

Beyond Circularity: Licensing for Innovation

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I. Introduction

Of late, patent damages have become a very active area of scholarship. Of course damage awards matter to litigants, but their importance goes much deeper. Tort damages are compensation for harm and as such they go directly to the core nature and function of tort systems. What counts as damage tells us a lot about a tort system and its underlying purpose.

In the modern telling of it, there are two types of patent damages: lost profits and reasonable royalties.¹ Lost profits are generally reserved for manufacturers—patent holders that are building and selling a patented product. If infringement causes any lost sales then the patentee can recover the profits lost due to the infringement.²

Many patent holders are not manufacturers and they are precluded from lost profits. For them, or for anyone else who cannot prove lost profits, reasonable royalties are the statutory fall back.³ Courts are to award “in no event less than a

[†] Professor of Law, Cornell Law School. © 2017 Oskar Liivak. I would like to thank Tom Cotter, John Golden, and David Taylor for helpful comments and discussion. The article has benefitted greatly from presentation at the Second Patent Damages Conference at the University of Texas School of Law.

¹ CRAIG NARD, *THE LAW OF PATENTS* 787 (1st ed. 2008).

² *See id.* at 788 (describing the legal framework for determining lost profits as set forth by *Panduit Corp. v. Stahl Bros. Fibre Works*, 575 F.2d 1152, 1156 (6th Cir. 1978)).

³ *See* 35 U.S.C. § 284 (2012) (“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

reasonable royalty.”⁴ And it is these awards that have been the focus of much debate.⁵ To compute a reasonable royalty, the courts have come to rely on an extensive list of factors. These factors were collected in the 1970 case of *Georgia-Pacific Corp. v. United States Plywood Corp.*⁶ Of these so-called *Georgia-Pacific* factors, a number of them focus on the objective evidence of the patentee’s prior negotiated licenses. The very first *Georgia-Pacific* factor looks to “the royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty.”⁷ Likewise, the second factor considers “the rates paid by the licensee for the use of other patents comparable to the patent in suit.”⁸ In setting a reasonable royalty, it seems to make perfect sense to look to the rates that the patentee had previously agreed to.⁹ This objective evidence of previous licenses saves the court from having to compute a reasonable royalty itself. Such market-based evidence for damages appears prominently in many areas of law and so naturally it appears prominently in patent law too.¹⁰

Despite its allure, a growing chorus of scholars has fundamentally questioned the use of prior negotiated licenses for patent damages.¹¹ Scholars have noted that there is a troubling feedback loop between the patent damages calculated by looking to prior licenses and negotiated licenses themselves.¹² Because patent licenses are negotiated in the shadow of threatened (if not actual, ongoing) litigation, the licenses necessarily reflect in large part the expected patent damages that would

royalty for the use made of the invention by the infringer . . .”).

⁴ *Id.*

⁵ See U.S. DEP’T OF JUSTICE & FED. TRADE COMM’N, THE EVOLVING IP MARKETPLACE: ALIGNING PATENT NOTICE AND REMEDIES WITH COMPETITION 160 (2011) [hereinafter 2011 FTC IP MARKETPLACE REPORT], <https://www.ftc.gov/sites/default/files/documents/reports/evolving-ip-marketplace-aligning-patent-notice-and-remedies-competition-report-federal-trade/110307patentreport.pdf> (“Much of the controversy in the patent community concerning damage awards has focused on whether the law governing reasonable royalty damages appropriately compensates patentees.”). Within this debate, there is, although, some consensus. A reasonable royalty is generally understood as the economic value of the patented technology in relation to its next best alternative. See *id.* at 186–87 (“Academics, practitioners, economists, and business representatives acknowledged the importance of the value of the patented technology over alternatives to a reasonable royalty damages analysis.”). But beyond that, deep disagreement exists regarding the proper way to determine that incremental value.

⁶ See *Georgia-Pac. Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970).

⁷ *Id.*

⁸ *Id.*

⁹ Jonathan S. Masur, *The Use and Misuse of Patent Damages*, 110 Nw. U.L. REV. 115, 156 (2015) [hereinafter Masur, *Use and Misuse*] (“Courts inevitably struggle to assess reasonable royalty damages, and it is only natural that they would turn to market-based measures such as existing licenses.”).

¹⁰ See 1 DAN B. DOBBS, LAW OF REMEDIES § 3.3(3), at 297–98 (2d ed. 1993) (providing examples of market-measured damages in tort and contract law); see also *id.* § 3.5, at 328–30 (noting that comparable sales and prior sales are potential measures for market damages).

¹¹ See *infra* note 36.

¹² See Mark A. Lemley & Scott Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 2021 (2007) (“While an effort by courts to mimic the market seems unexceptional, in fact reliance on private license deals involves a degree of circularity because royalty rates in those deals are themselves set as a function of what patentees could get if they went to court.”).

result if the patentee and the licensing target do not reach an agreement.¹³ In particular, the expected damages payout depends critically on the probability of success for the patentee at trial. For patent litigation on average, this factor is much less than one.¹⁴ In other words, negotiating to avoid the threat of patent suit will pivot about the expected payout from such a suit: the probability of success times the expected damages award.

If the patentee does ultimately file suit, if and when patent damages are actually being computed, then the patentee has already survived an invalidity attack and has proved infringement. There is no probability of failure—the patentee has won. Prior licenses that had incorporated a discount factor for expected payout should not be used as direct measures of a reasonable royalty. Where these conditions hold, incautious use of this seemingly objective data will lead to improperly set damages.¹⁵

In their contribution to the 2016 Conference on Patent Damages, Jonathan Masur and Erik Hovenkamp (H&M) offer some of the latest scholarship in this important area.¹⁶ Building off points made in an earlier Masur article,¹⁷ the duo make two main arguments. They first reemphasize and reinforce the problems stemming from the circularity implicit in using prior licenses that are negotiated in the shadow of litigation. On this point, this article agrees with them. Their work joins and reinforces the concern that such licenses are not the clean, objective evidence that they appear to be.¹⁸ And as I will argue below, a hundred years ago the Supreme Court warned against using exactly such licenses for many of the same reasons we are concerned about them today. Yet despite that sage advice, the Federal Circuit is moving in the opposite direction and is liberalizing the use of licenses reached in settlements rather than restricting them.

Despite our agreement on that point, this article though sharply disagrees with H&M on a related matter. The pair goes beyond simply cautioning against using settlement licenses as comparables. They conclude that *all* patent licensing is inherently fraught with these problems because there is no patent licensing that exists without the taint of these circularities.¹⁹ They suggest we simply stop using prior negotiated licenses as evidence for calculating patent damages.²⁰

¹³ *Id.* at 2021–22.

¹⁴ See Stephen H. Kalos & Jonathan D. Putnam, *On the Incomparability of ‘Comparables’: An Economic Interpretation of ‘Infringer’s Royalties’*, 9 J. PROPRIETARY RTS. 1, 3 (1997) (asserting that “the potential licensee would be willing to pay up to the ‘expected value’ of the license, where the expected value is the full economic value of the license discounted for the probability that the patent is invalid and/or not infringed.”).

¹⁵ “Improperly set” here means improper relative to the reasonable royalty that is based on the assumption that the patent is valid and infringed.

¹⁶ See generally Erik Hovenkamp & Jonathan Masur, *How Patent Damages Skew Licensing Markets*, 36 REV. LITIG. 379 (2017).

¹⁷ See Masur, *Use and Misuse*, *supra* note 9, at 120 (setting forth three problems arising from “the use of existing licenses to measure reasonable royalty damages”).

¹⁸ See *infra* note 42.

¹⁹ See Hovenkamp & Masur, *supra* note 16, at 413 (“To avoid the problems created by the licensing-

Although agreeing descriptively that circularity is a problem for *most* of today's licensing, this article argues that there are (and have been) licensing programs that do not succumb to the circularity disease and that do produce market-based evidence that can be used rather directly to compute patent damages. And they should be emphasized not just because they are good sources of data for damages, but more importantly, such licensing programs are normatively important for justifying the patent system as an engine of innovation. Such licensors (along with innovators that sell manufactures) form the core connection between invention and innovation. Such licensing programs are programs of innovation and technology transfer. Technological tools are moving from their creators to their myriad users.

At a fundamental level, H&M have overlooked the distinction between *ex ante* versus *ex post* licensing. They focus solely on the latter while ignoring the former. In its 2011 report on the Evolving IP Marketplace, the Federal Trade Commission devotes the first two chapters to distinguishing *ex ante* from *ex post* licensing.²¹ *Ex post* licensing is about licensing patent rights that is negotiated late “*after* the [licensing target] has invested in creating, developing or commercializing the technology” themselves.²² Transferring the patented technology is not the focus of these transactions. Often the licensing target has already independently invented and commercialized the technology themselves. Independent invention is no defense in patent law's world of strict liability and the transaction is simply trying to resolve the overhanging patent liability. Such licenses are negotiated deep in the shadow of litigation and the licensing terms often bear little relevance to the incremental value of the patented technology. Lock-in costs, litigation costs, and litigation outcome uncertainty can all play outsized roles in these negotiations. As a result, such licenses are not particularly helpful as comparables for determining a reasonable royalty. As advised by H&M, and others before them, we should not use *ex post* licensing for determining a reasonable royalty. This article agrees.

But not all patent licensing is trying to settle a potential or actual lawsuit. As emphasized by the FTC, *ex ante* licensing involves patent transactions between a patentee and a technology user that takes place “*before* the purchaser has obtained

based damages standard, we offer a simple proposal: stop using it.”); Masur, *Use and Misuse*, *supra* note 9, at 121 (“[T]here is doubt as to whether existing licenses can provide reliable evidence of reasonable royalty damages.”). Hovenkamp & Masur do acknowledge limited circumstances where a prior negotiated license may avoid the problems they identify. See Hovenkamp & Masur, *supra* note 16, at 416 (“[O]ne possible exception to our proposal is a patent that has been widely licensed on common terms to many different licensees, as with patents subject to a RAND commitment.”). But even this limited exception is qualified. They follow-up noting that those licenses will be “inapt” wherever “the established royalty was materially affected by pre-litigation uncertainty.” *Id.*

²⁰ *Id.* at 413.

²¹ See 2011 FTC IP MARKETPLACE REPORT, *supra* note 5, at 31, 49 (devoting the first chapter to *ex ante* licensing, and the second to *ex post* licensing).

²² *Id.* at 8.

the technology through other means.”²³ The purchaser wants to get technology that it has not yet independently invented. And the focus of the transaction is the technology transfer—moving technology from its creator to those that can implement it. That is innovation. It is one of the few uses of the patent system that can be defended in strong terms.²⁴ And because the focus is on the technology and not the patent rights, the bulk of the circularity problems just do not exist.²⁵ Furthermore, if indeed the incremental value is the desired datum for reasonable royalties, then the amount that a technological user is willing to pay above and beyond the existing alternatives is certainly very relevant for calculating a reasonable royalty. Such *ex ante* licenses are the market licenses that should form the basis for comparable-based reasonable royalties. Yet such *ex ante* licensing is just ignored by H&M.

This article presents three main reasons why they are incorrect when they argue that no licensing program can escape the circularity disease. As a first point, their conclusion runs counter to patent history. As explained below, already in 1889 the Court warned against reflexive use of some negotiated patent licenses—in modern parlance we would say that the problematic licenses are *ex post* licenses, or straight promises not to sue. Most of the circularity dynamics that worry today’s damages scholars can be found in the court opinions of that era. But even as the Court made those warnings about *some* negotiated licensing it was simultaneously singing the praises of other licenses.

And to a large extent we overlook those programs today. Such programs create what are known as established royalties. Such a royalty program is not just suitable for damages calculations but the Court considers these as the “best” evidence for damages calculations.²⁶ The Court was aware of the dangers that some negotiated licenses pose, and it told lower courts to steer clear of them, but the Court also saw the importance and value of other licensing programs that stood apart from the problematic ones. There are licensing programs that avoid the circularity.

As a second point, all licensing cannot be suspect because (if true) that would suggest all market-based damages are suspect. The broad problems about patent licensing that H&M emphasize would condemn not just all prior licenses but it would also condemn using market data for lost profits calculations. There is a deep, close kinship between the manufacturing business models used for lost profits and the *ex ante* licensing used for established royalties. Product manufacturers can be seen as engaged in a type of *ex ante* licensing program. A product manufacturer sells the patented product along with an implied license to use that patented product.

²³ *Id.* at 7–8.

²⁴ See Oskar Liivak, *Establishing an Island of Patent Sanity*, 78 BROOK. L. REV. 1335, 1357–65 (2013).

²⁵ See 2011 FTC IP MARKETPLACE REPORT, *supra* note 5, at 145 n.28 (noting that “circularity is attenuated in an *ex ante* licensing negotiation by the licensee’s ability to use an alternative technology and his unwillingness to pay more than the incremental value the invention adds to the infringing product, regardless of the size of any potential damage award.”).

²⁶ *Clark v. Wooster*, 119 U.S. 322, 326 (1886). See also *infra*. notes 79-80 and accompanying text.

They are selling to users who do not yet have the technology. The profits from such sales are the difference between revenue and the costs. And that profit can be seen as the price the patentee has put on the implied license to use their patented product. Sales that are lost due to infringement are the harm that lost profits damages aims to fix. And in making that calculation we rely heavily on the market prices established for those products.²⁷ Yet if H&M's broad arguments are correct, then we should stop using market prices for lost profits too. If they are right, then the revenue figures for lost profits are invariably infected by discounts relating to litigation uncertainty about patent validity. Nobody, including H&M, is worried about lost profits, but it seems their arguments necessarily implicate lost profits as well.

Lastly, and in a more normative and theoretical mode, if they are right and there is no reliable market price on patented technology, then significant foundations of the patent system are implicated. And that is worrisome. If they are right that no licensing program can produce reliable market values, then that removes one of the major rationales for a patent system. Technological advancement is a critical engine of economic growth.²⁸ That much is certain. Which institutions a society should use to foster technological growth is far less certain. The main advantage of a patent system over alternatives like grants or prizes, is that a patent system leverages private decision making. Through their own calculus people invest time and resources to create technological tools. Others that can utilize those tools use their own calculus to decide if they want to buy that technology. When these parties come together, we have technology moving from creators to users and it is an economic activity that can be justified economically on rather strong terms. Litigation plays a role but it should not be the main event.²⁹

If patent-related transactions are all “ineluctably”³⁰ tainted and there is no reliable market price for the value of the technology, then we lose a critically important pillar for a functioning patent system.³¹ If the patent system necessarily requires the courts (rather than private parties) to habitually compute the

²⁷ As with established royalties, the market price is not reflexively always used as the price for calculating lost revenue. If the patent holder market price was forced to be low in order to compete with infringers, then courts are willing to adjust the lost profits calculus to account for such price erosion. See *Grain Processing Corp. v. Am. Maize-Prods. Co.*, 893 F. Supp. 1386, 1392 (N.D. Ind. 1995).

²⁸ See PETER S. MENELL, *Intellectual Property: General Theories*, 2 CIVIL LAW AND ECONOMICS, THE ENCYCLOPEDIA OF LAW AND ECONOMICS 134 (Boudewijn Bouckaert & Gerrit De Geest eds., 2000) (“Robert Solow demonstrated that technological advancement and increased human capital of the labor force accounted for most (between 80 and 90 percent) of the annual productivity increase in the US economy between 1909 and 1949, with increases in the capital/labor ratio accounting for the remainder It is now widely recognized that technological advancement and enhanced human capital are the principal engines of economic growth in the United States and other industrialized countries.” (citation omitted)).

²⁹ See Oskar Liivak, *Private Law and the Future of Patents*, 30 HARV. J.L. & TECH. 33, 38–41 (2017).

³⁰ See Masur, *Use and Misuse*, *supra* note 9, at 115.

³¹ See Kenneth W. Dam, *The Economic Underpinnings of Patent Law*, 23 J. LEGAL STUD. 247, 247–48 (1994).

incremental value of technological inventions, then such a system will bankrupt itself administratively.³² Moreover, if the government is to calculate the value of technological inventions analytically in every case (as we must assume in their non-market assessment), then rather than incurring the deadweight, dynamic, and administrative costs of a patent system, why not just have a prize or grant system instead?

Relatedly, concluding that there are no licenses that focus on technology transfer sits in considerable tension with one of the main justifications for patents. Kenneth Arrow famously noted the particular difficulties attending a market for technology.³³ Without some legal backing (like through a patent system), a technology seller could not easily reveal her technology to potential buyers for fear that the buyer would just take the information. And if the seller does not reveal the information, few buyers would be willing to blindly pay beforehand. This is Arrow's information paradox.³⁴ Arrow saw property rights (like patents) as a way out of the paradox by enabling a market in technology. Yet if *ex post* licensing is the licenses that exist, then there is no beneficial technology transfer; the licensor has usually already independently invented the technology. It is just a market to avoid being sued. The terms of such licensing agreements bear little relation to the value of the technology.

To some extent Masur himself wishes to find a way out too. Masur concludes his initial article lamenting that, “[i]t is in the nature of legal scholarship to write comedies rather than tragedies. Each legal problem should be accompanied by a clever (and preferably plausible) solution. But it does not seem that this story is meant to end well.”³⁵ This article tries to offer a way out. Indeed, a patent system that focuses only on *ex post* transactions has all the pathologies that (H&M) identify. But a patent system need not and should not be understood that narrowly. If instead the system focuses on *ex ante* transactions with the goal of efficient exchange and dissemination of technology, then not only does the circularity disease for patent remedies fade away, but the patent system can have a solid defensible foundation.

The following two sections further detail these arguments. The first section lays out the current scholarship, including H&M's work, in the use of prior licenses for patent damages. Much of that work questions the widespread use of prior negotiated licenses in damages calculations. That work finds that licenses negotiated in the shadow of litigation can be infected by factors that are improper for a damages calculation. This article largely agrees with those conclusions and the

³² See Liivak, *supra* note 24, at 34.

³³ See KENNETH J. ARROW, *Economic Welfare and the Allocation of Resources for Invention*, in THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS, NATIONAL BUREAU OF ECONOMIC RESEARCH 609, 614–19 (1962).

³⁴ See *id.*

³⁵ Masur, *Use and Misuse*, *supra* note 9, at 156.

section further shows that these worries are also consistent with concerns already identified by the Supreme Court in the 19th century.

But H&M go beyond this, and argue that no licensing program exists that can avoid this circularity. The second and last section takes on that argument. It shows that historically the Supreme Court recognized established royalties as a licensing program that was not tainted and that the Court considered such licenses to provide the best evidence of patent damages. Such damages calculations using established royalties are analogous to the largely uncontroversial damages via lost profits. This section ends by arguing that such licensing programs of technology transfer are necessary foundations of a healthy patent system and posits that the present disagreement about damages might be driven by a very important high-level disagreement about the purpose of the patent system. The view espoused here focuses on patents as support for a market of *ex ante* exchange of *inventions*, while H&M have limited their focus on the patent system as solely an *ex post* exchange of *patent rights*.

II. License Distortions in the Shadow: Policy and History

For the past two decades there has been a growing concern over the prevalent use of prior negotiated licenses as evidence for calculating reasonable royalties.³⁶ The worry is that there is an inherent feedback loop built into patent damages calculations. The notion is that patent licenses are negotiated in the shadow of litigation. Licensors and licensees base their negotiation on the expected outcome of patent litigation. Licenses negotiated to avoid the overhang of threatened litigation will necessarily contain a discount reflecting the chances that the plaintiff (due to invalidity, noninfringement, or unenforceability) will never be awarded damages. But those licensing amounts are not directly relevant for measuring damages because damages are only awarded after a patent is found valid and infringed.

A. Distortion Dynamics in the Shadow

The primary worry is that basing today's patent damages on yesterday's patent licenses creates a dangerous circular loop.³⁷ The feedback occurs because the

³⁶ See Kalos & Putnam, *supra* note 14, at 2 (“[A]rm’s length royalties agreed to in the course of licensing negotiations are often insufficient to compensate for infringement.”); see ROGER D. BLAIR & THOMAS F. COTTER, *INTELLECTUAL PROPERTY: ECONOMIC AND LEGAL DIMENSIONS OF RIGHTS AND REMEDIES* 230 (2005) (describing double discounting of damage awards based on prior negotiated licenses); 2011 FTC IP MARKETPLACE REPORT, *supra* note 5, at 145 n.28; Thomas F. Cotter, *Patent Holdup, Patent Remedies, and Antitrust Responses*, 34 J. CORP. L. 1151, 1182–83 n.156 (2009); Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 2021 (2007) (“The first problem comes from reliance on industry licensing rates.”); David O. Taylor, *Using Reasonable Royalties to Value Patented Technology*, 49 GA. L. REV. 79, 114–16 (2014); William F. Lee & A. Douglas Melamed, *Breaking the Vicious Cycle of Patent Damages*, 101 CORNELL L. REV. 385, 418–20 (2016); Masur, *Use and Misuse*, *supra* note 9, at 130–38.

³⁷ See Lemley & Shapiro, *supra* note 36, at 2021 (“While an effort by courts to mimic the market seems unexceptional, in fact reliance on private license deals involves a degree of circularity because the royalty rates in those deals are themselves set as a function of what patentees could get

majority of patent licenses are negotiated in the shadow of existing or threatened patent litigation.

As with any negotiation, the ultimate agreement (or lack thereof) reflects the position each party must confront if an agreement is not reached.³⁸ If the licensing target refuses to take a license, the patent holder can sue. But to prevail, the patent holder has to survive invalidity and perhaps unenforceability attacks, and then must prove infringement. As a result, any negotiated license prior to (or during trial) will reflect this discount for trial uncertainty.³⁹ But once courts reach the point where damages need to be computed then validity and infringement have been established.⁴⁰ An obvious error is introduced if the court uses the above-described prior negotiated license as the measure of a reasonable royalty.⁴¹

Although these issues have been noted for some time, recent scholarship has emphasized that this does not just threaten the damages in a particular case. The recent work has focused on the potential for this dynamic to lead to systemic problems in patent damages. If the initial negotiated license occurs in the shadow of litigation and necessarily incorporates the risk and uncertainty for success at trial, then so does any later negotiation. But those later negotiations reflect the probability of success for those litigants coupled to the potential damages recovery at trial which will be computed based on the probability of success estimates of earlier licensees.⁴² This downward spiral threatens to upend reasonable royalties.⁴³

if they went to court.”).

³⁸ See ROGER FISHER ET AL., *GETTING TO YES: NEGOTIATING AGREEMENT WITHOUT GIVING IN* (2011).

³⁹ See Kalos & Putnam, *supra* note 14, at 2 (“[R]oyalties agreed to as the result of actual licensing negotiations are generally discounted for uncertainty regarding whether the patent is valid and infringe”); Taylor, *supra* note 36, at 115 (“Negotiated royalties thus include discounts based on risk borne by the patent owner associated with proving liability, relief, and enforceability, and they may also include discounts based on costs borne by the patent owner to bring infringement litigation.”).

⁴⁰ *Georgia-Pacific* explicitly instructs the hypothetical negotiation to take place under the assumption that the patent is valid and infringed. See *Georgia-Pac. Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1121 (S.D.N.Y. 1970).

⁴¹ See Taylor, *supra* note 36, at 115 (“Use of negotiated royalties as reasonable royalties locks in these discounts, creates incentives to infringe and litigate instead of settle and license, and, moreover, creates a circularity problem.”).

⁴² In more formal terms, the negotiated royalty for the n th licensor, NR_n , is related to previous licenses by $NR_n = \gamma_n NR_{n-1}$ where γ_n is the probability for patentee success at trial against the n th licensing target. As γ is generally less than one, this suggests that as this dynamic plays out, negotiated licenses and any reasonable royalties based on those licenses will monotonically decrease. Yet depending on the details of the model, this may converge to zero at different rates. For example, the courts could use the average of all previous negotiated royalties in setting the reasonable royalties or they might rely on the most recent negotiated license. The convergence to zero of this dynamic depends on these more specific assumptions. But the main point is clear. Patent damages are not stable over time even if the value of the patented technology has not changed and patent damages that are monotonically decreasing cannot be considered functioning properly.

⁴³ See Taylor, *supra* note 36, at 141 (“This circularity, left unchecked, may devalue reasonable royalties given risk associated with liability, relief, and enforcement.”); Masur, *Use and Misuse*, *supra* note 9, at 121 (“Judicial error with regard to the appropriate measure of damages will

Enforcement uncertainty is not the only factor argued to be causing damages feedback. Related criticisms argue that there are feedback factors that inflate (rather than progressively deflate) patent damages.⁴⁴ In 2007, Lemley and Shapiro argued that negotiated licenses can include the licensor's hold-up costs and can far exceed the incremental value of the patented technology.⁴⁵ A later licensor may have its own hold-up costs to worry about in their licensing negotiations but because damages rely on prior negotiated licenses, that later licensor must also negotiate in the shadow of previous hold-out costs as well. For today's infringement and licensing landscape, this may well be quite prevalent: "many licenses—especially those in fields with a 'develop without full preclearance' dynamic—are negotiated after the licensee has already begun practicing the licensed patent."⁴⁶

Furthermore once these dynamics are understood by patent holders, then there is the worry that patent holders will strategically manipulate these feedback loops. As argued by Lee and Melamed, "[p]atent holders have an incentive to negotiate first with parties least able to litigate or otherwise resist and thus most likely to agree to inflated royalties, and then to use those agreements as benchmarks in later litigation and negotiations. The feedback loop is complete."⁴⁷

B. Proposed Reforms

Having recognized the problems, scholars have proposed a number of reforms. Rightfully recognizing that an error source is the mismatch between success probability at the time of negotiation and the certainty of success when damages are being computed, some have argued for finding places where the spread between these litigation expectations is minimized.⁴⁸ And accordingly as Kalos and Putnam suggested, in 1997, that "where a license has been negotiated after litigation in

produce smaller royalty amounts outside of litigation, which will in turn lead to lower judicial calculations of damages, which will then beget even smaller royalty payments outside of litigation, and so forth.").

⁴⁴ See Lee & Melamed, *supra* note 36, at 439 ("The inflated premium extracted from one firm drives a litigation outcome for the next firm. Knowing this, patent holders have an incentive to negotiate first with parties least able to litigate or otherwise resist and thus most likely to agree to inflated royalties, and then to use those agreements as benchmarks in later litigation and negotiations. The feedback loop is complete.").

⁴⁵ See Lemley & Shapiro, *supra* note 12, at 2022 ("The consequence of this circularity is that reasonable royalties are elevated above the benchmark level, and the problems of holdup identified earlier 'infect' the court-awarded level of reasonable royalties. Since negotiated royalties reflect a premium based on holdup, so will the reasonable royalties awarded by the court. And this in turn gives patent holders more negotiating power in a self-reinforcing manner, which ultimately magnifies the effects of holdup on negotiated royalty rates.").

⁴⁶ Lee & Melamed, *supra* note 36, at 418; accord Hovenkamp & Masur, *supra* note 16, at 381 ("This discourages patent holders from licensing at anything less than a high royalty rate—even if additional mutually-beneficial agreements could be reached at lower rates—due to the fear that anything less would weaken its patent by limiting its future recovery.").

⁴⁷ Lee & Melamed, *supra* note 36, at 439.

⁴⁸ Masur, *Use and Misuse*, *supra* note 9, at 131 ("The problem is caused in large part because the court, in reconstructing the hypothetical negotiation, must assume that the parties agreed the patent was valid and infringed.").

which a patent has been found to be valid, the agreed-to royalty will not have been discounted for uncertainty over validity. In such cases, the use of an actual royalty rate as a reasonable royalty rate is sufficient to compensate for infringement.”⁴⁹ Although it avoids the litigation discount, this proposal ignores entirely the hold-up costs.

Alternatively, if we can get a handle on the discount factors and how they distorted prior negotiations, then perhaps we could adjust those figures to correct for the distortion. David Taylor has discussed adjustments to correct negotiated royalties.⁵⁰ Colleen Chien and Eric Schulman advocate for allowing a broader evidentiary sweep for what they term ‘semi-comparable’ licenses.⁵¹ They suggest looking for licenses that contain “objective measures of the incremental value of the technology” even if that means expanding the search area to licenses that we might otherwise consider not “strictly comparable.”⁵² And although such licenses are not likely to offer up a clean valuation, they argue that it is a starting from which “adjustments can then be made to arrive at a reasonable royalty.”⁵³ These proposals are a step forward. They recognize the dangers with incautious use of negotiated licenses and they all offer some future directions to optimize the needed adjustments but unwinding the distortions is not trivial.⁵⁴ In light of that complexity, some scholars advocate not using a negotiated royalty for damages calculations.⁵⁵ As H&M write, “we offer a simple proposal: . . . in most cases they should ignore licenses entirely.”⁵⁶

C. SCOTUS: Avoid Licenses Formed in the Shadow

As noted in the previous section, a number of scholars have warned about the problematic dynamics of using licenses negotiated in the shadow of litigation as measures for damages. Despite the attraction of an objective “market” valuation, some have gone so far as to recommend curtailing the practice entirely. As a policy

⁴⁹ Kalos & Putnam, *supra* note 14, at 5 (“The foregoing analysis does not mean, however, that actual royalties should never be used as reasonable royalties in estimation of damages.”); *accord* Masur, *Use and Misuse*, *supra* note 5, at 147 (arguing that a settlement reached when the litigation outcome becomes near certain should be a “guiding star” in valuation).

⁵⁰ See Taylor, *supra* note 36, at 130 (“That is, negotiated royalties (so called “comparable agreements” or “comparables”) need to be adjusted to reflect these corrective assumptions before they are used as reasonable royalties.”); *see also* Masur, *Use and Misuse*, *supra* note 9, at 148 (“Another solution would be for the court assessing damages to apply a multiplier to an existing license.”).

⁵¹ Colleen Chien & Eric Schulman, *Patent Semi-Comparables*, 25 TEX. INTELL. PROP. L.J. (forthcoming 2017).

⁵² *Id.*

⁵³ *Id.*

⁵⁴ See Masur, *Use and Misue*, *supra* note 9, at 148–56.

⁵⁵ See John Jarosz & Michael Chapman, *The Hypothetical Negotiation and Reasonable Royalty Damages: The Tail Wagging the Dog*, 16 STAN. TECH. L. REV. 769, 811–12 (2013); *see also* Taylor, *supra* note 36, at 126–32.

⁵⁶ Hovenkamp & Masur, *supra* note 17, at 413.

matter, I agree. And as a doctrinal matter, this section will argue that the Supreme Court agrees too.

In 1889, the Supreme Court decided *Rude v. Westcott*.⁵⁷ The Court reviewed an award of patent damages.⁵⁸ To prove the fact and amount of harm, the patentee offered three prior licenses. The Court noted that

it would seem that [the license] was made in part under a threat of suit, and in part as the result of an arbitration after litigation on the subject had been commenced, and to avoid future litigation. It is clear that a payment of any sum in settlement of a claim for an alleged infringement cannot be taken as a standard to measure the value of the improvements patented, in determining the damages sustained by the owners of the patent in other cases of infringement. Many considerations other than the value of the improvements patented may induce the payment in such cases. The avoidance of the risk and expense of litigation will always be a potential motive for a settlement.⁵⁹

Rude, although appearing before the statutory appearance of reasonable royalties, still represents good law.⁶⁰ And indeed the case is regularly cited for its proposition that litigation *settlements* are not suitable evidence for calculating patent damages.⁶¹ But *Rude* is relevant beyond just settlement of actual, initiated patent litigation.⁶² Both its explicit holding and its articulated rationales impact all *ex post* licensing.⁶³ Any licensing whose central purpose is money (or other consideration) in exchange for a “promise not to sue” is suspect and should not be used incautiously for damages calculations.⁶⁴

⁵⁷ *Rude v. Westcott*, 130 U.S. 152 (1889).

⁵⁸ *Id.* at 162.

⁵⁹ *Id.* at 164.

⁶⁰ *See* U.S. Frumentum Co. v. Lauhoff, 216 F. 610, 618 (6th Cir. 1914)(citing to *Rude v. Westcott* and its exclusion of licenses relating to litigation settlement); *see also* DONALD CHISUM, CHISUM ON PATENTS § 20.02 (“Judge Denison’s seminal opinion in U.S. Frumentum Co. v. Lauhoff (1914) gave the reasonable royalty concept a new life, a life which was subsequently christened by the Supreme Court in 1915 and by Congress in 1922.”); *see also* 4 WILLIAM C. ROBINSON, THE LAW OF PATENTS FOR USEFUL INVENTIONS § 1057, at 329 n.4 (1890) (“That payments made in settlement of suits for infringement do not establish a license fee.”).

⁶¹ *Panduit v. Stahl Bros. Fibre Works*, 575 F.2d 1152, 1164 n.11 (6th Cir. 1978); *Bascom Global Internet Servs. v. AOL LLC*, 2011 U.S. Dist. LEXIS 100609, *4 (E.D.N.Y. Sept. 8, 2011); *Cornell Univ. v. Hewlett-Packard Co.*, 2008 U.S. Dist. LEXIS 39343, *6–7 (N.D.N.Y. May 14, 2008); *Hanson v. Alpine Valley Ski Area, Inc.*, 718 F.2d 1075, 1078–79 (Fed. Cir. 1983) (“[S]ince the [settlement] offers were made after the infringement had begun and litigation was threatened or probable, their terms should not be considered evidence of an ‘established royalty’ since ‘[I]license fees negotiated in the face of high litigation costs ‘may be strongly influenced by a desire to avoid full litigation’”).

⁶² *See* Oskar Liivak, *When Nominal is Reasonable: Damages for the Unpracticed Patent*, 56 B.C. L. REV. 1031, 1050 (2015) (“[*Rude v. Westcott*] deserves much more attention than it currently receives.”).

⁶³ *Ex ante* licensing focuses on technology transfer while *ex post* licensing focuses solely on a promise not to sue. *See supra* note 17 and accompanying text. *Ex post* licenses are predominantly forced upon those that have independently invented the patent subject matter. *See* Liivak, *supra* note 29, at 46.

⁶⁴ Some question the modern relevance of *Rude* arguing that the holding of the case prohibits the use of settlements as evidence for *established royalties*. And for today’s reasonable royalties, that prohibition need not be followed. *See* ResQNet.com, Inc. v. Lansa, Inc., 594 F.3d 860, 869–71

In short, contemporary patent scholarship has reached the conclusion that most of today's patent licenses improperly include factors that should be irrelevant to patent damages. Most importantly, most of the prior negotiated licenses include factors beyond the incremental value of the patented technology, like litigation expenses and litigation success probabilities. The general consensus is that those licenses should be either ignored as evidence for reasonable royalties or should be at least carefully handled and adjusted for these erroneous factors. This article argues that a case like *Rude v. Westcott* makes clear that, for many of the same policy rationales, the Supreme Court agrees that such licenses should be avoided altogether if not handled with real care and scrutiny.

III. Out from the Shadow: Innovation via Technology Licensing

The previous section concluded that most of today's prior negotiated licenses cannot easily be used to determine patent damages. That immediately brings up a hard and sobering question. If all *ex post* licensing should be excluded, what, if any, licensing activity is left? On first blush, little seems to remain.⁶⁵ And in part, as discussed above, that descriptive fact has led many to suggest alternative routes to computing reasonable royalties.

H&M not only agree that most licensing is problematic, but they go further, arguing that *all* prior negotiated patent licenses are error prone and should not be used.⁶⁶ Masur contends flatly that “there is no egress from this circularity.”⁶⁷ Patent transactions are all “ineluctably” tainted by the shadow of litigation.⁶⁸ He explains that

[t]he point is that patent licenses are inherently parasitic on litigation: without the threat of litigation, there would be no licensing Whether the courts realize it or not, there is no other context in which licenses might arise.⁶⁹

As argued above in Section I, *ex post* patent licensing is indeed problematic in the way noted by H&M, previous scholars, and the Supreme Court. *Ex post*

(Fed. Cir. 2010); *Prism Tech. v. Sprint Spectrum*, 849 F.3d 1360, 1368–70 (Fed. Cir. 2017). But such a limiting view underestimates and misunderstands the case. *Rude* addresses the relevance of certain evidence for proving the fact and amount of harm from patent infringement. The Court concluded that prior licenses negotiated under threatened or actual litigation should not be used to prove the amount of damages in a case. This is still highly relevant to a reasonable royalties calculation. Whether reasonable royalties, or lost profits, or established royalties, courts are compensating for damage. If some licenses are error prone for calculating damages under established royalties then they are still error prone for damages under reasonable royalties. After all reasonable royalties are still a form of damages and are compensation for the harm of infringement.

⁶⁵ See Lee & Melamed, *supra* note 36, at 418 (“[V]irtually all licenses—even those that do not arise directly out of litigation—are negotiated in ‘the shadow of the law’ and reflect the parties’ litigation expectations.”).

⁶⁶ See Masur, *Use and Misuse*, *supra* note 9, at 115; see also Hovenkamp & Masur, *supra* note 16, at 413.

⁶⁷ Masur, *Use and Misuse*, *supra* note 9, at 134 n.83.

⁶⁸ *Id.* at 115.

⁶⁹ *Id.* at 135.

licensing necessarily incorporates a probabilistic account of expected patent damages and often can include significant lock-in costs. And indeed we should only use such evidence very carefully, if at all.

But this article strongly disagrees with their broader theoretical claim that there is no licensing outside the context of settling litigation (whether threatened or actual). First, using negotiated licenses as evidence for damages is not some new judicial creation. It has a very long history in the United States.⁷⁰ And it is not as if the courts have not been aware of the dangers of *some* licenses. As explained below, the Supreme Court has emphasized many of the same concerns as today but it did so while still praising other licensing practices. The existence of those other practices presents a puzzle for H&M. Did H&M overlook an important class of licensing or has Congress and the Supreme Court been improperly relying on them as damages since 1793?

Second, H&M's critique, if correct, applies further than they acknowledge and presumably further than they would like. Their criticisms, if taken seriously, should not only bring into question all negotiated licenses but should bring into question lost profits as well. If there is no reason to license a patent other than to settle the prospect of litigation (and thereby tainting that license), then there is no other reason to pay a premium for a patented article as well. In short, lost profits should be as tainted as all patent licensing. But that is not an argument that anyone is making. Lost profits are generally considered immune (or at least correctable) from litigation uncertainty.

Lastly, and more normatively, if the patent system cannot generate reliable market valuations for patented inventions then the system has far bigger problems than this contained debate about comparable licenses used in computing reasonable royalties. If the patent system cannot function to foster efficient technology transfer and a robust market for it, then the patent system loses a central pillar justifying its existence.

A. Established Royalties: Untainted Licensing

As mentioned above, the Supreme Court's 1889 opinion warns against the incautious use of any licensing whose purpose is solely to relieve the licensee of

⁷⁰ The Act of 1793 based damages solely on prior licensing agreements: "the infringer should forfeit and pay to the patentee a sum equal to three times the price for which the patentee has usually sold or licensed to other persons the use of said invention." Patent Act of 1793, ch. 11, 1 Stat. 318-23, § 5. That licensing-centric damages provision was replaced in 1800 with a provision that broadened the focus to "actual damage." See Act of Apr. 17, 1800, ch. 25, 2 Stat. 37, 38, § 3. But note that the change in 1800 did not reflect a policy change that licensing based damages were inappropriate rather it just reflected that other modes like lost profits should be put on a similar footing for proving compensable harm. See *Seymour v. McCormick*, 57 U.S. 480, 488 (1853) (explaining the statutory change as reflecting the realization that "some inventions or discoveries had their chief value in a monopoly of use by the inventor, and not in a sale of licenses, [and as a result] the value of licenses could not be made a universal rule, as a measure of damages."). *Contra* Masur, *Use and Misuse*, *supra* note 9, at 120 (suggesting courts have only recently "arrived at" the use of existing licenses and that "[c]ourts have relied upon existing licenses in calculating damages for decades").

patent litigation (whether potential or actual litigation).⁷¹ But while offering that warning, the Court also strongly suggests that other licensing is not problematic. The Court reiterated the long standing rule that some negotiated licenses can be used as a measure of damages: “[i]t is undoubtedly true that where there has been such a number of sales by a patentee of licenses to make, use and sell his patents, as to establish a regular price for a license, that price may be taken as a measure of damages against infringers.”⁷²

Having warned that litigation related licenses are problematic, the Court outlines that other categories are not tainted. Such licenses should be “[l]ike sales of ordinary goods, they must be common, that is, of frequent occurrence, to establish such a market price for the article that it may be assumed to express, with reference to all similar articles, their salable value at the place designated.”⁷³

The Court expands on this and enumerates a set of criteria as a suitable measure of damages via an established royalty:

1. “it must be paid or secured before the infringement complained of;”
2. “it must be paid by such a number of persons as to indicate a general acquiescence in its reasonableness by those who have occasion to use the invention;”
3. “it must be uniform at the places where the licenses are issued;”⁷⁴ and
4. it must not be paid under threat of suit or in settlement of litigation.⁷⁵

There is no doubt that such established royalties are not often granted,⁷⁶ but their existence provides an important historical counterpoint to H&M’s suggestion that no licensing programs can give accurate guidance. And as the Supreme Court is explicitly excluding licenses formed “under threat of suit,” it is clear that *ex post* licensing is being ruled out as an evidentiary source for established royalties.

And it is not just an existence of proof of some obscure exception to H&M’s broad pronouncement. Such licensing programs that lead to established royalties were considered excellent measures of damages. The Court has repeatedly stated that “established royalt[ies] . . . [afford] a basis for measuring . . . damages”⁷⁷ and in fact “it is a general rule in patent cases, that established license fees are the best

⁷¹ *Rude v. Westcott*, 130 U.S. 152 (1889).

⁷² *Id.* at 165.

⁷³ *Id. Contra Hovenkamp & Masur, supra* note 16, at 413 (“One inherent problem with the licensing-based damages standard is that it reflects a trivialized view of patent rights as commercial objects. It treats them like commodities . . . that are always sold to everyone at a common price.”).

⁷⁴ *Rude*, 130 U.S. at 165.

⁷⁵ *Id.* at 166.

⁷⁶ Michael J. Chapman, *Using Settlement Licenses in Reasonable Royalty Determinations*, 49 IDEA 313, 323 (2009).

⁷⁷ *Dowagiac Mfg. Co. v. Minn. Moline Plow Co.*, 235 U.S. 641, 648 (1914); *see also Philp v. Nock*, 84 U.S. 460, 462; *Birdsall v. Coolidge*, 93 U.S. 64, 70 (1876); *Clark v. Wooster*, 119 U.S. 322, 326 (1886); *Tilghman v. Proctor*, 125 U.S. 136, 143 (1888).

measure of damages that can be used.”⁷⁸ In modern times the Federal Circuit has similarly recognized that “[w]here an established royalty exists, it will usually be the best measure of what is a ‘reasonable’ royalty.”⁷⁹

At the very least, this long standing history and praise for established royalties should present an interesting puzzle for the modern debate over negotiated licenses.⁸⁰ Why have courts continued to praise established royalties? At times we might disregard old hoary cases when their reasoning is outdated, but the cases of the time demonstrate that the courts worried about many of the same litigation risk distortions that today’s scholarship is highlighting. Yet those cases still embraced a specific type of licensing as a measure of damages. This article suggests that those cases were considering a style and rationale for licensing that H&M have failed to consider. In large part, this article argues that the Supreme Court was embracing *ex ante* patent licensing.

In particular, if the harmful dynamics of circularity appear wherever negotiations are tainted by either litigation risk distortions or where the defendant has sunk costs that can be leveraged, we should then look for technological negotiations that occur without these two factors. There is broad consensus that the proper measure of damages is the “incremental [*ex ante*] value of the patented [technology] over the next-best alternative.”⁸¹ Or as Lee and Melamed described it, we want “the invention’s market value” without the distorting “factors such as lock-in costs and litigation risks.”⁸²

Such a clean transaction occurs when the patent holder licenses the technology to a *user* who is (at the time of negotiation) able to deploy the next best alternative (patented or not) as a substitute to using the patented technology. For this example, the focus is on a simple user of the technology, not someone who wants to resell it. How much would I pay for a non-exclusive license to use that technology? For concreteness, consider a cost-saving process that reduces the energy needs for

⁷⁸ Clark v. Wooster, 119 U.S. 322, 326 (1886).

⁷⁹ Nickson Indus., Inc. v. Rol Mfg. Co., 847 F.2d 795, 798 (Fed. Cir. 1988); Hanson v. Alpine Valley Ski Area, Inc., 718 F.2d 1075, 1078 (Fed. Cir. 1983); see also LAWRENCE M. SUNG, PATENT INFRINGEMENT REMEDIES 281 (2003) (noting that licenses for the patent in suit have been called “one of the strongest measures of a reasonable royalty”). But even with an established royalty, the courts have recognized scenarios where the established royalty must be adjusted to properly compensate the patentee. See, e.g., Nickson Indus., 847 F.2d at 798 (“[A] higher figure may be awarded when the evidence clearly shows that widespread infringement made the established royalty artificially low.” (citing Trio Process Corp. v. L. Goldstein’s Sons, Inc., 533 F.2d 126, 129–30 (3d Cir. 1976))).

⁸⁰ Although David Taylor certainly argues that even established royalties are problematic (“Unadjusted established royalties, because they are negotiated royalties, reflect valuation of patent rights”), he still notes the puzzle of the case law that praises established royalties. Taylor, *supra* note 36, at 132 (“But there is still law indicating that established royalties, when they exist, are the “best measure” of reasonable royalties.”). While I agree with Taylor’s focus on the value of the patented technology rather than the value of the patent rights, I do not agree that established royalties value the rights. To see it otherwise appears inconsistent with *Rude*.

⁸¹ See 2011 FTC IP MARKETPLACE REPORT, *supra* note 5, at 189.

⁸² Lee & Melamed, *supra* note 36, at 440–41.

production of some valuable chemical.⁸³ I will pay up to the amount of the costs that are saved.⁸⁴ I do not particularly care about the validity of the patent. I do not have the technology yet and that is what I am paying for. Such a negotiated license just does not seem tainted by any issues about validity. I do not care about validity—I want to cut my energy needs and I need the technology to do that. If the technology does not work, I would not pay. Now imagine that all potential users are offered a similar license.⁸⁵ Evidence from such an extensive, non-exclusive licensing program would qualify for established royalties because it provides an undistorted market price for the patented invention.⁸⁶ Here, non-exclusive licensing to end-users can provide a fairly accurate guide for patent damages.⁸⁷ Such licensing programs are precisely those envisioned by the FTC in support of robust *ex ante* transactions.

B. Lost Profits: Implied Licensing of a Technological Commodity

Established royalties, as described in the previous section, are not the only place where patentees are engaged in licensing to end-users. Established royalties are very closely related to lost profits. Until the development of reasonable royalties, they were the two avenues for establishing patent damages. Importantly,

⁸³ See Liivak, *supra* note 24, at 1361 (exploring the economics of selling a cost-saving process to an industry that wants to utilize it).

⁸⁴ Hovenkamp and Masur make a lot out of the “naïve” view of patents as commodities and that such a view would foreclose the opportunity to price discriminate. Hovenkamp and Masur, *supra* note 16, at 413. This article does not agree. Established royalties do not require the same dollar figure for each license. It just needs to be “uniform.” And that requirement has generally allowed flexibility so that the license can meter the royalties to match incremental value of the technology for varying users. For example in the cost saving example, a license for a cost saving process can have uniform licensing terms but it can be very tailored to the incremental value of users.

⁸⁵ John Duffy has argued that courts have traditionally put a thumb on the scale to aid such commercializing patentees. See John F. Duffy, *Reviving the Paper Patent Doctrine*, 98 CORNELL L. REV. 1359 (2013). One un-appreciated benefit of such a doctrine is that commercializing patentees (and those that transact with them) are less worried about patent invalidity and non-infringement because the probability of finding the patent valid and infringed increases toward unity. In other words, such doctrines help further reduce circularity by reducing the litigation uncertainty discount.

⁸⁶ Some might respond that this is unrealistic and that in reality potential technology users will feign disinterest but will surreptitiously use the technology anyways. If patent remedies are not properly designed then indeed this may happen. See *Panduit Corp. v. Stahl Bros. Fibre Works, Inc.* 575 F.2d 1152, 1163 (6th Cir. 1978). But it need not happen. For such cases of bad actors that copy and pirate in the face of a patentee who is trying to actually innovate (by tech transfer), patent law should unload the full panoply of the court’s power via injunctive relief and enhanced damages to prevent those actions. See *id.*

⁸⁷ Exclusive licensing from a patentee to someone like a regional distributor for the patented technology could also provide an unencumbered estimate of the value of the patented technology but need to be more careful. First, the negotiation for license to become the exclusive supplier of the technology does hinge on validity concerns and that raises many of the problems that plague negotiated *ex post* licenses. Second, the value of the technology requires business estimates as to end user demand for the technology. The first problem can be ameliorated perhaps by transactions that resemble warranty deeds rather than quitclaim deeds. The licensor insures the licensee against the chance of invalidity. And as to the second, that valuation is surely an estimate but it is not less an estimate than any other business venture where ultimate consumer demand needs to be guessed.

lost profits are generally acknowledged to be less susceptible to the circular dynamics described above for negotiated licenses. But why?

After all, a manufacturer is selling a patented object for a market price, but at the same time the manufacturer is licensing as well. The license is just not explicit. Manufacturer patentees are selling their patented product for money. In the transaction they get money in exchange for the patented product and an implied license to use the patented product. The profit on any component sales that are lost due to infringement is the harm that lost profits damages aims to fix. And in making that calculation, we rely heavily on the market prices established for those products. The lost profits are quite directly akin to the harm from unlicensed use in an established royalty case. As suggested by David Taylor, established royalties could perhaps be better described as “lost royalties.”⁸⁸

If as claimed by Masur, there is “simply no reason to license a patent other than to alleviate the threat of suit,”⁸⁹ then there is not going to be a reason to pay a premium (above the marginal production costs) for a patented device. Every component sale is a negotiation and the selling price should reflect some discount for the expectation value of patent damages via lost profits. Lost profits would be as hopelessly tainted as reasonable royalties via negotiated licenses. But I do not think H&M are willing to go that far. The circularity discussions from other scholars just do not implicate lost profits either.⁹⁰

And just as with the established royalties example, the easier lost profits cases have patent holders selling to end users. The end-user is not particularly motivated by patent validity, nor are they locked-in to make the purchase. The profit premium that the patent holder can reap is a market value for the incremental value of the patented tool relative to the next-best alternatives. In short, such sales figures do provide a reliable market price for the patented technology.

C. For Innovation We Need a Market in Inventions

The above shows that there are important types of patent licensing (explicit or implied) where the harmful impacts of circularity are muted. Those examples not only provide good *data*⁹¹ for patent damages, but they exemplify (in my opinion) the basic function and nature of the patent system. By having patent damages keyed to these types of activities, the patent system instructs patent holders what we expect them to do with their patents (innovate) and more importantly what duties

⁸⁸ Taylor, *supra* note 36, at 97 n.64.

⁸⁹ Masur, *Use and Misuse*, *supra* note 9, at 134.

⁹⁰ There are times (just as with established royalties) when the “market” price during the period of infringement is not adopted directly as the measure of lost profits. When price erosion can be proven, then the patentee can argue that the selling price would have been greater but for the infringement. *See* Grain Processing Corp. v. Am. Maize-Prods. Co., 893 F. Supp. 1386, 1390–92 (N.D. Ind. 1995). This is quite analogous to Learned Hand’s concerns in *Consol. Rubber Tire Co. v. Diamond Rubber Co. of N.Y.*, 226 F. 455, 459 (S.D.N.Y. 1915), *aff’d*, 232 F. 475 (2d Cir. 1916).

⁹¹ *See* Chien & Schulman, *supra* note 51 (focusing on seeking data sources exclusively).

others have (avoid infringing and causing harm to the innovators).⁹² When an inventor can support themselves financially with such a business model, I am convinced that it represents socially beneficial, economically defensible behavior that deserves strong court protection to prevent piracy and other harms.⁹³ Through such a system, patent law can hope to create a vibrant market in technological artifacts and, through it, society benefits as technology is created and deployed.⁹⁴ An important part of that system is in fact treating inventions like commodities.⁹⁵ That is how the technology can be widely deployed. And indeed such a patent system might strike some as “naïve and grossly over-simplified.”⁹⁶ But to me, simple is not a bug. In complex systems, simple often is the only thing that might actually work.⁹⁷

H&M do not see patent damages or the overall patent system the same way. As described in part above, they think that “[t]he prospects for finding a true market measure of patent value do not seem promising.”⁹⁸ They lament that “courts will not be able to draw upon market indications of value”⁹⁹ but they cannot see any licensing activity that could take place outside the shadow of litigation. They focus on the “patent licensing market.” For them, “[p]atent licenses are best understood as civil settlements in anticipation of possible litigation.”¹⁰⁰ Technology transfer is just not a central part of their story.

With each worldview, I think we are each being internally consistent. But they are different views with different foci. I am focused on the invention—the patented technology—and its efficient distribution through market exchange. Focusing on the actual technology is different than focusing on the patent rights.¹⁰¹ H&M talk about the “patent rights” as the main focus. They talk about the “efficient dissemination of patent rights” and a “patent licensing market.” That is quite different from a healthy invention licensing market. And though this current debate is ostensibly about a detailed discussion of computing a reasonable royalty, it is also directly connected to a much bigger debate over the purpose and function of the patent system.

⁹² See Liivak, *supra* note 29, at 51.

⁹³ See Liivak, *supra* note 24, at 1376.

⁹⁴ In this sense, this market narrative focuses much more on actual innovation rather than just the act of invention. See JOSEPH A. SCHUMPETER, *THE THEORY OF ECONOMIC DEVELOPMENT* 88–89 (1951) (discussing the distinction between invention and innovation). Invention is what gets you in the door to get a patent but innovation (or gearing up to innovate) is what starts to accrue damages.

⁹⁵ *Id.*

⁹⁶ Hovenkamp & Masur, *supra* note 16, at 413.

⁹⁷ See Henry E. Smith, *Property as Platform: Coordinating Standards for Technological Innovation*, 9 J. COMPETITION L. & ECON. 1057, 1090 (2013).

⁹⁸ Masur, *Use and Misuse*, *supra* note 9, at 156.

⁹⁹ *Id.* at 157.

¹⁰⁰ *Id.* at 127.

¹⁰¹ See Taylor, *supra* note 36, at 91–97.

IV. Conclusion

Recent scholarly work has highlighted problematic circular dynamics in the use negotiated licensing agreements for patent damages. Much of the criticism is well deserved. Most prior licensing agreements are not indicative of the value of the patented technology but are rather just attempts to settle potential or actual litigation. These are all *ex post* licenses. But the problems with *ex post* licenses does not mean that there are no licenses that have probative value for measuring a market value for a patented invention. *Ex ante* licensing is different in kind. Where the patentee is an innovator and is selling the technology to those that do not yet have it, those licenses produce the sought after market-based valuation of the patented invention relative to the available alternatives. Such acts not only provide more reliable data for computing patent damages but those acts are also the very ones that should be supported and encouraged as forming the backbone of a patent system that protects innovation.