Software* made clear that the question of whether the defendant’s investigation was so inadequate as to qualify the infringement as willful can only be established after balancing the costs and benefits of that investigation under the circumstances, an inquiry that requires taking into account

⁴²³ *Id.* at 259.

⁴²⁴ *Id.* at 263.

⁴²⁵ *Id.*

⁴²⁶ *Id.* at 264.

⁴²⁷ *Id.*

⁴²⁸ *Id.*

⁴²⁹ *Id.*

⁴³⁰ *Id.*

⁴³¹ For one example of a foundational scholarly contribution by then-Professor Calabresi, see generally GUIDO CALABRESI, *THE COSTS OF ACCIDENTS: A LEGAL AND ECONOMIC ANALYSIS* (1970) (discussing the economic goals of tort law).

the size of the defendant company and the expertise it is expected to have with respect to the potentially infringing matter.⁴³² Economic analysis of this sort is what truly objective recklessness is about.⁴³³ In the next Part, I will aim to apply this approach to patent law which, like copyright law,⁴³⁴ is thought to have strong utilitarian foundations that make economic analysis a proper tool in determining the scope of the defendant's liability.⁴³⁵

The remedial scheme for trademark infringement under the federal Lanham Act is even more complex than in copyright. The relevant subsection states that “[i]n assessing damages the court may enter judgment, according to the circumstances of the case, for any sum above the amount found as actual damages, not exceeding three times such amount.”⁴³⁶ These permissive treble damages are explicitly non-punitive,⁴³⁷ and indeed courts have held that the Lanham Act does not provide for punitive damages *at all*.⁴³⁸ Nevertheless, the statute also allows juries to award profits and gives judges seemingly unlimited discretion to adjust them,⁴³⁹ and it mandates treble damages for

⁴³² See *Island Software*, 413 F.3d at 263-64.

⁴³³ Again, however, subjective considerations can also matter. See *Yellow Pages Photos, Inc. v. Ziplocal, LP*, 795 F.3d 1255, 1273 (11th Cir. 2015) (holding copyright infringement willful where the defendant was “not at all concerned about the source of the photos it was receiving”).

⁴³⁴ See CRAIG ALLEN NARD, MICHAEL J. MADISON & MARK P. MCKENNA, *THE LAW OF INTELLECTUAL PROPERTY* 12-14 (5th ed. 2017).

⁴³⁵ On the use of economic analysis of some common-law rules in determining whether the defendant should be liable for patent infringement in a particular set of circumstances, see generally Dmitry Karshedt, *Divided Infringement, Economics, and the Common Law*, 67 FLA. L. REV. F. (forthcoming 2018), <https://ssrn.com/abstract=3111911>.

⁴³⁶ 15 U.S.C. § 1117(a) (2018).

⁴³⁷ See *id.* (stating that permissive treble damages, like other remedies under § 1117(a), “shall constitute compensation and not a penalty”).

⁴³⁸ See *Getty Petroleum Corp. v. Bartco Petroleum Corp.*, 858 F.2d 103, 108-13 (2d Cir. 1988). I thank Professor Robert Brauneis for discussing these aspects of the Lanham Act's remedial scheme with me.

⁴³⁹ See *id.* at 109-11 (tracing the history of 15 U.S.C. § 1117(a)); see *Hearings Before the Subcomm. on Trade-Marks, Comm. on Patents, H.R. 102, H.R. 5461, and S. 895, 77th Cong., 1st Sess. 203-06* (1941). Some circuits require willfulness for an award of profits. See, e.g., *Romag Fasteners, Inc. v. Fossil, Inc.*, 817 F.3d 782, 789-91 (Fed. Cir. 2016) (holding that the Second Circuit requires willfulness for accounting, even though § 1117(a) says that this remedy is “not a penalty” and, unlike § 1117(c)(2), does not use the word “willful”), *cert. granted and judgment vacated on other grounds*, 137 S. Ct. 1373 (2017) (mem.), *judgment reinstated in relevant part*, 686 F. App'x 889 (Fed. Cir. 2017) (mem.). *But see Banjo Buddies, Inc. v. Renosky*, 399 F.3d 168, 173-75 (3d Cir. 2005) (holding that “willfulness is a factor, not a prerequisite” for an award of profits).

intentional trademark infringement “unless the court finds extenuating circumstances.”⁴⁴⁰ Finally, the Lanham Act provides for statutory damages “[i]n a case involving the use of a counterfeit mark . . . in connection with the sale, offering for sale, or distribution of goods or services,” including enhanced statutory damages for this sort of infringement “if the court finds that the use of the counterfeit mark was willful.”⁴⁴¹

As in copyright law, the majority view appears to be that knowledge of a specific trademark is not required for willfulness, and reckless disregard toward the intellectual property rights of others would suffice. In one case, *International Star Yacht Racing Ass’n v. Tommy Hilfiger*, the Second Circuit cited the defendant’s “failure to conduct a comprehensive trademark search” as one of the factors pointing toward willfulness,⁴⁴² and explained that “willful ignorance should not provide a means by which [the defendant] can evade its obligations under trademark law.”⁴⁴³ After another appeal and remand, the parties continued to dispute whether the defendant had “an obligation to conduct a more extensive trademark search” than one it actually performed to avoid a finding of willfulness.⁴⁴⁴ Some other jurisdictions have adopted a rule to the same effect: In the First Circuit, the conduct sufficient for willful trademark infringement is “measured against standards of reasonable behavior,” which suggests that highly unreasonable non-searches might be willful.⁴⁴⁵ Again, patent law is

⁴⁴⁰ 15 U.S.C. § 1117(b) (2018); *cf.* *Hogg v. Emerson*, 52 U.S. 587, 607 (1850) (appearing to adopt this approach in patent cases); *see also supra* notes 99–100 and accompanying text (discussing *Hogg*).

⁴⁴¹ 15 U.S.C. § 1117(c)(2).

⁴⁴² *Int’l Star Class Yacht Racing Ass’n v. Tommy Hilfiger, U.S.A., Inc.*, 80 F.3d 749, 752–53 (2d Cir. 1996); *cf.* *Polo Fashions, Inc. v. Dick Bruhn, Inc.*, 793 F.2d 1132, 1135 (9th Cir. 1986) (noting that the purpose of trademark remedies is to “take all the economic incentive out of trademark infringement”) (citation omitted).

⁴⁴³ *Tommy Hilfiger*, 80 F.3d at 754. *See generally* David Welkowitz, *Willfulness*TM, 79 ALB. L. REV. 509 (2016).

⁴⁴⁴ *Int’l Star Class Yacht Racing Ass’n v. Tommy Hilfiger, U.S.A., Inc.*, 205 F.3d 1323, at *1 (2d Cir. 2000) (unpublished table decision).

⁴⁴⁵ *Fishman Transducers, Inc. v. Paul*, 684 F.3d 187, 191–92 (1st Cir. 2012) (“In federal civil litigation willfulness requires a conscious awareness of wrongdoing by the defendant or at least conduct deemed ‘objectively reckless’ measured against standards of reasonable behavior. The criminal standard is slightly more demanding because it requires a subjective indifference to risk for recklessness — sometimes called willful blindness — as the minimum condition for a willfulness finding.”). *But cf.* *SecuraComm Consulting Inc. v. Securacom Inc.*, 166 F.3d 182, 188–89 (3d Cir. 1999) (differentiating “careless” and “willful” failures to ascertain the trademark rights of others and distinguishing *Tommy Hilfiger* based on the fact of copying and attorney advice to search for trademarks) (citations omitted), *superseded by statute on other*

decidedly different in requiring actual knowledge of the existence of the right being infringed for enhanced damages.⁴⁴⁶

One immediate objection, at least to the relevance of the copyright portion of this discussion, might be that copyright infringement, unlike patent law, requires proof of copying.⁴⁴⁷ But there are other ways to infringe copyrights, including — as we saw in *Island Software*⁴⁴⁸ — by distributing copyrighted materials,⁴⁴⁹ and similar cases of willful infringement under this provision of the Copyright Act can be readily found.⁴⁵⁰ In these cases, the defendants did not copy the materials, but rather merely passed them along in the stream of commerce. Nonetheless, the courts still concluded that the failure to ascertain whether the rights of others are infringed in the process could be willful. In addition, it bears repeating that, today, willful patent infringement cannot lie even when a defendant copies an item marked with a patent number or copies a product of a close competitor without investigating the competitor's patent portfolio. The actual knowledge rule for patent treble damages is so rigid that even copying combined with a lack of a patent search will not suffice for enhancement. *A fortiori*, ignorance of easily discoverable patents cannot currently lead to liability for enhanced damages either.⁴⁵¹

It is worth noting, finally, that in contrast to the Patent Act, both the Copyright Act and the Lanham Act include provisions for criminal infringement, which are oriented toward subjectively culpable mental states.⁴⁵² Criminal penalties are possible, for example, against those who “intentionally . . . traffic[] in goods or services and knowingly use[] a counterfeit mark,”⁴⁵³ while enhanced civil penalties are available for less subjective forms of culpability. Patent law, however,

grounds as stated in *Banjo Buddies, Inc. v. Renosky*, 399 F.3d 168, 171 (3d Cir. 2005).

⁴⁴⁶ Although one can argue that the difficulty of determining validity and infringement in patent cases might support a unique standard for willful patent infringement, validity and infringement of trademarks can also raise exceedingly difficult questions, as do defenses to copyright infringement liability based on fair use, whether the use of the copyrighted material is authorized, and so on.

⁴⁴⁷ 17 U.S.C. § 106(1) (2018).

⁴⁴⁸ *Island Software & Comput. Serv., Inc., v. Microsoft Corp.*, 413 F.3d 257, 260-61 (2d Cir. 2005).

⁴⁴⁹ 17 U.S.C. § 106(3).

⁴⁵⁰ *Yellow Pages Photos, Inc. v. Ziplocal, LP*, 795 F.3d 1255, 1269 (11th Cir. 2015).

⁴⁵¹ See *supra* note 45 and accompanying text.

⁴⁵² 17 U.S.C. § 506(a) (2018); 18 U.S.C. § 2320 (2018). See generally *Manta*, *supra* note 414.

⁴⁵³ 18 U.S.C. § 2320(a)(1).

is distinctly non-criminal, so that the very notion of a form of liability exclusively focused on subjective factors seems aberrant. Nonetheless, criminal law concepts have found their way into patent cases in the form of the actual knowledge prerequisite for treble damages.

d. Summary

When compared to the laws of negligence, products liability, copyright, trademark, and even the FCRA, patent law is a severe outlier. This is because, even granting that “willfulness” is a requirement for enhanced patent damages, patent law does not follow the “standard civil usage” of willfulness.⁴⁵⁴ In emphasizing the subjective mental state of actual knowledge, courts in patent cases pay heed only to the historic function of punitive damages as a sanction of behavior actuated by a desire to cause someone harm, as opposed to modern, more objective forms of culpability reflected in the civil recklessness standard.⁴⁵⁵ To be sure, the former route to obtaining punitive damages has not been discarded, as courts generally continue to award them for subjectively culpable behaviors that could be classified as “insults.”⁴⁵⁶ But, as numerous examples in this section indicate, courts in tort cases also allow punitive damages under the objective standard, which focuses on socially undesirable *conduct* endangering the world at large, including reckless failures to advert to the possibility of invading the rights of others.⁴⁵⁷ Professor Sharkey summed up these developments as follows: “[W]hereas punitive damages were once awarded predominantly for acts that satisfied malice aforethought or intentional wrongdoing, now many punitive damages awards arise from what was essentially accidental conduct, albeit committed recklessly.”⁴⁵⁸ The Federal Circuit has not fully accounted for this aspect of enhanced damages.

Halo’s discussion of punitive damages for “conscious” and “flagrant” infringements, as well as for “reckless” conduct involving infringements of which the defendant had “reason to know,” perfectly tracks the subjective-objective dichotomy of possible approaches for proving up enhanced damages.⁴⁵⁹ Although the Supreme Court

⁴⁵⁴ *Safeco Ins. Co. of Am. v. Burr*, 551 U.S. 47, 57-58 (2007).

⁴⁵⁵ See *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1932-34 (2016).

⁴⁵⁶ See *supra* Section II.B. But see *Safeco*, 551 U.S. at 70 n.20.

⁴⁵⁷ See W. PAGE KEETON ET AL., PROSSER AND KEETON ON TORTS § 34, at 213-14 (5th ed. 1984) (discussing the interplay of culpable mental states and objectively deviant conduct).

⁴⁵⁸ Sharkey, *Economic Analysis of Punitive Damages*, *supra* note 3, at 493.

⁴⁵⁹ *Halo*, 136 S. Ct. at 1932-33; see also *infra* notes 499-505 and accompanying text.

emphasized subjective routes to willfulness,⁴⁶⁰ it did so in the context of criticizing a Federal Circuit test that, anomalously, made subjective factors basically irrelevant in the willfulness inquiry — and the Court’s controlling opinion explicitly referenced continued applicability of civil recklessness to enhanced patent damages by relying on the formulation of that standard from the *Restatement of Torts*. The Court, to be sure, characterized enhanced patent damages as punitive, but the bottom line is that there is ample precedent for civil punishment of reckless behavior.

Because *Halo* did not appear to signal a significant departure from the modern tort standards discussed in this section, it is difficult to rationalize retaining actual knowledge of the infringed patents as the limit on treble damages in patent law. At the very least, a departure of this magnitude from the prevailing standard would require highly persuasive policy or economic justifications. Nonetheless, even if *Halo* left that question open, those justifications do not support retaining the actual knowledge rule. In the section that follows, I sketch out the already familiar example of the statute in which policy considerations overrode the prevailing common-law rule and contrast it with the Patent Act. I then apply the prevailing rule to patent law in Part III.

C. Policy Considerations

Smith v. Wade holds that adoption of the dominant common-law approach to fill a gap in a federal statute silent on the relevant point is a sound methodology of statutory interpretation.⁴⁶¹ Nonetheless, departures from that standard are possible if strong policy considerations that justify them, and which are consistent with the statute at issue, are present. Thus, perhaps in part due to the quasi-criminal nature of § 1983 actions,⁴⁶² decisions after *Smith v. Wade* settled on a standard limiting punitive damages in these suits to behaviors exhibiting callousness or willful indifference to known risks, as opposed to merely conduct that is “unheeding” in the circumstances in which the defendant had reasons to know that harm would eventuate.⁴⁶³ Indeed, because its passage was motivated by Reconstruction-Era resistance to civil rights, § 1983 embodies a strong undertone of moral disapproval against the acts that those subject to

⁴⁶⁰ See *supra* note 110 and accompanying text.

⁴⁶¹ See *supra* notes 307–12 and accompanying text; see also *supra* note 15 and accompanying text.

⁴⁶² See *supra* notes 317–18 and accompanying text.

⁴⁶³ See *supra* notes 321–30 and accompanying text.

liability under this section have committed. The subjective focus of punitive damages standards in § 1983 actions may reflect this background.⁴⁶⁴

Patent law, in contrast, is as far from criminal law as can be in terms of its social goals, and patent infringement does not typically engender moral disapproval.⁴⁶⁵ The goals of patent remedies should be, on the whole, to encourage efficient conduct, however defined, not to mete out punishment that would preclude retribution and self-help.⁴⁶⁶ The adoption of a subjective, criminal-style recklessness standard relying on actual knowledge as an absolute constraint on awards of treble damages is therefore puzzling. Moreover, because this standard discourages assimilation of information and can reward forms of holdout,⁴⁶⁷ it is difficult to square with the economic-utilitarian orientation of patent law. While treble damages for the infringer's subjective bad faith remain available in patent cases,⁴⁶⁸ policy and economic considerations fail to justify going against the tide of tort law by limiting the availability of that remedy to acts accompanied by subjectively culpable mental states, and in fact support its expansion to sanction more objective forms of "egregious" conduct.⁴⁶⁹

To be sure, modern punitive damages doctrine is at variance with outcomes that a purely economic analysis would support.⁴⁷⁰ Economic models reject the very idea of "punitive" liability for egregious or

⁴⁶⁴ In addition, there are specific rationales for basing *liability* on a subjective standard in constitutional tort suits against federal officers, *see, e.g.*, *Farmer v. Brennan*, 511 U.S. 825, 835-44 (1994), and for defamation claims against public officials, *see, e.g.*, *N.Y. Times Co. v. Sullivan*, 376 U.S. 254, 279-86 (1964); Keating, *supra* note 66, at 339 & n.96. Interestingly, as Professor Gregory Keating and others noted, proof of certain intentional torts could include an objective component for evaluating intent. *See* Keating, *supra* note 66, at 339 & n.96 (citing, among other cases, *Garratt v. Dailey*, 279 P.2d 1091 (Wash. 1955), for the proposition that one intends the natural consequences of one's actions); *see also* Keith N. Hylton, *Intent in Tort Law*, 44 VAL. U. L. REV. 1217, 1230 (2010). *See generally* Nancy J. Moore, *Intent and Consent in the Tort of Battery: Confusion and Controversy*, 61 AM. U. L. REV. 1585 (2012).

⁴⁶⁵ *See generally* Sherkow, *supra* note 73; *see also* Paul M. Janicke, *Do We Really Need So Many Mental and Emotional States in Patent Law?*, 8 TEX. INTELL. PROP. L.J. 279 (2000).

⁴⁶⁶ *See generally* Sarah R. Wasserman Rajec, *Tailoring Remedies to Spur Innovation*, 61 AM. U. L. REV. 733 (2012); Karen E. Sandrik, *Reframing Patent Remedies*, 67 U. MIAMI L. REV. 95 (2012).

⁴⁶⁷ *See supra* Section I.E.

⁴⁶⁸ *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1932-33 (2016).

⁴⁶⁹ *Id.*

⁴⁷⁰ *See supra* note 63 and accompanying text.

reprehensible behaviors, however defined, and rationalize supra-compensatory damages primarily in the circumstances in which rights-violations are difficult to detect or provide such small compensatory damages that lawsuits are not worthwhile.⁴⁷¹ Because they are still based on mental states of individual defendants, even if objectively defined in part, today's tort punitive damages standards are not consistent with models that would make fault completely irrelevant in the punitive damages inquiry.⁴⁷² Additional lines of attack on modern punitive damages doctrine include the criticism that the required elevated level of culpability is extremely difficult to communicate with precision to juries,⁴⁷³ as well as concerns about the size and unpredictability of the punitive damages awards.⁴⁷⁴ All of these critiques cast economic rationality of punitive damages into doubt, though it must be remembered that at least the "unpredictable punitive damages" critique does not completely translate to patent law's enhanced damages because of the treble limit in the latter.⁴⁷⁵

Availability of punitive damages awards untethered to compensatory damages has, in a significant constitutional law development, triggered Due Process claims that have led to such awards getting struck down for lack of proportionality (to the awarded compensatory damages) in a series of Supreme Court decisions.⁴⁷⁶ More interestingly, the seminal case of *Philip Morris v. Williams* held that the Due Process clause prohibits taking harms to parties not before the court into account in determining the amount of punitive damages⁴⁷⁷ — though some,

⁴⁷¹ See, e.g., Polinsky & Shavell, *supra* note 31; see also Darryl Biggar, *A Model of Punitive Damages in Tort*, 15 INT'L REV. L. & ECON. 1, 2 (1995).

⁴⁷² But see Sharkey, *Economic Analysis of Punitive Damages*, *supra* note 3, at 488; see also Porat, *supra* note 64, at 95-96.

⁴⁷³ See Owen, *Civil Punishment and the Public Good*, *supra* note 31, at 108-10; see also Ellis, *supra* note 31, at 33-43; Grady, *supra* note 31, at 1219-24 (discussing the staying power of subjective elements in the law of punitive damages).

⁴⁷⁴ See, e.g., John Calvin Jeffries, Jr., *A Comment on the Constitutionality of Punitive Damages*, 72 VA. L. REV. 139, 139 (1986). For a critique of punitive damages in products liability cases in particular, see PETER W. HUBER, *LIABILITY: THE LEGAL REVOLUTION AND ITS CONSEQUENCES* 14-15, 155-56, 170-71, 224-25 (1988). See also Richard J. Mahoney & Stephen E. Littlejohn, *Innovation on Trial: Punitive Damages Versus New Products*, 246 SCIENCE 1395 (1989).

⁴⁷⁵ See *supra* Section I.B.2.

⁴⁷⁶ *State Farm Mut. Auto. Ins. Co. v. Campbell*, 538 U.S. 408 (2003); see also *BMW of N. Am., Inc. v. Gore*, 517 U.S. 559 (1996).

⁴⁷⁷ See *Philip Morris USA v. Williams*, 549 U.S. 346, 353-57 (2007) (holding that harms to parties not before the court cannot be directly taken into account in the punitive damages calculus).

including the dissent in that case,⁴⁷⁸ pointed out that the Court still allowed juries to consider such harms under the “reprehensibility” factor for evaluating the award’s rationality.⁴⁷⁹ Although these decisions were meant to prevent “runaway” awards, they have also, somewhat ironically, resulted in a move away from a rigorous economic treatment of damages enhancements. Even though awards with very large punitive-to-compensatory ratios can sometimes be economically justified, the Supreme Court appeared to forestall this possibility by announcing that awards for which this ratio is greater than 10:1 might draw particularly searching constitutional scrutiny.⁴⁸⁰

Still, economic considerations continue to find their way into punitive damages cases. As Professor Sharkey argued, “it would be wrong to conclude that the U.S. Supreme Court has closed the door entirely on economic rationales of punitive damages.”⁴⁸¹ She explained that “the Court recognizes optimal deterrence as one, but not the sole, underlying justification for punitive damages.”⁴⁸² More generally, and putting the magnitude of the awards to one side, the *threshold level of culpability* for punitive damages today is at least more consistent with economic reasoning than the subjective nineteenth-century standard motivated by retribution for “insults.”⁴⁸³ As Professor Sharkey argued in a different article, the expansion of the scope of punitive damages to reckless behaviors serves “the efficiency-based goal of economic deterrence.”⁴⁸⁴ Professor Peter Diamond’s work is to the same effect — he contended that awards of punitive damages for reckless disregard of the rights of others properly take into account “costs that are not adequately represented in the defendant’s decision process.”⁴⁸⁵ Given

⁴⁷⁸ *Id.* at 360 (Stevens, J., dissenting).

⁴⁷⁹ Sharkey, *Economic Analysis of Punitive Damages*, *supra* note 3, at 496-97; *see also* Colby, *Clearing the Smoke*, *supra* note 31, at 457-64.

⁴⁸⁰ *State Farm*, 538 U.S. at 425 (“[F]ew awards exceeding a single-digit ratio between punitive and compensatory damages, to a significant degree, will satisfy due process.”); *cf. id.* (“[R]atios greater than those we have previously upheld may comport with due process where ‘a particularly egregious act has resulted in only a small amount of economic damages.’” (quoting *Gore*, 517 U.S. at 582)); *see* Sharkey, *Economic Analysis of Punitive Damages*, *supra* note 3, at 492. *But see* *Mathias v. Accor Econ. Lodging, Inc.*, 347 F.3d 672, 674, 675-76 (7th Cir. 2003) (Posner, J.) (allowing a large punitive-to-compensatory ratio in spite of *State Farm*).

⁴⁸¹ Sharkey, *Economic Analysis of Punitive Damages*, *supra* note 3, at 496.

⁴⁸² *Id.*

⁴⁸³ *See supra* Section I.B.1.

⁴⁸⁴ Sharkey, *Punitive Damages as Societal Damages*, *supra* note 31, at 450.

⁴⁸⁵ Peter Diamond, *Integrating Punishment and Efficiency Concerns in Punitive Damages for Reckless Disregard of Risks to Others*, 18 J.L. ECON. & ORG. 117, 134 (2002).

the importance of this internalization function, economically efficient results are more likely to be achieved when the law of punitive damages allows for objective evaluations of the defendant's conduct and does not, as in the nineteenth century, merely aim to punish those who commit acts accompanied by subjectively culpable states of mind.⁴⁸⁶ The modern solution may not be "first-best" from an economic perspective, but it is probably better from that perspective than the nineteenth-century one.⁴⁸⁷

Although the claim is highly contested, increased consideration of objective factors in the punitive damages calculus may be a part of a larger trend in tort law — the move toward economic efficiency. Thus, Professor George Priest identified "the tendency of the set of all legal rules to become dominated by rules achieving efficient . . . allocative effects,"⁴⁸⁸ and Professor Paul Rubin came to similar conclusions.⁴⁸⁹ Others, including Professor Jody Kraus, likewise noted an "impressive level of fit" between results of economic analysis and case outcomes under common-law rules.⁴⁹⁰ Professors Priest and Rubin contended that such shifts are an inevitable consequence of the iterative nature of adversarial litigation,⁴⁹¹ while others, including Professor Kraus, argued that courts have lately been following — at least to some extent and maybe somewhat unwittingly — the teachings of economically-

⁴⁸⁶ Cf. Sheldon M. Novick, *Introduction to OLIVER WENDELL HOLMES, THE COMMON LAW* iii, xiv-xv (Dover 1991) (1881) ("If law was simply an instrument to accomplish certain material ends, it followed that the law should concern itself solely with external behavior; the merely moral or subjective should be stripped away by the process of evolution. Holmes argued that he could discern in the developing common law a trend toward complete reliance on 'external standards' of behavior."); see also *supra* notes 65–66 and accompanying text. Note, though, that *Seagate's* supposedly "objective" standard was in fact aberrant in comparison with objective standards in modern tort law. See *supra* notes 180–81 and accompanying text.

⁴⁸⁷ In addition, a purely economic approach to punitive damages might encounter significant challenges in the way of information costs, justifying the use of the recklessness standard as rough, "modular" proxy for identifying economically inefficient behaviors. See generally Henry E. Smith, *Modularity and Morality in the Law of Torts*, 4 J. TORT L. 1 (2011) (explaining how modularity helps reduce information costs in tort law).

⁴⁸⁸ George L. Priest, *The Common Law Process and the Selection of Efficient Rules*, 6 J. LEGAL STUD. 65, 65 (1977).

⁴⁸⁹ Paul H. Rubin, *Why Is the Common Law Efficient?*, 6 J. LEGAL STUD. 51, 51-52 (1977). See generally Richard A. Posner, *A Theory of Negligence*, 1 J. LEGAL STUD. 29 (1972).

⁴⁹⁰ Kraus, *supra* note 359, at 357. But cf. Gillian K. Hadfield, *Bias in the Evolution of Legal Rules*, 80 GEO. L.J. 583 (1992) (disagreeing with the common law efficiency thesis).

⁴⁹¹ See generally Priest, *supra* note 488; Rubin, *supra* note 489.

mindful scholars of tort law, some of whom have become judges.⁴⁹² Some have maintained, though, that the extent of influence of economic thinking on tort law has been overstated or should be limited⁴⁹³ — and still others argued that the rules that purportedly serve the goal of “efficiency” instead do the bidding of powerful interests in society.⁴⁹⁴

Be that as it may, the increasing influence of the law-and-economics movement on civil litigation over time is difficult to deny — and Judge Calabresi’s opinion in *Island Software* is a powerful example of that trend.⁴⁹⁵ Nor is the shift to objective evaluations of conduct reflective of economic thinking necessarily a hypermodern development. Though far ahead of his time, one scholar, and later judge, with a strong economic-utilitarian bent was Oliver Wendell Holmes.⁴⁹⁶ Interestingly enough, one of the legacies of Holmes’ handiwork as a Justice on the Supreme Judicial Court of Massachusetts was an objective recklessness standard for *criminal* violations, in addition to the more historically grounded subjective standard.⁴⁹⁷ Although the possibility of proof of recklessness using a (mostly) objective standard should probably be considered aberrant as far as criminal law goes,⁴⁹⁸ the Massachusetts approach allowing for separate, disjunctive subjective and objective routes to demonstrating recklessness for those crimes for which this mental state is an element closely reminds one of *Halo*. A recent case explained:

Wanton or reckless conduct is determined based either on the defendant’s specific knowledge or on what a reasonable person should have known in the circumstances. If based on the objective measure of recklessness, the defendant’s actions constitute “wanton or reckless conduct if an ordinary normal [person] under the same circumstances would have realized

⁴⁹² Kraus, *supra* note 359, at 333-36.

⁴⁹³ See, e.g., Goldberg & Zipursky, *supra* note 337; see also Keating, *supra* note 66.

⁴⁹⁴ See, e.g., Jack M. Balkin, *Too Good to Be True: The Positive Economic Theory of Law*, 87 COLUM. L. REV. 1447 (1987) (reviewing WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF TORT LAW* (1987)).

⁴⁹⁵ See *supra* notes 423–33 and accompanying text.

⁴⁹⁶ See HOLMES, *supra* note 486, at 108-09 (offering a vigorous endorsement of objective standards in the law).

⁴⁹⁷ See *Commonwealth v. Pierce*, 138 Mass. 165, 174-78 (1884) (Holmes, J.) (adopting a largely objective or “external” standard in a criminal recklessness case); see also HOLMES, *supra* note 486, at 53-59.

⁴⁹⁸ See Note, *Criminal Negligence*, 12 HARV. L. REV. 428, 428-29 (1898); see also Samuel H. Pillsbury, *Crimes of Indifference*, 49 RUTGERS L. REV. 105, 192-206 (1996).

the gravity of the danger.” If based on the subjective measure, i.e., the defendant’s own knowledge, “grave danger to others must have been apparent and the defendant must have chosen to run the risk rather than alter [his or her] conduct so as to avoid the act or omission which caused the harm.”⁴⁹⁹

The influence of Holmes’s economic-utilitarian thinking on tort law was marked as well. Specifically, his legacy has had an effect on the modern law of punitive damages. In *Exxon Shipping Co. v. Baker*, its latest pronouncement on punitive damages besides *Halo*, the Supreme Court invoked Holmes’s “bad man,” a *homo economicus* who cares only about possible penalties for his actions and thus seeks “some ability to know what the stakes are in choosing one course of action or another.”⁵⁰⁰ Professor Jill Lens criticized *Exxon*’s reliance on the bad man construct and lamented that the Court’s “conception of punishment is detached from its traditional morality roots.”⁵⁰¹ But *Exxon* was dealing with a miscreant who was reckless, not one who acted maliciously or with intent to harm anyone,⁵⁰² so the Court’s diminished focus on moral considerations can be defended.

Significantly, though, modern economic-utilitarian thinking exemplified by Holmes’s bad man does not fully control the law of punitive damages. As the *Halo* Court pointed out with its vituperative “pirate” language, moral considerations can still come into play when such damages are awarded for intentional rights-violations.⁵⁰³ But *Halo*, like *Exxon*, also made clear that one can be liable for enhanced damages due to recklessness,⁵⁰⁴ a level of culpability whose “connection to morality”⁵⁰⁵ is more attenuated. As in most of the rest of tort law, recklessness based on a “reason to know” of unreasonable risk of infringement can, and should be, a route to establishing eligibility for enhanced damages that is separate from the route that contemplates punishment for “conscious” and “flagrant”

⁴⁹⁹ *Commonwealth v. Pugh*, 969 N.E.2d 672, 585 (Mass. 2012) (quoting *Commonwealth v. Welansky*, 55 N.E.2d 902, 909-10 (Mass. 1944)) (citations omitted).

⁵⁰⁰ 554 U.S. 471, 502 (2008).

⁵⁰¹ Lens, *Bad Man*, *supra* note 31, at 790.

⁵⁰² *Exxon Shipping Co. v. Baker*, 554 U.S. 471, 493-95, 512-13 (2008). To recall, the faulty conduct in *Exxon* was the captain’s operation of a tanker while intoxicated. *See id.* at 475-79; *see also supra* note 140 and accompanying text.

⁵⁰³ *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1932 (2016).

⁵⁰⁴ *Id.* at 1933.

⁵⁰⁵ *See* Lens, *Bad Man*, *supra* note 31, at 825.

infringements.⁵⁰⁶ Enhanced damages based on recklessness, I maintain, are particularly suitable for dealing with the *homines economici* engaged in patent infringement. I develop this standard in the Part that follows.

III. BACK TO PATENT LAW: TOWARD A PROPER STANDARD FOR ENHANCED DAMAGES

A. *Civil Recklessness: A Recap and Some Potentially Easy Cases in Patent Law*

To orient the discussion of how civil recklessness can be implemented in patent law, its features are worth recapping and highlighting. To begin, the standard of having “reason to know” of facts that point to a risk of a rights-violation, adopted from the *Restatement by Halo*,⁵⁰⁷ is demanding. As explained by Professor Kenneth Simons, “The Restatement’s concept of ‘reason to know’ is narrower than ‘reasonably should know’ — it essentially requires that the facts be at your fingertips.”⁵⁰⁸ Echoing this characterization, Professor Stephanie Bornstein maintained that “[r]ecklessness in tort goes further than negligence to account for situations in which the actor takes risks that are unusually high and for which the costs of preventing the harms are low.”⁵⁰⁹ According to Professor Dan Dobbs’s treatise, “the risk-utility balance strongly disfavors the defendant’s conduct,”⁵¹⁰ but — as noted throughout — civil recklessness can also include the somewhat subjective component of “conscious indifference,” which is “not necessarily required to establish gross negligence.”⁵¹¹ One way to further characterize the subjective component of the inquiry is that the defendant “intentionally or consciously runs a very serious risk with no good reason to do so.”⁵¹² Another commentator, Professor Geoffrey Rapp, explained that some cases “find[] recklessness [in] the defendant’s ‘I don’t care

⁵⁰⁶ Cf. *supra* Section II.B.

⁵⁰⁷ *Halo*, 136 S. Ct. at 1933 (quoting *Safeco Ins. Co. of Am. v. Burr*, 551 U.S. 47, 69 (2007) (quoting RESTATEMENT (SECOND) OF TORTS § 500 (AM. LAW INST. 1965))).

⁵⁰⁸ See Simons, *Rethinking Mental States*, *supra* note 39, at 472 n.32 (quoting RESTATEMENT (SECOND) OF TORTS § 12).

⁵⁰⁹ See Stephanie Bornstein, *Reckless Discrimination*, 105 CALIF. L. REV. 1055, 1086 (2017) (citing DAN B. DOBBS, *THE LAW OF TORTS* § 147 (West 2000)).

⁵¹⁰ DOBBS, *supra* note 509, § 147, at 351.

⁵¹¹ *Id.*

⁵¹² *Id.*

attitude.”⁵¹³ Nonetheless, as Professor Dobbs observed, “[T]he defendant’s state of mind can ordinarily only be proved by proving the defendant’s conduct, so that extreme departure from ordinary care in many cases tends to prove not only gross negligence but a conscious indifference to the rights of others.”⁵¹⁴

Under this standard, a patent infringer’s conduct could be eligible for treble damages within the meaning of *Halo* in certain circumstances in which it lacked actual knowledge of the patent’s existence⁵¹⁵ — a state of mind that, under the Federal Circuit’s current interpretation of *Halo*, now completely exonerates the infringer from liability for enhanced damages.⁵¹⁶ For example, willful blindness to the existence of a patent, whereby “(1) the defendant must subjectively believe that there is a high probability that a fact exists and (2) the defendant must take deliberate actions to avoid learning of that fact,”⁵¹⁷ would probably suffice under the proposed approach.⁵¹⁸ So

⁵¹³ Rapp, *supra* note 39, at 152 (quoting *Williamson v. McKenna*, 354 P.2d 56, 67 (Or. 1960)).

⁵¹⁴ DOBBS, *supra* note 509, § 147, at 351-52. The formulation in Georgia is illustrative. See GA. CODE ANN. § 51-12-5.1(b) (2018) (punitive damages possible where “the defendant’s actions showed willful misconduct, malice, fraud, wantonness, oppression, or that entire want of care which would raise the presumption of conscious indifference to consequences”). Interestingly, Theodore Sedgwick’s 1847 treatise stated that punitive damages could be awarded for “negligence so gross as to raise a presumption of malice.” SEDGWICK, *supra* note 107, at 26; see also *supra* notes 105–09 and accompanying text. In that, Sedgwick was probably ahead of his time, presaging the recklessness standard. Indeed, truly “objective” recklessness might be logically equivalent to gross negligence. See Simons, *Rethinking Mental States*, *supra* note 39, at 464-65, 478; see also George P. Fletcher, *The Fault of Not Knowing*, 3 THEORETICAL INQUIRIES L. 265, 278 (2002) (equating recklessness with gross negligence and discussing circumstances in which “the fault lies in [the defendant’s] having failed to investigate the risks attendant upon his affirmative conduct”).

⁵¹⁵ *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1932 (2016). For an illuminating discussion of actual versus “statistical” knowledge, and associated concepts of particularized versus general risk, see generally Simons, *Statistical Knowledge Deconstructed*, *supra* note 214.

⁵¹⁶ See *supra* notes 215–19 and accompanying text.

⁵¹⁷ See *Glob.-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. 754, 769 (2011).

⁵¹⁸ For a recent example where a district court allowed a claim for enhanced damages to proceed in a willful blindness scenario, see *Intel Corp. v. Future Link Sys., LLC*, 268 F. Supp. 3d 605, 623 (D. Del. 2017) (refusing to grant summary judgment of no willfulness based in part on the evidence that “Intel’s own engineers concede that they avoid reviewing other, non-Intel patents so as to avoid willfully infringing them” and allegations of “corporate atmosphere encouraging employees to ‘turn a blind eye’ to patents”). This result seems in tension with prevailing precedent, see *supra*, Section I.D.2, though it is not clear if in the leading post-*Halo* Federal Circuit case on point, *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317 (Fed. Cir. 2016), the plaintiff

would other behaviors involving inquiries into patent coverage that are so woefully inadequate as to demonstrate a gross enough departure from ordinary care and, in turn, indicate an infringer's conscious indifference to the patent rights of others.⁵¹⁹ Consistent with the demanding nature of the recklessness standard, as captured in the "reason to know" formulation, qualifying behaviors might include a failure to investigate whether a product that the defendant copied was covered by patents, or a decision not to monitor the patents of a close competitor.⁵²⁰ To go beyond these specific examples of non-searches that may be reckless, though, a comprehensive framework is needed. In the next section, I consider some factors that could be relevant to the recklessness inquiry.

proved the defendant's actual knowledge of the patent as a factual matter. In fact, it seems that the Federal Circuit held that actual knowledge could be inferred from patent marking on the products that the defendant copied. *Id.* at 1341-42; *see supra* notes 44-45 and accompanying text.

⁵¹⁹ One may note that this standard is like the "deliberate indifference" mental state for indirect infringement that the Supreme Court rejected in *Global-Tech* in favor of the willful blindness standard. *See Glob.-Tech*, 563 U.S. at 766-70. Although, as observed above, *see supra* notes 224-26 and accompanying text, the Supreme Court's willfulness and indirect infringement standards are difficult to reconcile, it is notable that *Global-Tech* explicitly rejected recklessness (the criminal version of it!) in the indirect infringement context, *id.* at 769-70, while *Halo* acknowledged recklessness as a possible standard, *Halo*, 136 S. Ct. at 1932. But there is yet another wrinkle — the defendant's beliefs with respect to the asserted patent's validity cannot negate liability for indirect infringement, *Commil USA, LLC v. Cisco Sys., Inc.*, 135 S. Ct. 1920, 1926-28 (2015), but can negate willfulness, *Halo*, 136 S. Ct. at 1932. In this vein, I argued in a recent article that claims like those at issue in *Commil* might be recharacterized as claims of direct infringement, dispensing with the knowledge-of-the-patent requirement. *See Karshtedt, Causal Responsibility and Patent Infringement, supra* note 15, at 586-92.

⁵²⁰ *Cf.* *SEB S.A. v. Montgomery Ward & Co.*, 594 F.3d 1360, 1375-78 (Fed. Cir. 2010), *aff'd on other grounds sub nom. Glob.-Tech*, 563 U.S. 754; *Intel*, 268 F. Supp. at 609, 623. For an example from Canada, *see Bell Helicopter Textron Canada Ltée v. Eurocopter*, [2013] F.C.A. 219, para. 190 (Can. C.A.), *aff'g* [2012] F.C. 113 ("[I]t simply defies belief that a large and sophisticated corporation such as Bell Helicopter would not verify intellectual property rights prior to embarking, as it did, on a research program directly involving the study of the landing gear of a leased EC120 helicopter. At the very least, this would be willful blindness."). On remand, the court allowed treble damages, citing the fact that copying was involved. *See Airbus Helicopters, S.A.S. v. Bell Helicopter Textron Canada Ltée*, [2017] F.C. 170, para. 312, *appeal docketed*, A-94-17 (F.C.A. Mar. 10, 2017). Notably, punitive damages in this case were awarded under the common law — there is no statutory authorization for them under Canadian patent law. I thank Professor Norman Siebrasse for bringing this case to my attention.

B. *Reckless Failures to Learn of a Patent: Beyond the Easy Cases*

The exercise of setting a standard of care, and instructing juries on what might constitute an extreme deviation from it, creates — on the model of Judge Calabresi's approach in *Island Software* — an opportunity for courts to bring economic reasoning to bear on the issue of enhanced damages within the strictures of modern common-law punitive damages doctrine.⁵²¹ Borrowing from tort law, the default standard one would set is, simply, what a reasonably prudent firm would do by way of investigating patent rights of others under all the circumstances.⁵²² By itself, though, that standard does not tell us very much, and the real work lies in ascertaining the relevant circumstances, as well as their salience for the recklessness inquiry based on the defendant's allegedly extreme deviation from the standard. A close examination of the specific setting of the infringement, then, should give us some sense of the efficient amount of patent search and analysis. The emphasis here, again, is on costs and benefits: as William Lee and Professor Douglas Melamed noted, "when a company can cost-effectively learn of relevant patents and avoid infringement *ex ante*, it should be deterred from proceeding to infringe the patents."⁵²³ In other words, when potential defendants can readily take steps to avoid infringement but do not, deterrence through enhanced damages may be appropriate.

Accordingly, one factor that the fact-finder could take into account in deciding if a non-search was reckless, suggested by Judge Calabresi in *Island Software*, is company size and sophistication in the relevant area of technology.⁵²⁴ Less is to be expected from a small company, for which an extensive investigation intended to forestall infringing activity may become cost-prohibitive, than of an established manufacturer operating in the field. Furthermore, the law should demand even less from an end user who lacks any technological expertise and just happens to have acquired the technology from another party because the necessary investments into search are, in these circumstances, likely to be highly socially costly relative to any social benefit of the avoided infringement.⁵²⁵ A related intuition is that

⁵²¹ *Island Software & Comput. Serv., Inc., v. Microsoft Corp.*, 413 F.3d 257, 264 (2d Cir. 2005); see *supra* notes 426–30 and accompanying text.

⁵²² See *Brown v. Kendall*, 60 Mass. 292, 296-97 (1850).

⁵²³ Lee & Melamed, *supra* note 5, at 299.

⁵²⁴ *Island Software*, 413 F.3d at 264.

⁵²⁵ See *supra* notes 282–84 and accompanying text; see also Mark D. Janis & Timothy R. Holbrook, *Patent Law's Audience*, 97 MINN. L. REV. 72, 117 (2012); Karshedt, *Causal Responsibility and Patent Infringement*, *supra* note 15, at 625 n.376.

patent searching would be likely inefficient and socially wasteful if a firm had to develop expertise in an area of technology that is irrelevant to the firm's operations just to avoid exposure to treble damages. Professor Paul Heald's insightful model of optimal remedies for patent infringement is consistent with these insights: He is skeptical of enhancing damages in the circumstances in which "the inventive firm and a self-inventing infringer operate in different commercial fields."⁵²⁶ Examining the characteristics of the infringing firm ensures that courts "do not automatically multiply a damage award simply for a failure to search,"⁵²⁷ but rather ascertain circumstances that make a search that would aid in avoiding infringement particularly appropriate and cost-effective.

Another factor, alluded to earlier in the Article, centers on the patentee's difficulties in detecting infringement,⁵²⁸ whether based on the defendant's efforts to conceal the infringing acts or simply based on the nature of the invention. Reduced likelihood of detection leads to systematic undercompensation for infringement,⁵²⁹ making this factor particularly suitable for consideration under the economic models of enhanced damages.⁵³⁰ Indeed, this factor embodies one area in which modern approaches to mental states for punitive damages and law-and-economics thinking have reached some convergence: "As Judge Posner points out in *Mathias v. Accor Economy Lodging*, reckless and grossly negligent conduct may justify the application of a damage multiplier based on the chance that the wrong will go undetected or unchallenged."⁵³¹ Courts should therefore instruct juries to look with particular care at infringements of so-called method or process patents and other infringements unlikely to be discovered by the patentee.⁵³² Criticizing *Seagate*, Professor Heald questioned the fact that the

⁵²⁶ See Paul J. Heald, *Optimal Remedies for Patent Infringement*, 45 HOUS. L. REV. 1165, 1191 (2008).

⁵²⁷ *Id.* at 1197.

⁵²⁸ See *supra* notes 265–67 and accompanying text; see also Chiang, *supra* note 229.

⁵²⁹ Thomas F. Cotter, *An Economic Analysis of Enhanced Damages and Attorney's Fees for Willful Patent Infringement*, 14 FED. CIR. B.J. 291, 310 (2004).

⁵³⁰ Indeed, culpability aside, high punitive damages awards have been thought to be justifiable when the wrongdoing was difficult to detect, increasing the defendant's chances of getting away with a violation. See, e.g., *BMW of N. Am., Inc. v. Gore*, 517 U.S. 559, 582 (1996).

⁵³¹ Heald, *supra* note 526, at 1190 (citing *Mathias v. Accor Econ. Lodging, Inc.*, 347 F.3d 672, 675–76, 678 (7th Cir. 2003)).

⁵³² See Jeffrey R.D. Lewis & Art C. Cody, *Unscrambling the Egg: Pre-Suit Infringement Investigations of Process and Method Patents*, 84 J. PAT. & TRADEMARK OFF. SOC'Y 5, 7 (2002).

“express focus in [its] willfulness inquiry is on the infringer’s intent, while ignoring the chance that the infringement will go undetected.”⁵³³ The criticism also applies to the Federal Circuit’s willfulness doctrine post-*Halo*, which focuses on the defendant’s subjective mental state by privileging actual knowledge, but ignores underdetection as an independent factor in determining whether threshold requirements for enhanced damages have been met.⁵³⁴

Under the third factor, related to the other two, the fact-finder would address in a holistic manner the type of industry in which the infringer operates and the number and kind of patents potentially covering the infringing products. If the product could potentially infringe numerous patents, or if the area of technology is known for notice failures when it comes to patent claims,⁵³⁵ “self-inventing” could well be “the optimal behavior” given the expense of search.⁵³⁶ Although these characterizations are subject to debate, broadly speaking the information technology industry is described by some as one in which a patent search could be prohibitively expensive based on notice difficulties and a sheer number of relevant patents, while the biomedical device industry could fall on the other end of the spectrum.⁵³⁷

Decision-makers, to be sure, should consider the particular facts of each case, but the features of products and patents in the area of infringing technology could be highly informative with respect to whether a search would be efficient. The general idea of industry-specific policy levers in patent law is not new — it was developed by Professors Dan Burk and Mark Lemley in a series of insightful articles

⁵³³ Heald, *supra* note 526, at 1197.

⁵³⁴ See Masur, *supra* note 265, at 195-96; see also Roger D. Blair & Thomas F. Cotter, *An Economic Analysis of Damages Rules in Intellectual Property Law*, 39 WM. & MARY L. REV. 1585, 1591 (1998). Concealment is, however, one of the “Read factors” guiding the trial judge’s discretion as to how much to increase the damages once the jury finds willfulness. See *infra* Section III.D.

⁵³⁵ See BESSEN & MEURER, *supra* note 249, at 49-50, 233-34. See generally Peter S. Menell & Michael J. Meurer, *Notice Failure and Notice Externalities*, 5 J. LEGAL ANALYSIS 1 (2013).

⁵³⁶ See Heald, *supra* note 526, at 1189.

⁵³⁷ See WENDY H. SCHACHT, CRS REPORT FOR CONGRESS, PATENT REFORM: ISSUES IN THE BIOMEDICAL AND SOFTWARE INDUSTRIES (2006), <https://fas.org/sgp/crs/misc/RL33367.pdf>; see also Christina Mulligan & Timothy B. Lee, *Scaling the Patent System*, 68 NYU ANN. SURV. AM. L. 289, 289, 304 (2012) (estimating that “[i]n software, for example, patent clearance by all firms would require many times more hours of legal research than all patent lawyers in the United States can bill in a year” because “there are around twenty-four billion new [software] patent-firm pairs each year that could produce accidental infringement”).

and a book.⁵³⁸ But it has not yet been applied to the context of enhanced patent damages.⁵³⁹ Under the proposed framework, then, if industry characteristics suggest that uncompensated infringements would carry high social costs that could be readily avoided by patent searching, the fact-finder might readily find a non-search to be reckless.

For this third factor, as for the first, an examination of industry customs with respect to patent searching might be relevant, though not conclusive.⁵⁴⁰ Although endogeneity is always a concern when courts rely upon the custom of a particular industry to determine whether a defendant grossly deviated from the standard of care,⁵⁴¹ accepted practices can often converge on socially efficient conduct.⁵⁴² In tort cases, courts have held that “extreme deviations” from industry customs or standards are indicative of recklessness,⁵⁴³ and some commentators have recognized that custom can be relevant to the enhanced damages inquiry in patent law in particular.⁵⁴⁴ Therefore, decision-makers could consider, in undertaking the recklessness inquiry, whether the defendant has acted like a severe industry outlier — but may, consistent with the treatment of custom in other areas of law, discount the custom if it appears eminently unreasonable, is a

⁵³⁸ DAN L. BURK & MARK A. LEMLEY, *THE PATENT CRISIS AND HOW THE COURTS CAN SOLVE IT* 95-170 (2009); Dan L. Burk & Mark A. Lemley, *Biotechnology's Uncertainty Principle*, 54 CASE W. RES. L. REV. 691, 735 (2004); Dan L. Burk & Mark A. Lemley, *Is Patent Law Technology-Specific?*, 17 BERKELEY TECH. L.J. 1155, 1155 (2002); Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575, 1576-77 (2003).

⁵³⁹ Professor Jason Rantanen's work comes close. See Rantanen, *An Objective View*, *supra* note 15, at 1623-24 (arguing that “it is the risk as perceived by a person in the actor's place that is relevant, not some abstract notion of risk held by an omniscient being”).

⁵⁴⁰ Cf. Jennifer E. Rothman, *The Questionable Use of Custom in Intellectual Property*, 93 VA. L. REV. 1899 (2007) (expressing skepticism with respect to the use of custom for determining fair use in copyright law).

⁵⁴¹ For an insightful empirical study on endogeneity in two specific areas of law, see Daniel L. Chen & Susan Yeh, *Distinguishing Between Custom and Law: Empirical Examples of Endogeneity in Property and First Amendment Precedents*, 21 WM. & MARY BILL RTS. J. 1081, 1081 (2013).

⁵⁴² For an early analysis of this thesis, see Clarence Morris, *Custom and Negligence*, 42 COLUM. L. REV. 1147, 1148 (1942).

⁵⁴³ See *Rhea v. Brown Mfg. Corp.*, No. 3:08-cv-35, 2010 WL 2572052, at *1-3 (E.D. Tenn. June 18, 2010) (safety standards); *Walston v. Monumental Life Ins. Co.*, 923 P.2d 456, 459, 461 (Idaho 1996) (insurance industry standards).

⁵⁴⁴ See Heald, *supra* note 526, at 1191 & n.12 (citing Jay P. Kesan, *Carrots and Sticks to Create a Better Patent System*, 17 BERKELEY TECH. L.J. 763, 766 (2002)).

product of collusion between industry players, or is an inappropriate stand-in for the standard of care for some other reason.⁵⁴⁵

Fortunately, some relevant data based on which we could make tentative generalizations on search practices by industry is available.⁵⁴⁶ Addressing patent search behavior among startups, a study by Professors Graham, Merges, Samuelson, and Sichelman “inquired whether . . . respondents’ companies regularly check the patent literature to determine if someone else has a U.S. patent that covered what they were doing or were considering.”⁵⁴⁷ The authors found, for example, that “[a]mong [non-venture backed] respondents who answered, slightly more than one-third reported conducting . . . [patent] searches.”⁵⁴⁸ Notably, “[t]his likelihood was particularly high for biotechnology (nearly seven in ten) and medical device (over half) companies, while slightly less than one-quarter of software companies reported doing regular patent searches.”⁵⁴⁹ The overall search numbers were “substantially” greater among venture-backed firms, and those firms exhibited a similar industry trend: “propensity [to search] was particularly high among biotechnology (nearly nine in ten) and medical device (over nine in ten) firms.”⁵⁵⁰ These findings are consistent with the work on industry trends with respect to notice failure and patent numerosity discussed earlier.⁵⁵¹

Custom, indeed, has already been accepted in the willful infringement inquiry on some level. For example, relying on Federal Circuit precedent, the trial court looked to custom in *Stryker v. Zimmer*, the companion case to *Halo*. The court explained that “Zimmer offered no evidence that its behavior — copying a competitor’s product, without attempting to design around the competitor’s patents and without first seeking clearance from counsel

⁵⁴⁵ See, e.g., *The T.J. Hooper*, 60 F.2d 737 (2d Cir. 1932) (Hand, J.).

⁵⁴⁶ I assume that the ten-year-old study discussed here is not outdated and remains relevant. If not, at least the study provides a model of the sort of data that could be collected and used in litigation in the future.

⁵⁴⁷ Stuart J.H. Graham et al., *High Technology Entrepreneurs and the Patent System: Results of the 2008 Berkeley Patent Survey*, 24 BERKELEY TECH. L.J. 1255, 1321 (2009).

⁵⁴⁸ *Id.*

⁵⁴⁹ *Id.*

⁵⁵⁰ *Id.*

⁵⁵¹ See *supra* notes 535–37 and accompanying text; see also Stewart E. Sterk, *Property Rules, Liability Rules, and Uncertainty About Property Rights*, 106 MICH. L. REV. 1285, 1285 (2008) (“In some instances, the cost of acquiring information about the scope of property rights will exceed the social value of that information. In those circumstances, further search for information about the scope of rights is inefficient; the social harm avoided by further search does not justify the costs of the search.”).

on infringement concerns — was in keeping with standards of commerce in the medical device industry.”⁵⁵² The court concluded that this evidence supported the jury’s finding of willfulness and, for this and other reasons, denied Zimmer’s motion for judgment as a matter of law of no willfulness.⁵⁵³ The Federal Circuit reversed the trial court in *Stryker* under the *Seagate* standard,⁵⁵⁴ but the Supreme Court in turn vacated the Federal Circuit’s judgment in that case and the district court ultimately reinstated the award of full treble damages.⁵⁵⁵ Although, under prevailing precedent, the *Stryker* court considered custom only with respect to conduct involving patents known to the defendant, there is nothing in *Halo* to foreclose the trial court’s consideration of search customs as well, and much to support it. Allowing the jury to hear this kind of evidence and assess its relevance should be a part of the trial court’s exercise of discretion that the Supreme Court emphasized in *Halo*.⁵⁵⁶

Finally, the timing of search would be relevant for the recklessness inquiry. If a patent covering a product springs up unexpectedly years after the product has been launched, the failure to find that patent should be significantly less likely to be adjudged reckless than if the patent was in existence prior to product development. While the recklessness standard could readily demand a clearance search prior to potentially infringing activity based on the factors discussed above, the costs of continuous monitoring for new patents after product launches would probably be prohibitive in many circumstances. In addition, as Professor Mark Lemley and Ragesh Tangri explained, the number of options that an infringer has after investing into a particular product is more limited than prior to the time that the investments were made. They argued that “a company . . . can hardly be expected to throw . . . product-specific investments away every time the company is confronted with one of the more than two million patents currently in force in the United States” and concluded that a willfulness inquiry that “focuses only on the accused infringer’s state of mind at the time

⁵⁵² *Stryker Corp. v. Zimmer, Inc.*, No. 1:10-cv-1223, 2013 WL 6231533, at *14 (W.D. Mich. Aug. 7, 2013), *vacated*, 837 F.3d 1268 (Fed. Cir. 2016).

⁵⁵³ To be sure, under the prevailing standard, the custom at issue was one relating to dealing with known patents. *See id.* at *12.

⁵⁵⁴ *Stryker Corp. v. Zimmer, Inc.*, 782 F.3d 649 (Fed. Cir. 2014), *vacated sub. nom. Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923 (2016).

⁵⁵⁵ *Stryker Corp. v. Zimmer, Inc.*, No. 1:10-cv-1223, 2017 WL 4286412, at *1 (W.D. Mich. July 12, 2017), *on remand from* 837 F.3d 1268 (Fed. Cir. 2016), *appeal docketed*, No. 17-2541 (Fed. Cir. Sept. 13, 2017).

⁵⁵⁶ *Halo*, 136 S. Ct. at 1933-34.

it initially adopts the product” would help avoid overdeterrence.⁵⁵⁷ I largely agree: unless some special circumstances, such as a very low-cost search followed by a cheap redesign, are present after the product launch, the failure to find “after-arising” patents should not count against the infringer in the recklessness inquiry.⁵⁵⁸

To summarize, the ultimate purpose of the inquiry into the quality of a patent search is to enable the fact-finder to decide whether the defendant who lacked actual knowledge of the asserted patent should nonetheless be charged with it based on *Halo*’s “reason to know” standard.⁵⁵⁹ Importantly, the inquiry has both factual and evaluative components. On the factual side, the defendant who lacked actual knowledge could have either (1) done no searching at all; or (2) done some searching but missed the relevant patent. On the evaluative side, the fact-finder would conclude whether route (1) or (2) was reckless with the aid of the factors discussed above and thus decide if the infringement was willful. Of course, a defendant who lacked actual knowledge of the patent’s existence could not have formed a belief about legality of its activities as far as noninfringement or invalidity are concerned — the problem, if any, lies in the failure to find the patent. The nature of the inquiry, however, changes once the defendant learns of the patent.⁵⁶⁰ In the next section, I examine how willfulness should be analyzed under the proposed test for defendants who have acquired actual knowledge of the patent.

C. Patent Search Versus Patent Analysis

Assume an infringer who, at one point, lacked actual knowledge of the asserted patent and, based on the factors in the previous section, the court concludes that infringement during that period was not reckless and therefore not willful. But then the infringer learns of the patent, whether after a search, receipt of a demand letter, or perhaps even after being served with the plaintiff’s complaint. How should the conduct of this type of defendant be evaluated? Because, today, actual knowledge is the *sine qua non* of enhanced damages, we are seemingly

⁵⁵⁷ Lemley & Tangri, *supra* note 26, at 1117, 1119.

⁵⁵⁸ At the same time, infringers who do have patent monitoring programs for their existing products could use this fact in their favor in countering claims of willful infringement. I thank Professor Brian Love for suggesting that I make this point.

⁵⁵⁹ *Halo*, 136 S. Ct. at 1933.

⁵⁶⁰ For example, if the defendant developed a reasonable noninfringement or invalidity position after acquiring actual knowledge of a patent, enhanced damages could not be collected from that point on. See Holbrook, *supra* note 275, at 1039, 1044 (discussing similar timing issues in the context of indirect infringement).

in familiar territory. The question to ask is whether the conduct involved in infringing a known patent was reckless or intentional,⁵⁶¹ which could be answered by examining whether the defendant developed a noninfringement or invalidity position, attempted a redesign of its product, and so on. In the wake of *Halo*, courts have already been making such inquiries.⁵⁶²

But under the approach set forth in this Article, something is now different than under the rule that renders actual knowledge dominant because the relevant timeframe has expanded to include search in addition to analysis. It should matter for the cost-benefit calculation, for example, whether a defendant acquired knowledge of the patent through its own search as opposed to a demand letter or another action by the patentee, such as a lawsuit.⁵⁶³ Particularly when the infringer already expended significant resources on search, it cannot be expected also to scrutinize every potentially relevant patent to the level of an opinion of counsel letter so as to avoid liability for enhanced damages. Under these circumstances, a relatively shallow analysis of each of the patents of possible interest by an engineer trained in the field may be sufficient to counter the willfulness charge.⁵⁶⁴ As an alternative, examinations of patent validity or noninfringement that do not involve the “deep dive” of an opinion letter are sometimes performed by law firms in the course of a so-called “freedom to operate” study may be adequate to avoid willfulness in this context.⁵⁶⁵ Thus, a major benefit of the proposed inquiry is that

⁵⁶¹ See *Halo*, 136 S. Ct. at 1932-33.

⁵⁶² See, e.g., *WesternGeco L.L.C. v. ION Geophysical Corp.*, 837 F.3d 1358, 1362-63 (Fed. Cir. 2016), *cert. granted on other grounds*, 138 S. Ct. 734 (2018).

⁵⁶³ Cf. Lemley & Tangri, *supra* note 26, at 1100-02 (noting that, under pre-*Seagate* doctrine, it did not seem to matter in the willfulness inquiry how the defendant’s knowledge of the patent was acquired).

⁵⁶⁴ Cf. *supra* notes 282–84 and accompanying text (explaining how something less than an opinion letter can be sufficient to avoid the conclusion of recklessness).

⁵⁶⁵ Although these terms are sometimes used interchangeably, “opinion of counsel” for the purposes of this Article refers to an in-depth development of invalidity or noninfringement positions with respect to one or a few patents, while “freedom to operate” denotes a broad patent search followed by a relatively cursory analysis of the patents that seem to be a threat. The latter is generally cheaper. See, e.g., A. James Isbester, *5 Top Takeaways: When Is an Opinion of Counsel Required in the New, Post-Halo Environment?*, LEXOLOGY (Apr. 17, 2017), <https://www.lexology.com/library/detail.aspx?g=235da072-c7c8-463e-99d1-222392a9c517> (distinguishing “clearance (freedom to operate) studies” from “opinions of counsel” and noting that there may be circumstances when “a summary memo regarding a specific patent or a freedom to operate memo covering all patents prior to product launch should be adequate,” while a “formal opinion” would not be needed to avoid willfulness).

it is at least structured in such a way so as not to discourage search, which the current approach does by giving potential infringers incentives to blind themselves to the patents of others.⁵⁶⁶

Thus, inclusion of the quality of patent search, in addition to legal analysis, in the willfulness calculus could potentially further reduce reliance on opinion of counsel letters, and mitigate associated problems involving privilege waivers as the focus of the inquiry shifts from specific patents to clearance activities generally.⁵⁶⁷ As the case law develops, courts may even settle on some “industry standard” safe harbors, concluding that a certain amount of search and analysis is *per se* sufficient to avoid a finding of “egregious” infringement qualifying for enhanced damages.⁵⁶⁸ Ultimately, by rewarding search, this approach to willfulness could encourage investments into learning patent landscapes and concomitant acquisition of technical information, rather than consumption of resources on opinion letters designed solely to be shields from enhanced damages. This recalibration of the willfulness doctrine in line with modern tort standards could, therefore, make it consistent with the patent law’s disclosure function, rather than at odds with it.⁵⁶⁹

In addition, the foregoing analysis is not meant to suggest that every time an infringer learned of a specific patent (or a set of patents) from the eventual plaintiff, as opposed to from its own search, a detailed analysis of the patents must be carried out to avoid the possibility of treble damages under the recklessness prong of *Halo*.⁵⁷⁰ When, on the one hand, the defendant is an end user lacking expertise in the relevant industry, requiring a formal opinion letter would be highly inefficient, for similar reasons that doing a patent search in the first

⁵⁶⁶ See generally *supra* Section I.E.

⁵⁶⁷ See *supra* notes 158–64 and accompanying text.

⁵⁶⁸ Professor Heald suggested that a diligent search could qualify the infringer for a safe harbor from willfulness, a proposal with which I agree to the extent it can be made consistent with *Halo*’s flexible inquiry. Heald, *supra* note 526, at 1191 (“[I]f the infringing firm conducted a reasonable search prior to self-inventing, and yet failed to find the invention, it seems clear that the damage award should not be augmented.” (footnote omitted)); cf. Lee Anne Fennell, *Accidents and Aggregates*, 59 WM. & MARY L. REV. (forthcoming 2018) (manuscript at 14–20), <https://ssrn.com/abstract=2960072> (discussing the concept of safe harbors in negligence law).

⁵⁶⁹ Cf. *supra* Section I.E.2 (discussing the importance of patent disclosure). To be sure, if no reasonable invalidity or noninfringement positions could be cheaply developed, the searcher would need to engage in licensing (or designing around the patent) and, perhaps, litigation. I address this point immediately below and also *infra* in Section IV.B.

⁵⁷⁰ Or, under the intent prong. See *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1931–32 (2016).

place would also be inefficient for such an entity.⁵⁷¹ On the other hand, though, when a company accused of infringement already employs technical experts who can meaningfully work with attorneys to evaluate the relevance of patents brought to the company's attention, a relatively thorough analysis could be justified. In addition, company size and resources should matter here as well. As Justice Breyer suggested in his *Halo* concurrence, a small company might not have the financial wherewithal needed for extensive patent analysis, and could therefore be overdeterred by a rule allowing for ready imposition of enhanced damages based on mere knowledge of patents listed in a demand letter.⁵⁷²

A question remains with respect to the proper course of action once it appears likely to the defendant that the patent at issue is valid and infringed. As an initial matter, proceeding with the development of the infringing product in these circumstances could potentially move the defendant from the zone of recklessness to that of intent and "piracy" under the subjective prong of *Halo*,⁵⁷³ though liability for patent infringement is always somewhat probabilistic given uncertainties in validity, claim construction, and so on.⁵⁷⁴ In any case, even when infringement approaches the intentional category, efficiency considerations are not completely irrelevant. In line with the framework adopted by Lee and Melamed, the fact-finder could ask if the intentionally-infringing defendant "could cost-effectively have avoided infringement by negotiating a license *ex ante* but chose instead to infringe."⁵⁷⁵ Specifically, the fact-finder could evaluate whether the defendant was already "locked-in" to using the infringing product, or whether there was a reason that negotiating a license would generate high transaction costs.⁵⁷⁶ If the costs of avoiding infringement in these circumstances were high, a finding of willfulness may be unwarranted — though perhaps, as I argue in the section that follows, efficiency considerations in cases of intentional infringement may be better addressed by a judge as opposed to a jury.

⁵⁷¹ See *supra* Section IV.B.

⁵⁷² *Halo*, 136 S. Ct. at 1936 (Breyer, J., concurring).

⁵⁷³ *Id.* at 1932 (majority opinion).

⁵⁷⁴ See generally Mark A. Lemley & Carl Shapiro, *Probabilistic Patents*, 19 J. ECON. PERSP. 75 (2005).

⁵⁷⁵ Lee & Melamed, *supra* note 5, at 441.

⁵⁷⁶ *But cf.* *Nat'l Presto Indus., Inc. v. W. Bend Co.*, 76 F.3d 1185, 1196 (Fed. Cir. 1996) (holding that, even though activity before the issuance of the patent may have "locked" the infringer in, it could still be liable for enhanced damages based on post-issuance infringement); see Lemley & Tangri, *supra* note 26, at 1100-02.

Combining the inquiries set forth in this section, the fact-finder could generally assess the “reasonableness of the infringer’s failure to negotiate a license ex ante in light of his or her assessment of the strength of the infringement claim, the number of patents and patent holders implicated by his or her product, and the cost of negotiating a license,”⁵⁷⁷ as well as, of course, the cost of search. The ultimate evaluative inquiry under the recklessness prong of *Halo* could be phrased to a jury as follows: “The defendant acted despite there being a substantial and unjustified risk of infringement that the defendant had reason to be aware of and should have avoided.”⁵⁷⁸ If the fact-finder concludes that the defendant acted in this manner and thus determines that the infringer has deviated from reasonable behavior so greatly as to enter the land of reckless conduct,⁵⁷⁹ the infringement would be adjudged willful, and therefore eligible for enhanced damages.

D. The Roles of Judge and Jury

Under the current approach to treble damages, jury verdicts of willfulness have a quasi-advisory character.⁵⁸⁰ As with any jury

⁵⁷⁷ Lee & Melamed, *supra* note 5, at 462.

⁵⁷⁸ I thank Professor Alexander Sarch for suggesting this formulation. As noted throughout this Part, the “should have avoided” decision would be based on the likelihood of the detection of infringement, relative social costs and benefits of search, and so on. Although the recklessness standard implemented through this jury instruction is intended to follow tort law’s modular approach to economic efficiency, *see* Smith, *supra* note 487 (discussing modularity in tort law), a judge’s decision whether to enhance the damages at all, and by how much, might reflect more fine-grained case-by-case determinations, *see infra* Section III.D.

⁵⁷⁹ *See supra* notes 507–14 and accompanying text.

⁵⁸⁰ I refer here to the judge’s ultimate decision to enhance damages, not to the initial willfulness determination. A recent district court decision called the jury’s willfulness conclusion itself advisory, which is a view that I do not believe to be consistent with Federal Circuit authority. *Compare* Enplas Display Device Corp. v. Seoul Semiconductor Co., No. 13-cv-05038 NC, 2016 WL 4208236, at *6 (N.D. Cal. Aug. 10, 2016) (“The Court approaches the jury finding as an advisory finding.”), *appeal docketed*, No. 16-2599 (Fed. Cir. Sept. 1, 2016), with *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1341 (Fed. Cir. 2016) (“We do not interpret *Halo* as changing the established law that the factual components of the willfulness question should be resolved by the jury.”). *But cf.* *Exergen Corp. v. Kaz USA, Inc.*, Nos. 2016-2315, 2016-2341, 2018 WL 1193529, at *22 (Fed. Cir. Mar. 8, 2018) (nonprecedential) (suggesting that a judge can decide not to enhance damages without a jury

determination, an infringer can challenge a verdict that an infringement was willful via a motion for judgment as a matter of law of no willfulness,⁵⁸¹ but that is not the only way that the infringer can avoid enhanced damages. The trial judge, in his or her discretion, has the ultimate authority to award any amount ranging from no enhanced damages to the full treble damages.⁵⁸² Because the ultimate result of no enhancement is therefore possible in spite of a jury finding of willfulness, this division of authority renders the mechanics of treble damages fairly protective of defendants. Indeed, in numerous district court decisions since *Halo*, including *Halo* itself, trial judges declined to award any enhanced damages in spite of jury findings of willfulness.⁵⁸³

Even more so than the standard for jury determinations of willfulness, the law governing the trial judge's discretion with respect to whether and how much to enhance damages has been in flux post-

consideration of willfulness).

⁵⁸¹ See FED. R. CIV. P. 50(a).

⁵⁸² Grp. One Ltd. v. Hallmark Cards, Inc., 407 F.3d 1297, 1308 (Fed. Cir. 2005).

⁵⁸³ See, e.g., Milwaukee Elec. Tool Corp. v. Snap-On Inc., Nos. 14-CV-1296-JPS, 17-MC-49-JPS, 2017 WL 6759410, at *22 (E.D. Wis. Dec. 29, 2017) (noting that the infringer "should have taken a license like every other competitor," but declining to enhance damages because "there is no reason to layer additional punishment atop this error"), *appeal docketed*, No. 18-1516 (Fed. Cir. Feb. 5, 2018); Saint Lawrence Commc'ns LLC v. Motorola Mobility LLC, 2:15-CV-351-JRG, 2017 WL 6268735, at *2 (E.D. Tex. Dec. 8, 2017); Idenix Pharm. LLC v. Gilead Scis., Inc., 271 F. Supp. 3d 694, 698-99 (D. Del. 2017), *further proceedings*, 2018 WL 922125 (D. Del. Feb. 16, 2018) (invalidating the patent at issue); Halo Elecs., Inc. v. Pulse Elecs., Inc., 281 F. Supp. 3d 1087, 1092-95 (D. Nev. 2017); Convolv, Inc. v. Dell Inc., No. 2:08-CV-244-RSP, 2017 WL 2463398, at *4-5 (D. Del. June 7, 2017), *appeal docketed*, 17-2335 (Fed. Cir. July 24, 2017); Brigham & Women's Hosp., Inc. v. Perrigo Co., 251 F. Supp. 3d 285, 293-94 (D. Mass. 2017), *appeal docketed*, No. 17-2021 (Fed. Cir. May 12, 2017); Sprint Commc'ns Co. v. Time Warner Cable, Inc., No. 11-2686-JWL, 2017 WL 978107, at *12 (D. Kan. Mar. 14, 2017); Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc., No. 09-cv-05235-MMC, 2017 WL 130236, at *4-5 (N.D. Cal. Jan. 13, 2017); Sociedad Española de Electromedicina y Calidad, S.A. v. Blue Ridge X-Ray Co., 226 F. Supp. 3d 520, 529-33 (W.D.N.C. 2016), *appeal docketed*, No. 17-1551 (Fed. Cir. Jan. 31, 2017); XY, LLC v. Trans Ova Genetics, LC, No. 13-cv-0876-WJM-NYW, 2016 WL 6664619, at *3-4 (D. Colo. Nov. 10, 2016); Presidio Components, Inc. v. Am. Tech. Ceramics Corp., No. 14-cv-02061-H-BGS, 2016 WL 4377096, at *20-21 (S.D. Cal. Aug. 17, 2016), *aff'd in relevant part*, 875 F.3d 1369 (Fed. Cir. 2017); *Enplas Display*, 2016 WL 4208236, at *8; Trs. of Bos. Univ. v. Everlight Elecs. Co., Ltd., 212 F. Supp. 3d 254, 257-28 (D. Mass. 2016), *appeal docketed*, No. 16-2591 (Fed. Cir. Aug. 31, 2016); *cf.* Erfindergemeinschaft UroPep GbR v. Eli Lilly & Co., No. 2:15-CV-1202-WCB, 2017 WL 2190055, at *4 (E.D. Tex. May 18, 2017) (Bryson, J., sitting by designation) (granting judgment as a matter of law of no willfulness because the court "would not have enhanced damages even if the jury had found Lilly's infringement to be willful").

Halo. Prior to the Supreme Court's decision, trial judges would typically look to the factors enumerated in the well-known Federal Circuit opinion in *Read Corp v. Portec, Inc.*, including (1) "whether the infringer deliberately copied the [patentee's] ideas or design," including copying directly from the patent or from a patent's "commercial embodiment," (2) "whether the infringer . . . investigated the scope of the patent and formed a good-faith belief that it was invalid or that it was not infringed," (3) "infringer's behavior as a party to the litigation," (4) infringer's "size and financial condition," (5) "closeness of the case," (6) "duration of the defendant's misconduct," (7) "remedial action by the defendant," (8) "defendant's motivation for harm," and (9) "whether defendant attempted to conceal its misconduct."⁵⁸⁴ After *Halo*, though, some courts have begun to de-emphasize the *Read* factors, maintaining instead that "they are not dispositive of the issue at hand" because *Halo* held that that "there is no precise rule or formula for awarding damages under § 284" and that "the touchstone for awarding enhanced damages after *Halo* is egregiousness."⁵⁸⁵ Although it is difficult to draw generalizations less than two years after *Halo* was decided, trial judges appear to treat egregiousness as a kind of overarching requirement for awarding enhanced damages that they must enforce after the patentee proves to the jury that the infringer acted willfully.⁵⁸⁶

Whatever the exact relationship between the jury willfulness standard and the trial judge enhancement standard,⁵⁸⁷ the inquiries overlap to some extent. For example, a good-faith belief of invalidity or noninfringement is likely relevant to the former as well as the latter,

⁵⁸⁴ 970 F.2d 816, 827 & n.7 (Fed. Cir. 1992).

⁵⁸⁵ See, e.g., *Sociedad Española*, 226 F. Supp. 3d at 532; see also *Imperium IP Holdings (Cayman), Ltd. v. Samsung Elecs. Co.*, 203 F. Supp. 3d 755, 763 (E.D. Tex. 2016) ("While the *Read* factors remain helpful to the Court's execution of its discretion, an analysis focused on 'egregious infringement behavior' is the touchstone for determining an award of enhanced damages rather than a more rigid, mechanical assessment."), *amended in part*, 2017 WL 1716589 (E.D. Tex. Apr. 27, 2017), *appeal docketed*, No. 17-2133 (Fed. Cir. June 6, 2017).

⁵⁸⁶ Cf. *Presidio Components*, 875 F.3d at 1382-83 (affirming this approach); *Alfred E. Mann Found. for Sci. Res. v. Cochlear Corp.*, 841 F.3d 1334, 1346 (Fed. Cir. 2016) (remanding to the district court to "consider whether [the defendant's] infringement 'constituted an "egregious case[] of misconduct beyond typical infringement" meriting enhanced damages under § 284 and, if so, the appropriate extent of the enhancement'" (quoting *WesternGeco L.L.C. v. ION Geophysical Corp.*, 837 F.3d 1358, 1364 (Fed. Cir. 2016) (quoting *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1934 (2016)) (alteration in original))).

⁵⁸⁷ See generally Mitchell G. Stockwell, *Who Decides Enhanced Damages?*, 45 AIPLA Q.J. 645 (2017).

even for courts that have replaced or supplemented the *Read* factors with the more amorphous “egregiousness” determination. Given the significance that *Halo* assigned to subjectively culpable behaviors and the Court’s mention of “motive or intent,” the “motivation for harm” factor likewise remains significant for both inquiries.⁵⁸⁸ Some of the other factors, such as the defendant’s size and financial condition, may not currently be relevant for the first, jury inquiry step. Under the framework I propose, though, this factor would be adapted to the recklessness inquiry by way of acknowledging the defendant’s specific circumstances and resource constraints, and queries captured in some of the remaining *Read* factors should also come into play at this, first stage of the willfulness inquiry. Thus, the fact that a product was copied would matter to the question whether the infringer was willfully blind, and concealment of misconduct would be probative of the difficulty of detection.

Are such duplicative inquiries necessary? Perhaps not: for one thing, the litigation process would be more efficient if the trial judge performed the entirety of the treble damages analysis. In addition, the risk of prejudicing the defendant’s jury case for no infringement liability with matter related to willfulness, which may be inflammatory, would be reduced.⁵⁸⁹ Some textual support for the trial judge’s plenary role in the treble damages determination exists in the statute, which declares that “the court shall” assess *compensatory* damages if they are “not found by a jury,” but also states that “the court may increase the damages up to three times the amount found or assessed” without mentioning a possible role of the jury for that decision.⁵⁹⁰ Nonetheless, complete elimination of the jury’s role in awarding enhanced damages would be so at odds with common-law principles that, given the statute’s ambiguous language, an interpretation that puts enhancement under § 284 entirely in the hands of trial judges should be disfavored.⁵⁹¹ And, in this Article, I

⁵⁸⁸ *Halo*, 136 S. Ct. at 1933.

⁵⁸⁹ See Daniel Harris Brean & Bryan P. Clark, *Casting Aspersions in Patent Trials*, 79 U. PITT. L. REV. (forthcoming 2018), <https://ssrn.com/abstract=2929055>; see also Lemley & Tangri, *supra* note 26, at 1108-19 (considering but tentatively rejecting the possibility of bifurcation of patent trials into separate proceedings to determine liability and willfulness).

⁵⁹⁰ 35 U.S.C. § 284 (2018); see *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 780 F.3d 1357, 1384 (Fed. Cir. 2015) (O’Malley, J., dissenting from denial of rehearing en banc).

⁵⁹¹ See generally *Cooper Indus., Inc. v. Leatherman Tool Grp., Inc.*, 532 U.S. 424 (2001) (addressing the somewhat constrained but nonetheless pervasive role of juries in the determination of punitive damages in tort).

take § 284 as it exists today as a given and aim to develop an interpretation of this section that is as accurate as possible without also violating the limits set by *Halo*.

Moreover, there is virtue in involving both jury and judge in the enhanced damages determination. For one thing, the presence of two separate decision-makers who are not required to defer to one another may help ensure that “enhanced damages are not . . . meted out in a typical infringement case.”⁵⁹² For another, the current structure gives the judge the ability to modulate the amount of enhanced damages based on the severity of the infringer’s conduct, considerations of efficiency and deterrence specific to the circumstances of the case, and, perhaps, even based on the judge’s conclusion that the compensatory damages award is sufficiently severe that little or no enhancement is needed to ensure that the infringer is “punished.”⁵⁹³ In addition, while the considerations taken into account by judge and jury might be similar, the dual decision-maker structure ensures that the relevant factors (for example, concealment and probability of detection) could be profitably used for both evaluating the infringing conduct generally and for fine-tuning the actual amount of enhancement. In all, the decision structure ensures that sanctions that are sometimes described as “extraordinary” are awarded with care as to both eligibility for the award and its actual amount.⁵⁹⁴

One specific form of possible judicial modulation might involve differentiation in the amount of damages based on whether the conduct at issue is intentional or in “bad faith” as opposed to merely reckless. There is a great deal of precedent for awarding lower enhanced damages where the defendant acted in a way that is “worse than negligent but less than malicious,”⁵⁹⁵ in the old “intentional harm” sense of “malice.”⁵⁹⁶ Judges assessing enhanced damages may

⁵⁹² *Halo*, 136 S. Ct. at 1932.

⁵⁹³ See, e.g., *Idenix Pharm. LLC v. Gilead Scis., Inc.*, 271 F. Supp. 3d 694, 703 (D. Del. 2017) (“[G]iven that the jury’s damages award is already the largest damages verdict ever returned in a patent trial (compensating Idenix for what it lost), additional sanction is just not warranted.” (emphasis removed)), *further proceedings*, 2018 WL 922125 (D. Del. Feb. 16, 2018) (invalidating the patent at issue); *Brigham & Women’s Hosp., Inc. v. Perrigo Co.*, 251 F. Supp. 3d 285, 293 (D. Mass. 2017), *appeal docketed*, No. 17-2021 (Fed. Cir. May 12, 2017) (declining to award any enhanced damages where compensatory damages were “at the high end of the damages sought”).

⁵⁹⁴ See, e.g., *Novo Industri A/S v. Travenol Labs., Inc.*, 677 F.2d 1202, 1211 (7th Cir. 1982).

⁵⁹⁵ *Exxon Shipping Co. v. Baker*, 554 U.S. 471, 510 (2008).

⁵⁹⁶ See *supra* notes 358–59 and accompanying text.

well decide to follow this distinction, generally awarding, say, an amount closer to double damages for the former but closer to treble damages for the latter.⁵⁹⁷ To aid in this analysis, a jury could be asked to indicate whether the infringement was reckless or intentional on a special verdict form, or a judge could decide whether the facts supporting a jury's decision to open the door for enhanced damages allow for the conclusion of intentional conduct or that which is merely reckless.⁵⁹⁸

Still, in keeping with his or her ultimate ability to exercise discretion, the trial judge could further modulate the amount of enhanced damages to account for the case's circumstances. Thus, when the intentional infringer is an end user of technology rather than a manufacturer working in a relevant field, the judge could decide to award a relatively small amount of enhanced damages, or even none at all, based on the efficiency rationales discussed earlier even if the jury happens to find willfulness.⁵⁹⁹ This result would be consistent with *Halo* because, in the context of the defendant's intentional conduct, the Court refers to "bad-faith infringement,"⁶⁰⁰ connoting more than mere intent. Case law shows that bad faith could evince a desire to exploit a disparity in resources or harm a competitor,⁶⁰¹ but this dynamic is typically not present in the end-user infringer scenario: The customer who bought the product and used it as intended, even in the face of a demand letter, is no pirate.⁶⁰² Conversely, an infringer adjudged to be willfully blind to its competitor's patents might have to end up paying relatively high damages even though its acts were not

⁵⁹⁷ *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 828 (Fed. Cir. 1992) (holding that "where the maximum amount is imposed . . . [t]he court's assessment of the level of culpability must be high"); see also *Polara Eng'g, Inc. v. Campbell Co.*, 237 F. Supp. 3d 956, 994 (C.D. Cal. 2017) ("Trebling damages is reserved for the cases at the most egregious end of the spectrum."), *appeal docketed*, No. 17-1974 (Fed. Cir. May 1, 2017).

⁵⁹⁸ See, e.g., *Georgetown Rail Equip. Co. v. Holland L.P.*, 867 F.3d 1229, 1245-46 (Fed. Cir. 2017) (affirming an award of enhanced damages in the amount of \$1,000,000 in addition to compensatory damages of \$1,541,333 based on "the degree of willfulness").

⁵⁹⁹ See *supra* notes 524-25, 570-71 and accompanying text; see also Brief of Amici Curiae Internet Companies in Support of Respondents at 12, *Halo Elecs., Inc. v. Pulse Elecs, Inc.*, 136 S. Ct. 1923 (2016) (Nos. 14-1513, 14-1520), 2016 WL 344490, at *12.

⁶⁰⁰ *Halo*, 136 S. Ct. at 1933 n.* (quoting *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 508 (1964)).

⁶⁰¹ See, e.g., *Golden Blount, Inc. v. Robert H. Peterson Co.*, 438 F.3d 1354 (Fed. Cir. 2006).

⁶⁰² Cf. *Halo*, 136 S. Ct. at 1932-33; see also Karshedt, *Causal Responsibility and Patent Infringement*, *supra* note 15, at 625 n.376.

intentional.⁶⁰³ This approach is consistent with *Halo*, which held that “courts should continue to take into account the particular circumstances of each case in deciding whether to award damages, and in what amount.”⁶⁰⁴

IV. OBJECTIONS

The proposed framework is open to several related objections that I have already alluded to in the previous Parts. The objections concern increased costs of litigation and adjudication for the expanded recklessness inquiry, raise the possibility that — particularly in cases of independent invention — the proposed standard will overdeter potential infringers, and, finally, question whether harm from patent infringement is as worthy of social concern as harm from other torts, so that standards for enhanced patent damages should be structured in such a way as to make that remedy as difficult to obtain as possible. I consider each in turn.

A. Litigation and Adjudication Costs

Looking into the adequacy of a patent search, or attempting to argue (and decide) whether a non-search was reckless, might consume significant resources of courts and litigants. One ready answer to this objection, however, is that the Supreme Court’s rejection of the *Seagate* standard in *Halo* reflects an attitude that the lower courts do not get to create standards lacking support in the common law even though such standards might reduce litigation costs. The Court explained that “respondents’ policy concerns,” including worries about increased “threat of litigation,” nonetheless “cannot justify imposing an artificial construct such as the *Seagate* test on the

⁶⁰³ See *supra* Section III.A. Professor Gregory Day reached a contrary conclusion, contending that infringing use of the patents by the patentee’s competitors might be desirable because of the resulting consumer benefits. See Gregory Day, *Competition and Piracy*, 32 BERKELEY TECH. L.J. (forthcoming 2018), <https://ssrn.com/abstract=2904373>. Professor Day’s approach is generally difficult to reconcile with *Halo*. Nonetheless, one can imagine circumstances in which the social benefits of infringing conduct, even if intentional, so outweigh the value of the enforcement of the patentee’s property interests that enhanced damages may not be warranted. See, e.g., *Idenix Pharm. LLC v. Gilead Scis., Inc.*, 271 F. Supp. 3d 694, 703-04 (D. Del. 2017), *further proceedings*, 2018 WL 922125 (D. Del. Feb. 16, 2018) (invalidating the patent at issue); cf. David Fagundes, *Efficient Copyright Infringement*, 98 IOWA L. REV. 1791 (2013).

⁶⁰⁴ 136 S. Ct. at 1933.

discretion conferred under § 284.”⁶⁰⁵ *Halo* is not the only case in which the Supreme Court took this position. In *SCA Hygiene*, again reversing the Federal Circuit, the Court sidestepped “policy arguments” for preserving the defense of laches against claims for damages for past infringement after adopting the general argument that “patent law is governed by the same common-law principles, methods of statutory interpretation, and procedural rules as other areas of civil litigation.”⁶⁰⁶ Administrative cost savings cannot vindicate statutory interpretations that are not correct.⁶⁰⁷

Moreover, with time, the costs of the recklessness analysis could be controlled, and the new standard could generate dynamic benefits. As discussed earlier, judicial decisions may establish recurring patterns of acceptable amount of search in specific industries that would make subsequent cases cheaper to litigate and adjudicate.⁶⁰⁸ Ideally, tailored standards that encourage cost-effective, reasonable searching would also facilitate transfer of technical information usable to industry participants, rather than expenditures on patent opinions crafted primarily for litigation.⁶⁰⁹ Another, related benefit of more thorough patent searches could be *avoidance* of costly litigation when a potential infringer, after coming across a patent to which it has no plausible defense of noninfringement or invalidity, designs out the infringing feature or gets a license from the patentee.⁶¹⁰

B. Overdeterrence

Another (and related) potential set of concerns relates to delay in innovative activity, or even potential abandonment of it, based on the possibility of increased exposure to enhanced damages.⁶¹¹ The

⁶⁰⁵ *Id.* at 1935.

⁶⁰⁶ *SCA Hygiene Prods. Aktiebolag v. First Quality Baby Prods., LLC*, 137 S. Ct. 954, 964 (2017) (quoting *SCA Hygiene Prods. Aktiebolag v. First Quality Baby Prods., LLC*, 807 F.3d 1311, 1333 (Fed. Cir. 2015) (en banc) (Hughes, J., dissenting)).

⁶⁰⁷ *Cf. Narechania*, *supra* note 212 (manuscript at 24); *see also Lee*, *supra* note 16.

⁶⁰⁸ *See supra* Section III.B.

⁶⁰⁹ *See supra* notes 568–69 and accompanying text.

⁶¹⁰ *Abramowicz*, *supra* note 88, at 252, 257–63; *see also id.* at 250 (“[A] legal determination of infringement represents our system’s conclusion that the social costs of the unlicensed infringing activity exceed the social benefits, and so there are no other factors to take account in the balance.”); Oskar Liivak, *Private Law and the Future of Patents*, 30 HARV. J.L. & TECH. 33, 50–52 (2017).

⁶¹¹ *See, e.g., Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1936–37 (2016) (Breyer, J., concurring).

existence of patents of uncertain validity and scope⁶¹² exacerbates these concerns, raising the prospect of undue holdup of innovation, mounting legal expenses, and perhaps nuisance-value settlements.⁶¹³ The concerns are weighty but, again, they can be addressed by industry-specific rules that would reduce or minimize search responsibilities in industries in which such lower-quality patents are more likely to be found.⁶¹⁴ In contrast, in fields with higher-quality patents, deterrence of infringement, or at least attention to the patent rights of others, is what we want to see. In those fields, patents play their intended role of protecting innovators even against independent, but later-arriving, inventors. In this context, patent search could play the socially valuable functions reducing duplicative work and, in turn, spurring design-arounds or even facilitating bargaining over, and eventual licensing of, patent rights.⁶¹⁵ The actual knowledge rule, in contrast, is much less effective at achieving this sort of tailoring.

In addition, even under the proposed standard, enhanced damages would not be imposed gratuitously. The two layers of review ensure that, to be liable for a significant enhancement, the infringer had to — consistent with *Halo* — have done something out of the ordinary.⁶¹⁶ An infringer who can point to the fact that it performed a search and analysis at the level close to what is generally expected in the relevant industry would be very unlikely to face enhanced monetary liability from a reasonable jury or, failing that, a judge. Recklessness, even in its more objective forms, is still a demanding standard that requires the plaintiff to show some serious misconduct on the losing defendant's part, and there are procedural protections as well. Indeed, even if the defendant engaged in intentional conduct that, according to the trial judge, should nonetheless not be sanctioned with enhanced damages, this form of liability could still be avoided.⁶¹⁷ Given the

⁶¹² On overdeterrence due to legal uncertainty, see generally Louis Kaplow, *Burden of Proof*, 121 YALE L.J. 738 (2012). See also John E. Calfee & Richard Craswell, *Some Effects of Uncertainty on Compliance with Legal Standards*, 70 VA. L. REV. 965 (1984); Richard Craswell & John E. Calfee, *Deterrence and Uncertain Legal Standards*, 2 J.L. ECON. & ORG. 279 (1986). On this problem in the patent context, see Lemley & Shapiro, *supra* note 574.

⁶¹³ See Means, *supra* note 386; see also Lemley, *supra* note 235, at 28.

⁶¹⁴ See *supra* Section III.B.

⁶¹⁵ See *Amstar Corp. v. Envirotech Corp.*, 823 F.2d 1538, 1546-47 (Fed. Cir. 1987) (finding no willfulness where the defendant made a good-faith attempt to design around the patent).

⁶¹⁶ Cf. *supra* note 583 and cases therein (collecting cases where the trial judge decided not to enhance damages in spite of the jury finding of willfulness).

⁶¹⁷ *Idenix Pharm. LLC v. Gilead Scis., Inc.*, 271 F. Supp. 3d 694, 703-04 (D. Del.

numerous ways that a defendant can escape liability for enhanced damages, the risk of overdeterrence may not be as high as was feared in the wake of *Halo*.⁶¹⁸

C. Harm from Patent Infringement

The final objection I consider stems from the claim that the harm from patent infringement is so different from harm from other kinds of torts that arguments for damages enhancements from other areas of civil litigation do not apply to patent law. For example, products liability torts result in physical injury, trespasses to land could cause physical damage to the land and trigger violent self-help, and negligence claims, likewise, often stem from harm to person or property.⁶¹⁹ In contrast, harm from infringement is internal to patent law: nothing is actually destroyed by an infringement, and no one is hurt. If anything, the infringement can increase social welfare by diminishing deadweight loss via increased competition in some product market.⁶²⁰ Why then, should we worry about “reckless indifference” with respect to patent infringement?

In responding to this objection, one notes as an initial matter that there is not an absolute actual damages or physical injury requirement for enhanced damages in civil litigation either. Punitive damages may lie even when the trespasser causes no actual harm⁶²¹ or when only nominal damages are awarded under various federal statutory torts.⁶²² Moreover, punitive damages for trespassory torts have been granted even when the possibility of violent self-help was not in the picture.⁶²³ Finally, as discussed earlier, punitive damages can be awarded for torts

2017), *further proceedings*, 2018 WL 922125 (D. Del. Feb. 16, 2018) (invalidating the patent at issue).

⁶¹⁸ See Puknys & Xu, *supra* note 284.

⁶¹⁹ Cf. *supra* notes 376–88 and accompanying text.

⁶²⁰ I thank Dr. Erik Hovenkamp and Professor Stephen Yelder for discussions that crystallized as this objection. For a similar tension in copyright law, see Gordon, *supra* note 296. See also Wendy J. Gordon, *Copyright and Tort as Mirror Models: On Not Mistaking for the Right Hand What the Left Hand Is Doing*, in *COMPARATIVE LAW AND ECONOMICS* 311 (Giovanni B. Ramello & Theodore Eisenberg eds., 2016); Wendy J. Gordon, *The Concept of “Harm” in Copyright*, in *INTELLECTUAL PROPERTY AND THE COMMON LAW*, *supra* note 261, at 452-83.

⁶²¹ See, e.g., *Feld v. Feld*, 783 F. Supp. 2d 76 (D.D.C. 2011); *Rhodes v. Harwood*, 544 P.2d 147 (Or. 1975). See generally Gideon Parchomovsky & Alex Stein, *Reconceptualizing Trespass*, 103 NW. U. L. REV. 1823, 1832-35 (2009).

⁶²² *Abner v. Kan. City S. R.R. Co.*, 513 F.3d 154, 159-63 (5th Cir. 2008).

⁶²³ See, e.g., *JCB, Inc. v. Union Planters Bank, NA*, 539 F.3d 862, 872-73 (8th Cir. 2008).

causing injuries that are strictly financial, such as negligent misrepresentation⁶²⁴ or tortious interference with contract — for latter, even in the circumstances where the breach itself might arguably be “efficient.”⁶²⁵

By way of another response, the very claim that “actual injury” in patent law is not possible is subject to challenge. The remedy of lost profits recoverable by a prevailing plaintiff practicing the infringed patent is treated as providing for actual damages based on the fact that the infringing market entrant interferes with the patentee’s ability to charge supracompetitive prices enabled by the patent.⁶²⁶ It is true that the claim for a so-called “injury” of lost profits is only possible because of the existence of a patent right. But that does not differentiate patent law from many other torts: A suit seeking compensation for a tortious financial injury associated with a lost contract depends on the existence of the tort of interference with contract, a claim for damages based on trespass only exists because we have trespassory torts, and so on.⁶²⁷ Patent law is not unique in this regard.

Nor is patent law unique in allowing enhanced damages when the only compensation for the patentee involves reasonable royalties as opposed to lost profits.⁶²⁸ In the intellectual property domain, enhanced damages (in the form of elevated statutory damages) are awarded without proof of lost profits for copyright infringement and,⁶²⁹ as already noted, no actual injury is required to collect compensatory or punitive damages for trespass. That is not to say that a recklessness or enhancement determination cannot turn on the fact that the patentee and infringer are competitors who are both practicing the patent — it certainly can.⁶³⁰ But a rule mandating that enhanced damages should be very difficult to obtain when the compensable injury is the loss of reasonable royalties would make patent law an outlier.

⁶²⁴ See *supra* notes 409–11 and accompanying text.

⁶²⁵ See McChesney, *supra* note 387.

⁶²⁶ Lee & Melamed, *supra* note 5, at 394.

⁶²⁷ See *supra* note 387 and accompanying text.

⁶²⁸ See 35 U.S.C. § 284 (2018) (setting “a reasonable royalty” as the floor of compensatory damages).

⁶²⁹ See 17 U.S.C. § 504(c)(2) (2018).

⁶³⁰ Cf. Dov Greenbaum, *In re Seagate: Did it Really Fix the Waiver Issue? A Short Review and Analysis of Waiver Resulting from the Use of a Counsel’s Opinion Letter as a Defense to Willful Infringement*, 12 MARQ. INTELL. PROP. L. REV. 155, 184 (2008) (noting treble damages as a motivation for patent trolls).

Finally, awards of enhanced damages for harm from patent infringement under similar standards as for other torts can be generally justified as a matter of policy. Consider the lost profits scenario first. Competition between firms, even based on copying, can often be good for consumers and worth encouraging,⁶³¹ but it can also be socially harmful — as when, for example, the patent owner ends up losing market share to the competitor, is unable to recoup its investments through the exclusive right of the patent, and ends up having to fold.⁶³² An even less socially desirable scenario could eventuate when a larger, well-resourced firm uninterested in doing innovative work ignores the patent of a smaller, upstart competitor who might not have resources to bring a lawsuit. As with any other tort, infringement of a patent can sometimes be socially harmful to the extreme, necessitating an award of enhanced damages in reckless disregard scenarios.

The social harm when an infringement does not involve a claim for lost profits is more attenuated,⁶³³ but it is still possible. The patent system exists to encourage innovation and, for its ex ante incentive mechanism to work, inventors — who may be prospective patentees — need to see that valid and infringed patents can be effectively enforced.⁶³⁴ An infringer who just does not want to pay for patent licenses even when the costs of patent search, analysis, and negotiation are low and the patentee would have been willing to engage could, at least in theory, seriously harm innovation via negative dynamic effects on future activities of the inventor of the asserted patent or of other, future inventors.⁶³⁵

⁶³¹ See *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 152-53, 156-57 (1989).

⁶³² See *supra* Section I.C.2.

⁶³³ Amy L. Landers, *Liquid Patents*, 84 DENV. U. L. REV. 199, 252-53 (2006) (contending that patent remedies should differ for practicing as opposed to non-practicing entities because each incurs a different kind of harm).

⁶³⁴ See, e.g., Sichelman, *supra* note 6, at 540 (“[T]he exclusionary rights afforded by patents promote a more optimal level of innovation by providing greater incentives to innovators to invent, market, and sell innovative products, as well as to disclose the knowledge underlying those innovations in the form of published patent documents.”); see also *id.* at 532-33 (“[T]he patentholder is more akin to a private attorney general, paid via the enforcement of his right as a reward for benefitting the public, than a vindicator of his own private rights.”).

⁶³⁵ Cf. Hylton, *Enhanced Damages for Patent Infringement*, *supra* note 26, at 425; Andres Sawicki, *Better Mistakes in Patent Law*, 39 FLA. ST. U. L. REV. 735, 762 & n.107 (2012) (discussing similar dynamic effects in the context of mistaken patent denials at the PTO or invalidation of issued patents).

It is true, as Professor Ted Sichelman argued, that patent law's remedial frameworks, which are focused on private harm, are not set up to directly serve larger social goals of this sort.⁶³⁶ But enhanced damages are, in fact, one remedy for which some consideration of societal harms, as opposed to merely private ones, is possible even presently in civil litigation.⁶³⁷ Indeed, even Professor Thomas Colby, who argued that consideration of societal harms in the calculation of punitive damages is foreclosed by the Supreme Court's constitutional precedents, noted that "by punishing the private wrong to the victim, punitive damages achieve a deterrent effect that benefits all of society."⁶³⁸ If properly calibrated, treble damages in patent law can serve this role just as enhanced damages can in other areas of civil litigation.

CONCLUSION

The Federal Circuit's actual knowledge limit on enhanced damages in patent law fails to reflect modern common-law developments. Moreover, it undermines the goals of economic efficiency and is in tension with the goals of the patent system. Finally, the rule arguably contradicts Supreme Court precedent. Instead of the actual knowledge rule, the recklessness standard for enhanced damages, accepted widely in other areas of law, belongs in patent law as well.

⁶³⁶ See generally Sichelman, *supra* note 6.

⁶³⁷ Cf. Colby, *Clearing the Smoke*, *supra* note 31; Sharkey, *Economic Analysis of Punitive Damages*, *supra* note 3.

⁶³⁸ Cf. Colby, *Clearing the Smoke*, *supra* note 31, at 462.