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JOURNAL ANNOUNCEMENTS

The *Texas Intellectual Property Law Journal* would like to congratulate our newly elected Editor-in-Chief for Volume 21, Matthew David Tanner. Matthew has served as one of our Staff Editors and has excelled in that capacity. More information on next year's board members will be able available in Volume 20, Issue 3.

The *Journal* would also like to congratulate several of its editors for their outstanding contributions to this issue: Veronika Bordas, Andrew J. Broadaway, Matthew David Tanner, and Yongjin Zhu.

Finally, the *Journal* successfully hosted the Thirteenth Annual Intellectual Property Law Symposium, which was held at The University of Texas School of Law on Friday, February 17, 2012. For information on the speakers, their topics, and presentations, as well as registration for next year's Symposium, please visit: www.ipsymposium.com.

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Res"Q"ing Patent Infringement Damages After *ResQNet*: The Dangers of Litigation Licenses as Evidence of a Reasonable Royalty

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Introduction

When a patent owner makes and sells a patented invention, it is easy to see how the owner is harmed by another's infringement. But what happens when the patent owner merely holds the patent with no plans to make or sell the patented invention? In that case, the patent owner loses no sales even when an infringer enters the scene. Unwilling to leave this non-practicing patent owner without an infringement remedy, the patent laws allow the patent owner to recover from the infringer damages in the rather imprecise form of a "reasonable royalty."[1]

To determine the amount of a reasonable royalty, the fact-finder journeys into the land of make-believe: she imagines a hypothetical negotiation that took place between the patentee and the infringer just before the infringing conduct began.[2] The royalty that would have resulted from that negotiation usually constitutes the reasonable royalty. As the Federal Circuit has lamented, the reasonable royalty measurement involves "more the talents of a conjurer than those of a judge,"[3] because it is a difficult, if not impossible, task to determine what royalty two warring parties would have agreed to had they negotiated a license years ago.

The fact-finder does not navigate these difficult waters unaided. She is usually presented with, among other things, previous license agreements for the patent-in-suit. Prior licenses help demonstrate the marketplace's general perception of the value of the patent, so they may give the fact-finder a good idea of what royalty the parties would have negotiated. But when the earlier licenses resulted from the settlement of previous litigation, their value as a market indicator becomes questionable—it is hard to determine how much of the settlement value is the result of the patent's value as compared to litigation risk or expenses. For this reason, litigation licenses have a checkered past as evidence of a reasonable royalty.[4]

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[1] 35 U.S.C. § 284 (2006), *amended by*, Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011).

[2] Lucent Techs., Inc. v. Gateway, Inc., 580 F.3d 1301, 1324 (Fed. Cir. 2009).

[3] Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1577–78 (Fed. Cir. 1995); *see also* Panduit Corp. v. Stahlin Bros. Fibre Works, Inc., 575 F.2d 1152, 1159 (6th Cir. 1978) ("Determination of a 'reasonable royalty' after infringement, like many devices in the law, rests on a legal fiction. Created in an effort to 'compensate' when profits are not provable, the 'reasonable royalty' device conjures a 'willing' licensor and licensee, who like Ghosts of Christmas Past, are dimly seen as 'negotiating' a 'license.'").

[4] This article addresses only the use of litigation licenses for purposes of proving a reasonable royalty. It does not address their potential use as evidence of patent validity. Licenses—as part of commercial success—are a secondary consideration in determining a patent's validity. In other words, the licensing of a patent does not directly show that a patented invention represents a new and non-obvious innovation, but a patented invention's success in the marketplace, including its licensing by market participants, may provide circumstantial evidence of the patented invention's novelty and usefulness. *See* 2 DONALD S. CHISUM, CHISUM ON PATENTS § 5.05 (2010).

Courts and scholars have trended toward allowing litigation licenses to be used as evidence of a reasonable royalty.[5] Their arguments often rely on a recent decision by the Federal Circuit, *ResQNet v. Lansa*.[6] This Article explores the Federal Circuit's *ResQNet* decision, as well as the practical results of admitting litigation licenses as evidence of a reasonable royalty.

Part 1 of this Article briefly recounts the history of patent damages and the development of the reasonable royalty as a damages standard. Part 2 examines the Federal Circuit's precedent regarding litigation licenses and similar evidence in proving a reasonable royalty. Part 2 also explores the *ResQNet* decision, as well as several other recent Federal Circuit decisions clamping down on the evidence that can be used to prove a reasonable royalty. In addition, Part 2 explains the error that district courts commit when they view *ResQNet* as mandating the admission of litigation licenses and distills the *ResQNet* line of cases into a few paramount principles that the Federal Circuit applies in reviewing the evidence supporting reasonable royalty awards.

Because *ResQNet* does not mandate the admission of litigation licenses in reasonable royalty cases, admission of these licenses hinges largely on an analysis of the three Federal Rules of Evidence traditionally used to exclude litigation licenses—Rules 402 (relevance), 403 (balancing), and 408 (settlement agreements). Part 3 applies these rules to litigation licenses. Part 3 shows that Rule 402 is an improper basis for blanket exclusion, because litigation licenses are relevant to a reasonable royalty determination. For purposes of Rule 403 and Rule 408 (by extension of Rule 703), Part 3 examines the balance between the probative value of litigation licenses and their prejudicial effect. Part 3 also takes issue with the recent argument of one commentator that courts should admit litigation licenses while foreclosing discovery of related negotiations. Part 3 concludes that litigation licenses should be excluded from evidence in most cases.

1) Background

a) The Reasonable Royalty as a Measure of Damages

Three kinds of damages are generally available to a patent holder whose patent has been infringed. The first is lost profits—if the infringer has made sales that otherwise would have gone to the patentee,[7] the patentee can recover its lost prof-

[5] *See, e.g.*, Michael J. Chapman, *Using Settlement Licenses in Reasonable Royalty Determinations*, 49 IDEA 313, 315 (2009); Parker Kuhl, *Rescue Me!: The Attack on Settlement Negotiations After ResQNet v. Lansa*, 26 BERKELEY TECH. L.J. 269, 269–70 (2011); E. Danielle Thompson Williams & Leslie T. Grab, *Contemporary Issues in Patent Royalty Damages*, PATENT LAW PRACTICE CENTER (Oct. 13, 2010, 7:00 PM), www.patentlawcenter.pli.edu/2010/10/13/contemporary-issues-in-patent-royalty-damages/ (discussing the differing conclusions of post-*ResQNet* cases).

[6] ResQNet.com, Inc. v. Lansa, Inc., 594 F.3d 860 (Fed. Cir. 2010).

[7] As used in the Patent Act, the patentee is anyone who holds title to the patent—not necessarily limited to the person who was originally granted the patent. 35 U.S.C. § 100(d) (2006).

its.[8] For many reasons, most notably the difficulty of proving causation, patentees are often unable to prove lost profits at trial.[9]

The second category of damages is an established royalty. If the patent holder had a track record of licensing the invention to others for a set amount, damages may be imposed at the rate of the established royalty.[10] An established royalty is difficult to prove—it requires prior licenses of the patent-in-suit that were (1) paid or secured before the infringement complained of; (2) paid by enough people to show a general acquiescence in its reasonableness; (3) uniform in their terms; (4) not entered under threat of suit or in settlement of litigation; (5) for comparable rights or activity under the patent.[11] The Supreme Court has cautioned against the use of litigation licenses to prove an established royalty, reasoning that the licenses do not necessarily reflect a voluntary royalty value.[12]

The final—and the most common—kind of damages available to the wronged patentee is a reasonable royalty.[13] This is the statutory floor of a damages award—the patent laws allow the patentee to recover from an infringer "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."[14] The reasonable royalty may be set as a lump sum or a running royalty, and a running royalty may be unscaled (a set value for every use of the invention) or based on a sliding scale (a sliding value that varies based on how often or extensively the licensee uses the invention).[15]

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[8] BIC Leisure Prods., Inc. v. Windsurfing Int'l, Inc., 1 F.3d 1214, 1218 (Fed. Cir. 1993).

[9] Proof of causation for the lost sales is especially onerous where non-infringing functional alternatives are available on the market, or where the patent holder may not have had sufficient capacity to make and sell the products. *See* 7 CHISUM, *supra* note 4, § 20.05(2)(e)(v)–(2)(e)(vii). In addition, the patented invention often represents only a small portion of the defendant's product, rendering proof of causation and damages difficult. *Id.* § 20.05(3). Moreover, lost profits may be a function of irreversible price erosion—the unlawful competition in the marketplace may cause the price of the invention to decline and create a market resistance to a subsequent price increase, so that the patentee suffers lost profits not only for the infringer's sales, but also for its own future lost sales (if it maintains its current price) or for future sales at the lower price caused by the infringer's activities. *See In re* Mahurkar Double Lumen Hemodialysis Catheter Patent Litig., 831 F. Supp. 1354, 1384 (N.D. Ill. 1993) ("Although the royalty cannot be greater than compensatory damages in a case such as this, compensatory damages can exceed the reasonable royalty. An infringer's activities do more than divert sales to the infringer. They also depress the price. Competition drives price toward marginal cost.").

[10] 7 CHISUM, *supra* note 4, § 20.06.

[11] *Id.*

[12] Rude v. Westcott, 130 U.S. 152, 164 (1889).

[13] Christopher B. Seaman, *Reconsidering the* Georgia-Pacific *Standard for Reasonable Royalty Patent Damages*, 2010 BYU L. REV. 1661, 1667 (2010).

[14] 35 U.S.C. § 284 (2006) *amended by*, Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011).

[15] *See* Lucent Techs., Inc. v. Gateway, Inc., 580 F.3d 1301, 1325 (Fed. Cir. 2009) (discussing lump-sum and running royalties); *see also* Studiengesellschaft Kohle, m.b.H. v. Dart Indus., Inc., 862 F.2d 1564, 1573 (Fed. Cir. 1988) (affirming district court's finding that special master erred by awarding a

b) Development of the Reasonable Royalty Standard

The reasonable royalty measure of damages arose as a result of the difficulty many plaintiffs faced in proving damages for patent infringement. Before the advent of the reasonable royalty, the Supreme Court limited damages for patent infringement to either provable lost profits or an established royalty.[16] Where a plaintiff had not previously licensed the patent and was not an active market participant (and, consequently, incurred no provable lost profits as the result of infringement), the Court often limited the plaintiff to a recovery of nominal damages and, for suits in equity, an injunction against further infringement.[17] In the mid-1800s, the Court began to allow damages awards to patentees who had neither previously licensed the patent-in-suit nor practiced the patent-in-suit in any commercial manner, though the Court was inconsistent in this area.[18]

Eventually, lower courts adopted the reasonable royalty standard.[19] The Supreme Court expressly approved—though in dicta—the use of the reasonable royalty standard as compensation for patent infringement for the first time in 1915, in *Dowagiac Manufacturing Co. v. Minnesota Moline Plow Co.*[20] The Court noted that, "although the plaintiff was entitled to prove what would have been a reasonable royalty, and thereby show a proper basis for an assessment of damages, no proof upon that subject was presented."[21]

In 1922, Congress amended the patent laws to allow a patentee to recover "a reasonable sum as profits or general damages" for infringement where the patentee could not prove lost profits or an established royalty.[22] The statutory language proved too vague, however, and in 1946, Congress again amended the law, this

straight running royalty instead of conforming the reasonable royalty award to patentee's previous licensing practice of a sliding scale royalty with a creditable down payment).

[16] 7 CHISUM, *supra* note 4, § 20.02.

[17] *See* Keystone Mfg. Co. v. Adams, 151 U.S. 139, 147 (1894) (awarding nominal damages); Rude v. Westcott, 130 U.S. 152, 167 (1889); Dobson v. Dornan, 118 U.S. 10, 17 (1886); Black v. Thorne, 111 U.S. 122, 124 (1884); Blake v. Robertson, 94 U.S. 728, 733–34 (1876); New York v. Ransom, 64 U.S. 487, 491 (1859).

[18] 7 CHISUM, *supra* note 4, § 20.02(2)(a) ("[T]he Supreme Court oscillated on the question of allowing general damages for use or sale of the plaintiff's invention where the plaintiff could not show an established license rate or specific lost profits."). In early America, litigation by the non-practicing entity was virtually unheard of—there was less incentive for the NPE to litigate under the pre-reasonable royalty damages scheme. The rise of NPE litigation is a relatively recent phenomenon, and the "patent troll" is largely a recent phenomenon. *See* Daniel P. McCurdy, *Patent Trolls Erode the Foundation of the U.S. Patent System*, SCI. PROGRESS, Winter 2008-09 at 78–79 (describing the rise in NPEs characterized as trolls and the increase in patent-troll litigation).

[19] *See, e.g.*, U.S. Frumentum Co. v. Lauhoff, 216 F. 610, 625 (6th Cir. 1914) (having "no hesitation" in affirming right of patentee to recover a "reasonable royalty").

[20] 235 U.S. 641, 649 (1914).

[21] *Id.*

[22] Act of Feb. 21, 1922, ch. 58, 42 Stat. 392.

time to provide for minimum damages of a "reasonable royalty."[23] Specifically, the amended language provided that "the complainant shall be entitled to recover general damages which shall be due compensation for making, using, or selling the invention, not less than a reasonable royalty therefor, together with such costs, and interest, as may be fixed by the court."[24]

Over time, the reasonable royalty standard has effectively swallowed up the established royalty standard,[25] and the established royalty has become less important.[26] The Federal Circuit now considers "[a]n established royalty [to be] the best measure of a 'reasonable' royalty for a given use of an invention because it removes the need to guess at the terms to which parties would hypothetically agree."[27] But an established royalty is not the only measure of a reasonable royalty; evidence that does not meet the traditionally rigid standards of an established royalty may nevertheless be probative in determining a reasonable royalty.[28]

The most common description of the reasonable royalty is that it is the amount that would have been agreed upon in a hypothetical negotiation between a willing patent owner and a willing licensee as of the time just before the infringement began and on the assumption that the patent was valid.[29] The hypothetical

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[23] Act of Aug. 1, 1946, ch. 726, 60 Stat. 778.

[24] *Id.*

[25] The Patent Reform Act of 2009, as introduced on March 3, 2009, by Senator Leahy, would have consolidated the two, expressly providing that, where there is an established royalty, a court may award reasonable royalty damages based on the established royalty. Patent Reform Act of 2009, S. 515, 111th Cong. § 4 (as introduced by Sen. Leahy, Mar. 3, 2009). The version of the bill approved by the Judiciary Committee omitted the entire section of the bill in which this provision was found. Patent Reform Act of 2009, S. 515, 111th Cong. (as reported by S. Comm. on the Judiciary, Apr. 2, 2009). The Senate never voted on the amended bill, and it died at that stage. In 2011, Senator Leahy re-introduced the amended version of the bill, with some modifications. Patent Reform Act of 2011, S. 23, 112th Cong. (as introduced by Sen. Leahy, Jan. 25, 2011).

[26] 7 CHISUM, *supra* note 4, § 20.06(2).

[27] Monsanto Co. v. McFarling, 488 F.3d 973, 978–79 (Fed. Cir. 2007) ("When the patentee has consistently licensed others to engage in conduct comparable to the defendant's at a uniform royalty, that royalty is taken as established and indicates the terms upon which the patentee would have licensed the defendant's use of the invention."). Nevertheless, even an established royalty may be less than a reasonable royalty, in which case the statute mandates the award of the higher reasonable royalty. For example, where an established royalty is artificially depressed due to widespread infringement, the appropriate award is a higher reasonable royalty. Nickson Indus., Inc. v. Rol Mfg. Co., 847 F.2d 795, 798 (Fed. Cir. 1988).

[28] H.B. Fuller Co. v. Nat'l Starch and Chem. Corp., 689 F. Supp. 923, 949 (D. Minn. 1988) ("The licenses . . . are insufficient to prove an established royalty as they were entered into after this litigation began and are tainted by this litigation. However, the licenses provide some indication of an appropriate license rate . . . ."); 7 CHISUM, *supra* note 4, § 20.07(2)(a); Wordtech Sys. Inc. v. Integrated Networks Solutions, Inc., 609 F.3d 1308, 1319 (Fed. Cir. 2010).

[29] Lucent Techs., Inc. v. Gateway, Inc., 580 F.3d 1301, 1324–25 (Fed. Cir. 2009). The reasonable royalty is also described as the sum "which would be accepted by a prudent licensee who wished to obtain a license but was not so compelled and a prudent patentee, who wished to grant a license but was not so compelled." Horvath v. McCord Radiator & Mfg. Co., 100 F.2d 326, 335–36 (6th Cir. 1938). The reasonable royalty is sometimes calculated under the "analytical method," which looks at the in-

negotiation relies on fantasy: "it requires a court to imagine what warring parties would have agreed to as willing negotiators."[30] At bottom, the reasonable royalty standard rests on speculation and is, as the Federal Circuit put it, "a difficult judicial chore."[31]

Despite the difficulty of determining a reasonable royalty, it has become "the predominant measure of damages in patent infringement cases."[32] The addition of the reasonable royalty standard portended big business for non-practicing entities (NPEs),[33] who, by definition could not prove lost profits,[34] and who may have lacked sufficient non-litigation licenses to show an established royalty.[35] Once the reasonable royalty standard was in place, some NPEs—often pejoratively called "patent trolls"—could fashion a lucrative business model out of acquiring and holding a patent portfolio and suing or threatening to sue anyone who potentially infringed.[36]

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fringer's projected profits on the infringing product, but the hypothetical negotiation is the "more common approach." *Lucent*, 580 F.3d at 1324. The infringer's projected profits—the subject of the analytical approach—are incorporated into the hypothetical negotiation, which includes the expected profit as a factor affecting the hypothetical bargain the parties would strike, but allows for consideration of other things, such as where the infringing product is a loss leader but is expected to create profits through convoyed sales. *Id.* at 1324–25.

[30] Fromson v. W. Litho Plate & Supply Co., 853 F.2d 1568, 1575 (Fed. Cir. 1988), *overruled by* Knorr–Bremse Systeme Fuer Nutzfahrzeuge GmbH v. Dana Corp., 383 F.3d 1337 (Fed. Cir. 2004).

[31] Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1577–78 (Fed. Cir. 1995); *see also* Panduit Corp. v. Stahlin Bros. Fibre Works, Inc., 575 F.2d 1152, 1159 (6th Cir. 1978) ("Determination of a 'reasonable royalty' after infringement, like many devices in the law, rests on a legal fiction. Created in an effort to 'compensate' when profits are not provable, the 'reasonable royalty' device conjures a 'willing' licensor and licensee, who like Ghosts of Christmas Past, are dimly seen as 'negotiating' a 'license.'").

[32] Uniloc USA, Inc. v. Microsoft Corp., 632 F.3d 1292, 1312 (Fed. Cir. 2011).

[33] NPEs can include institutions, such as universities, whose research may create new, patentable inventions, even though the institution does not market the invention. eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388, 393 (2006).

[34] The NPE, of course, had no lost profits, because it had no lost sales. Poly-America, L.P. v. GSE Lining Tech., Inc., 383 F.3d 1303, 1311 (Fed. Cir. 2004) ("[T]he patentee needs to have been selling some item, the profits of which have been lost due to infringing sales, in order to claim damages consisting of lost profits.").

[35] *See* Studiengesellschaft Kohle, m.b.H. v. Dart Industries, Inc., 862 F.2d 1564, 1572 (Fed. Cir. 1988) ("[O]ffers to license made at a time when 'litigation was threatened or probable' should not be considered evidence of an established royalty.").

[36] The "patent troll" moniker conceptualizes the NPE as waiting under the bridge (the patented invention) for someone to cross (to use the invention), and then attempting to extract a fee for crossing the bridge. Christopher A. Harkins, *Fending off Paper Patents and Patent Trolls: A Novel "Cold Fusion" Defense Because Changing Times Demand It*, 17 ALB. L.J. SCI. & TECH. 407, 410–11 (2007). Patent trolls are often entities formed to acquire and hold patents from inventors, who may not have the time, desire, or resources to participate in the market or to litigate against infringers. *Id.* at 412.

c) The *Georgia-Pacific* Factors

The proper measure of a reasonable royalty standard remains elusive.[37] How does one prove the royalty that would have resulted from a fictional negotiation in which both parties are willing to enter a license agreement but neither party is compelled to do so? That is the daunting task set before the parties disputing a reasonable royalty.

To aid this determination, the court in *Georgia-Pacific v. United States Plywood Corp.* surveyed the case law and set out a list of fifteen factors potentially relevant to the reasonable royalty calculation.[38] The factors are:

1. The royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty.
2. The rates paid by the licensee for the use of other patents comparable to the patent in suit.
3. The nature and scope of the license, as exclusive or non-exclusive; or as restricted or non-restricted in terms of territory or with respect to whom the manufactured product may be sold.
4. The licensor's policy and marketing program regarding licenses.
5. Any commercial relationship between the licensor and licensee.
6. The effect of selling the patented article on the licensee's other sales.
7. The duration of the patent and the term of the license.
8. The commercial success, profitability, and popularity of the product.
9. The advantages of the patent over prior art or practices.
10. The nature of the patented invention.
11. The extent and value of the infringer's use.
12. The customary allocation of profits between the licensee and licensor in the industry.
13. The portion of the profit attributed to the patented invention, rather than to another feature of the article or infringer.
14. The opinion testimony of qualified experts.
15. The amount that a licensor (such as the patentee) and a licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee- who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention- would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been ac-

[37] Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1577–78 (Fed. Cir. 1995).

[38] 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970), *modified*, 446 F.2d 295 (2d Cir. 1971).

> ceptable by a prudent patentee who was willing to grant a license.[39]

This "comprehensive (but unprioritized and often overlapping) list"[40] has enjoyed broad usage and gained acceptance in the Federal Circuit.[41]

For present purposes, the first and second factors are particularly relevant. The first factor looks to prior licenses of the patent-in-suit,[42] and the second looks to prior licenses entered into by the infringer for comparable patents.[43] Both factors consider past or existing licenses as a guide in assessing the reasonable royalty, but the factors are not without limits. In several important recent decisions, the Federal Circuit has reversed reasonable royalty awards based on insufficiencies in prior licenses offered as evidence. Several of those decisions are discussed in Part 2, *infra*.

d) Litigation Licenses as Reasonable Royalty Evidence

A thorny issue has arisen with respect to the *Georgia-Pacific* factors that look to amounts paid by prior licensees: whether to allow the use of prior licenses that arose out of actual or threatened litigation (sometimes called "litigation licenses" or "settlement licenses"). Obviously, licenses previously granted by the patentee for the patent-in-suit or previously agreed to by the infringer for a comparable patent could offer significant insight into how the parties would behave in the hypothetical negotiation for the license of the patent-in-suit; however, a license entered into to settle litigation is far less useful in allowing the fact-finder to hypothetically construct the behavior of the parties, because the settlement likely involved substantial considerations external to the parties' valuation of the patent.[44] As the Supreme Court put it in an established royalty case:

> 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

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[39] *Id.*

[40] ResQNet.com, Inc. v. Lansa, Inc., 594 F.3d 860, 869 (Fed. Cir. 2010). Although the Federal Circuit described the list as "comprehensive" in *ResQNet*, the list has also been described as non-exhaustive. Lear Auto. Dearborn, Inc. v. Johnson Controls, Inc., No. 04-73461, 2011 U.S. Dist. LEXIS 5203, at *11–12 (E.D. Mich. Jan. 20, 2011).

[41] Lucent Techs. Inc. v. Gateway, Inc., 580 F.3d 1301, 1324–25 (Fed. Cir. 2009); Interactive Pictures Corp. v. Infinite Pictures, Inc., 274 F.3d 1371, 1385–86 (Fed. Cir. 2001).

[42] The first *Georgia-Pacific* factor has not been strictly limited to those royalties "proving or tending to prove an established royalty." *See* 7 CHISUM, *supra* note 4, § 20.07 ("Prior and existing royalties could be considered as evidence of a reasonable royalty without regard to whether they fully met the prior standards for an established royalty.").

[43] *See ResQNet.com*, 594 F.3d at 881 ("[C]onsideration may be given to royalties paid by the licensee to others.").

[44] *See infra* Part 3(c)(i) ("[T]he giants of a given industry [could] use threats of costly and protracted litigation to extort an unreasonably low royalty.").

> sustained by the owners of the patent in other cases of infringement . . . . The avoidance of the risk and expense of litigation will always be a potential motive for a settlement.[45]

Based on this Supreme Court language and on the notion of the disutility of litigation licenses, many courts have excluded litigation licenses from evidence in the reasonable royalty context.[46] Courts that have excluded litigation licenses have traditionally held them inadmissible based on one or more of three Federal Rules of Evidence: Rule 402 (relevance),[47] Rule 403 (balancing),[48] or Rule 408 (settlement).[49] Some courts that have historically banned litigation licenses from evidence have recently changed course based on dicta appearing in the Federal Circuit's recent decision in *ResQNet.com, Inc. v. Lansa, Inc.*[50] The next section examines *ResQNet* and related Federal Circuit cases.

2) *ResQNet* and the Current State of the Law

a) *ResQNet*

In *ResQnet*, ResQNet's (the patentee) expert relied on seven prior licenses as a "starting point" in determining the reasonable royalty.[51] Five of the licenses were "re-bundling" licenses, permitting the licensees to re-brand the patentee's software,

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[45] Rude v. Westcott, 130 U.S. 152, 164 (1889); *see also* General Motors Corp. v. Blackmore, 53 F.2d 725, 729 (6th Cir. 1931) (settlement agreements "lack[] that element of volition upon the part of the infringers which was necessary to show true or actual value by showing what others were generally willing to pay and the licensors willing to accept").

[46] *See, e.g.*, Donnelly Corp. v. Gentex Corp., 918 F. Supp. 1126, 1134 (W.D. Mich. 1996) (in granting a motion in limine to exclude litigation licenses, inaccurately stating that the "Federal Circuit . . . has squarely held that in patent infringement litigation such as this the rates paid in the industry as a result of settlement negotiations may not be considered since they do not accurately reflect what a willing licensee would pay a willing licensor in an arm's length negotiation"). Neither of the court's cited Federal Circuit cases held this. *See also* American Original Corp. v. Jenkins Food Corp., 774 F.2d 459, 464 (Fed. Cir. 1985) (holding that district court did not err in awarding lower reasonable royalty than amount paid in litigation license, and noting that the litigation license "does not establish . . . the minimum reasonable royalty," because "[a] royalty at which a patentee offers to license his invention, particularly when coupled with a claim of infringement, is not necessarily the same rate as that upon which a hypothetical willing licensee and willing licensor would agree"); Hanson v. Alpine Valley Ski Area, Inc., 718 F.2d 1075, 1078–79 (Fed. Cir. 1983) (holding that district court did not err in rejecting patentee's settlement *offers* as proof of an *established* royalty, because "the latter requires actual licenses, not mere offers to license" and because "the offers were made after the infringement had begun and litigation was threatened or probable").

[47] *See infra* Part 3(a) (discussing the inadmissibility of irrelevant evidence).

[48] *See infra* Part 3(c) (discussing probative versus prejudicial balance).

[49] *See infra* Part 3(b) (discussing exclusion of settlement evidence).

[50] *See* ReedHycalog UK, Ltd. v. Diamond Innovations, Inc., 727 F. Supp. 2d 543, 546 (E.D. Tex. 2010) ("Historically, courts have excluded licenses made to settle litigation, finding their probative value highly questionable. . . . However, based on *ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860 (Fed. Cir. 2010), some parties are arguing, and some courts are finding, that settlement licences are admissible to prove a reasonable royalty.").

[51] ResQNet.com, Inc. v. Lansa, Inc., 594 F.3d 860, 869–70 (Fed. Cir. 2010).

re-bundle it with the licensee's own products, and resell the newly-bundled products.[52] In addition, the licenses included services such as technical support and training, and did not specifically mention the patent at issue in the lawsuit.[53] ResQNet failed to offer evidence that the software in these re-bundling licenses (or the users of the software) practiced the patented method.[54] These licenses had a large sliding-royalty rate (a rate that changed depending on various circumstances).[55]

The Federal Circuit contrasted the large royalty rates in the re-bundling licenses, which showed "no discernible link to the claimed technology," with the lower royalty rates in the remaining two licenses, which arose out of litigation.[56] Without evidence of the link, if any, between the re-bundling licenses and the patented method, those re-bundling licenses were essentially useless as evidence of a reasonable royalty.[57] The patent-in-suit dealt "with a method of communicating between host computers and remote terminals—not training, marketing, and customer support services. The re-bundling licenses simply ha[d] no place in this case."[58]

According to the majority, ResQNet's expert relied almost exclusively on the first *Georgia-Pacific* factor—prior licenses of the patent-in-suit—in evaluating the reasonable royalty.[59] Consequently, after the Federal Circuit held that the trial court should have disregarded the re-bundling licenses, only the two litigation licenses remained as potential damages evidence.[60] The court observed in dicta "that the most reliable license in this record arose out of litigation," but also noted that "litigation itself can skew the results of the hypothetical negotiation."[61] On remand,

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[52] *Id.* at 870.

[53] *Id.*

[54] *Id.* at 871 n.1 (discussing lack of a nexus between expert's proposed royalty rate and the other offered patent royalty rates).

[55] *Id.* at 871.

[56] *Id.*

[57] *See id.* ("Without that link . . . '[w]e . . . cannot understand how the [fact finder] could have adequately evaluated the probative value of [the] agreements.'" (quoting Lucent Techs. Inc. v. Gateway, Inc., 580 F.3d 1301, 1328 (Fed. Cir. 2009))). ResQNet's expert testified that the products in the re-bundling licenses were "based on" the patented invention, but that testimony was "a far cry from a conclusion that ResQNet's products are coextensive with the claimed invention." *Id.* at 871 n.1.

[58] *See id.* at 871–72 ("The first *Georgia-Pacific* factor, which Dr. David found to be controlling and which the district court in turn adopted, must consider licenses that are commensurate with what the defendant has appropriated.").

[59] *Id.* at 870 ("He considered a few of the other Georgia-Pacific factors, but dismissed them because '[f]or the most part, the other factors have no real impact here.'"); *but see id.* at 881 (Newman, J. dissenting and concurring) (arguing that the majority mischaracterized the expert's analysis of the factors, and that he "discussed all fifteen factors").

[60] *See id.* at 870 (discussing the two royalty rates that were not rebundled licenses).

[61] *Id.* at 872. Although the admissibility of the litigation licenses was not before the court in *ResQNet*, the court seemingly approved the consideration of the previously-admitted litigation licenses; it noted that Lansa (the defendant) did not need to present separate evidence of a reasonable royalty, because it

the district court would have to reconsider the reasonable royalty calculation, and it "should not rely on unrelated licenses to increase the reasonable royalty rate above rates more clearly linked to the economic demand for the claimed technology."[62] In concluding, the Federal Circuit faulted the district court for relying on the re-bundling licenses "without any factual findings that accounted for the technological and economic differences between those licenses and the [patent-in-suit]."[63] A district court "must consider licenses that are commensurate with what the defendant has appropriated."[64]

In dissent, Judge Newman accused the majority of "creat[ing] a new rule whereby no licenses involving the patented technology can be considered . . . if the patents themselves are not directly licensed or if the licenses include subject matter in addition to that which was infringed by the defendant here."[65] The district court recognized that none of the licenses in evidence was "a perfect approximation of the hypothetical license between ResQNet and Lansa."[66] Judge Newman noted that "it is not necessary that the identical situation existed in past transactions, for the trier of fact to determine the value of the injury,"[67] and he accused the majority of depriving the fact-finder of relevant information.[68]

The majority in *ResQNet* did not hold that a district court may never consider "any licenses involving the technology of [the patents-in-suit] bundled with additional technologies, such as software code."[69] Rather, the majority took issue with the district court's "considering ResQNet's re-bundling licenses to significantly adjust upward the reasonable royalty *without any factual findings that accounted for the technological and economic differences between those licenses and the [infringed patent]*."[70] The majority in *ResQNet* noted that reasonable royalty damages must be "carefully tie[d] . . . to the claimed invention's footprint in the marketplace,"[71] and "[a]ny evidence unrelated to the claimed invention does not support

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was entitled to rely on the evidence already in the record (the litigation licenses) to establish a reasonable royalty.

[62] *Id.* at 872–73.

[63] *ResQNet.com, Inc.*, 594 F.3d at 873.

[64] *Id.* at 872; *see also* Wordtech Sys. v. Integrated Networks Solutions, Inc., 609 F.3d 1308, 1320 (Fed. Cir. 2010) (clarifying that any comparison of past licenses to the infringement "must account for key differences between them").

[65] 594 F.3d at 876 (Newman, J., dissenting).

[66] *Id.* at 877.

[67] *Id.* at 879.

[68] *Id.*

[69] *Id.* at 876.

[70] *Id.* at 873 (emphasis added). Judge Newman argued that the district court provided sufficient factual findings, but the majority disagreed.

[71] *ResQNet.com, Inc.*, 594 F.3d at 869 (stating that damages must be tied to market place presence).

compensation for infringement."[72] Where licenses are "radically different from the hypothetical agreement under consideration," they are generally not competent proof of damages.[73]

b) The Aftermath of *ResQNet*

In the wake of *ResQNet*, many courts that formerly excluded litigation licenses reversed course.[74] The court in *ResQNet* indicated that litigation licenses have at least some probative value—it described one of the two litigation licenses as "the most reliable license in the record."[75] Consequently, any courts that previously excluded litigation licenses based only on their supposed irrelevance under Rule 402[76] should view *ResQNet* as altering that analysis.[77]

But few courts that excluded litigation licenses before *ResQNet* grounded the exclusions solely on irrelevance under Rule 402,[78] and nothing in *ResQNet* significantly impacts the other bases for exclusion: Rules 403 (probative versus prejudice balancing) and 408 (excluding settlement agreements).[79] Consequently, it makes little sense to abandon exclusionary rules predicated on Rules 403 or 408 in response to *ResQNet*. Even so, some courts are holding that *ResQNet* changed the litigation-license landscape entirely, so that litigation licenses are now broadly admissible.

For instance, before *ResQNet*, Judge David Folsom, District Judge for the Eastern District of Texas, excluded litigation licenses under Rule 403 concluding that the prejudicial effect of these licenses substantially outweighed their probative

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[72] *Id.* (discussing that unrelated evidence to the claimed invention is null).

[73] *Id.* (quoting Lucent Techs. Inc. v. Gateway, Inc., 580 F.3d 1301, 1327–28 (Fed. Cir. 2009)).

[74] *See* Volumetrics Med. Imaging, LLC v. Toshiba America Med. Sys., Inc., No. 1:05-CV-955, 2011 WL 2470460, at *14 (M.D.N.C. June 20, 2011) (the "vast majority of courts to consider the relevance of settlement agreements (and offers) to the subject of patent damages in light of *ResQNet.com*" have found them to be relevant).

[75] *ResQNet.com, Inc.*, 594 F.3d at 872.

[76] *See Volumetrics Med. Imaging*, 2011 WL 2470460, at *10 ("Before the decision in *ResQNet.com*, district courts across the country had divided sharply (and, based on the Court's research, rather evenly) in their assessments (in a variety of procedural contexts) of whether litigation-inspired licensing terms have relevance to the determination of a 'reasonable royalty.'"); *see also* GE v. DR Sys., No. CV 06-5581, 2007 U.S. Dist. LEXIS 44644, at *6 (E.D.N.Y. June 20, 2007) ("[S]ettlement agreements reached to resolve litigation or threatened litigation are generally not relevant to the issue of what may constitute a reasonable royalty."); Monsanto Co. v. Bayer Bioscience N.V., No. 4:00CV01915, 2005 U.S. Dist. LEXIS 46068, at *56 (E.D. Mo. Oct. 28, 2005) ("Based on the overwhelming case law on the subject, the settlement agreements are not relevant to the reasonable royalty rate . . . .") (internal quotations omitted).

[77] As shown in Part 3(a), *infra*, litigation licenses are relevant to the question of the reasonable royalty.

[78] *See, e.g.*, Cornell Univ. v. Hewlett-Packard Co., No. 01-CV-1974, 2008 U.S. Dist. LEXIS 39343, at *9–14 (N.D.N.Y May 8, 2008) (excluding litigation licenses under both Rule 402 and Rule 408).

[79] The bases for exclusion are examined in more detail *infra* in Part 3.

value.[80] *ResQNet* said nothing to diminish the prejudicial effect of litigation licenses,[81] and its only reference to probative value was relative—that the litigation licenses in that case were more reliable than the completely-unreliable re-bundling licenses.[82] Nevertheless, this same judge—without conducting a Rule 403 analysis at all—has determined that *ResQNet* mandates the admissibility of litigation licenses.[83]

Nothing in *ResQNet* should change the positions of courts that previously relied on Rules 403 or 408 to exclude litigation licenses. The admissibility of litigation licenses simply was not before the court in *ResQNet.*

c) Other Recent Reasonable Royalty Cases

i)*Lucent*

In *Lucent Techs. v. Gateway, Inc.*, on which the *ResQNet* court relied, the Federal Circuit reversed a jury's damages award that rested on insufficient evidence.[84] Lucent, the patentee, sought reasonable royalty damages calculated as a running royalty, while Microsoft (which had intervened on behalf of defendant Gateway) sought a lump-sum reasonable royalty.[85] The jury awarded a lump-sum royalty of $358 million.[86] Microsoft argued that insufficient evidence supported this award, and the Federal Circuit agreed.[87] The only licenses that Lucent had offered into evidence for the reasonable royalty calculation were prior licenses by Microsoft for technology that Lucent argued was comparable to the technology in its patent.[88] The court noted that only four of the eight licenses in evidence were lump-sum agreements.[89] It stopped short of holding "that a running-royalty license

[80] Spreadsheet Automation Corp. v. Microsoft Corp., 587 F. Supp. 2d 794, 801 (E.D. Tex. 2007).

[81] The court in *ResQNet* recognized the prejudicial effect of litigation licenses, noting that "litigation itself can skew the results of the hypothetical negotiation." ResQNet.com, Inc. v. Lansa, Inc., 594 F.3d 860, 872 (Fed. Cir. 2010).

[82] *Id.* at 872–73 (discussing why the litigation licenses were used).

[83] *See* Datatreasury Corp. v. Wells Fargo & Co., No. 2:06-CV-72, 2010 U.S. Dist. LEXIS 25291, at *19 (E.D. Tex. Mar. 4, 2010) ("In light of *ResQNet*, litigation-related licenses should not be excluded from the March 2010 Phase I trial in the above-captioned case.").

[84] 580 F.3d 1301, 1328 (Fed. Cir. 2009) (discussing why the evidence provided to jury was insufficient).

[85] *Id.* at 1325.

[86] *Id.* at 1324.

[87] *Id.*

[88] *Id.* Licenses reflecting amounts previously paid by the infringer to license comparable technology go to the second *Georgia-Pacific* factor. Regardless of whether the prior licenses relate to *Georgia-Pacific* factor 2 [prior licenses by the infringer for comparable technology] or factor 1 [prior licenses by the patentee for the patent-in-suit], the court applies the same "general criteria for comparing patent licenses." Wordtech Sys., Inc. v. Integrated Networks Solutions, Inc., 609 F.3d 1308, 1319 (Fed. Cir. 2010).

[89] *Lucent,* 580 F.3d at 1328 (discussing the lump-sum agreements).

agreement cannot be relevant to a lump-sum damages award, and vice versa," but the party offering the dissimilar agreement must offer "some basis for comparison."[90] In other words, the party should present "particularized expert testimony explaining how various differences between the real and hypothetical license negotiations" would impact the appropriate royalty in the case.[91]

As for the four lump-sum licenses, the court pointed out that they appeared to provide for a cross-license of broad patent portfolios and for a lump sum additional payment by Microsoft, but Lucent failed to offer evidence that these licenses "were sufficiently comparable to support the lump-sum damages award."[92] The court summarized the evidentiary shortcomings:

> The law does not require an expert to convey all his knowledge to the jury about each license agreement in evidence, but a lump-sum damages award cannot stand solely on evidence which amounts to little more than a recitation of royalty numbers, one of which is arguably in the ballpark of the jury's award, particularly when it is doubtful that the technology of those license agreements is in any way similar to the technology being litigated here.[93]

ii) *Wordtech*

In *Wordtech Systems, Inc. v. Integrated Networks Solutions, Inc.*,[94] defendant INS infringed Wordtech's patent covering an automated compact disc duplicator.[95] At trial, Wordtech introduced into evidence "thirteen patent licenses that it previously granted to third parties for rights to some or all of the patents-in-suit."[96] Stressing that "comparisons of past patent licenses to the infringement must account for 'the technological and economic differences' between them," the Federal Circuit reversed the jury's damages award of a lump-sum royalty.[97] Once again, the court held that the jury had an insufficient basis for comparison between the evidentiary licenses and the hypothetical license at issue.[98] Eleven of the licenses involved a running royalty.[99] The court acknowledged the potential relevance of these licenses, but found no basis for comparing the running royalties with the lump-

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[90] *Id.* at 1330.

[91] *Id.*

[92] *Id.* (discussing Lucent's burden on damages).

[93] *Id.*

[94] 609 F.3d 1308 (Fed. Cir. 2010).

[95] *Id.* at 1310–11 (detailing the background information of the cases).

[96] *Id.* at 1319 (discussing plaintiff's damages evidence).

[97] *Id.* at 1320 (quoting *ResQnet*, 594 F.3d at 873).

[98] *Id.* at 1318–22.

[99] *Id.* at 1320 (stating the lack of evidence supporting jury's finding).

sum award.[100] In addition, "Wordtech signed several of these licenses after initiating or threatening litigation against the licensees, and 'litigation itself can skew the results of the hypothetical negotiation.'"[101] As for the remaining two licenses, "[n]either license describe[d] how the parties calculated each lump sum, the licensees' intended products, or how many products each licensee expected to produce."[102]

iii) *Uniloc*

In *Uniloc USA, Inc. v. Microsoft Corp.*,[103] the Federal Circuit rejected the ubiquitous 25% "Rule of Thumb" for the reasonable royalty analysis.[104] In doing so, the court summarized *Lucent*, *ResQNet*, and *Wordtech* as holding that "a patentee [cannot] rely on license agreements that [are] 'radically different from the hypothetical agreement under consideration' to determine a reasonable royalty."[105] "The meaning of these cases is clear: there must be a basis in fact to associate the royalty rates used in prior licenses to the particular hypothetical negotiation at issue in the case."[106]

d) A Distillation of the Case Law

The *ResQNet* line of cases does not teach that in order to provide admissible evidence of a reasonable royalty a prior license must exactly match the circumstances of a hypothetical negotiation. Instead, *ResQNet* and the related cases emphasize the importance of the offering party linking the prior license to the patent-in-suit. The offering party must explain how the agreement is useful in calculating the reasonable royalty, and how any different circumstances surrounding the prior license would affect the hypothetical negotiation at issue in the litigation.

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[100] *Id.*

[101] *Id.* at 1320–21 (quoting ResQNet.com, Inc. v. Lansa, Inc., 594 F.3d 860, 872 (Fed. Cir. 2010) (discussing the context of the licenses that were considered)).

[102] *Id.* at 1320. This background information into the parties' calculation of the lump sum is required in order to draw a comparison to the infringer's intended use at the time of the hypothetical negotiation. Put differently, if a licensee intending to produce 1 million licensed products signed a lump-sum license for $1 million, a licensee intending to produce 250,000 licensed products would expect to negotiate a smaller lump-sum payment. The jury needs to know the prior licensee's projections at the time of the prior license in order to conduct the hypothetical negotiation based on the patentee's and infringer's projections.

[103] 632 F.3d 1292 (Fed. Cir. 2011).

[104] *Id.* at 1315. Prior to *Uniloc*, patent damages experts often used the 25% rule of thumb as a starting point for their hypothetical negotiation. The rule assumes that 25% of the anticipated profits from the use of a patented invention would go to the patentee as a royalty—the infringer would keep the other 75%. *Uniloc*, 632 F.3d at 1312–13. The rule of thumb is based on averages from empirical data. *Id.* The Federal Circuit criticized the rule's failure to account for the individualities of a given case. *Id.* at 1317–18.

[105] *Id.* at 1316 (quoting Lucent Techs. v. Gateway, Inc., 580 F.3d 1301, 1327 (Fed. Cir. 2009)).

[106] *Id.* at 1317.

The necessity of a link between the prior licenses and the hypothetical license under consideration is not a new concept. In *Georgia-Pacific*, the court recognized the importance of such a link.[107] Some of the licenses offered in that case were for manufacture and sale outside of the United States, where the patentee had no facilities or plans to sell.[108] The court found these circumstances very different from a license to a direct competitor within the United States.[109] Accordingly, the court found "no sound basis for a meaningful comparison," so that "the amounts of the royalties payable under the foreign licenses [did] not carry any significant weight with respect to the issue of a reasonable royalty."[110] Similarly, in a related context, the Federal Circuit has noted that a party seeking to rely on litigation licensing fees to show commercial success must demonstrate a nexus between the fees (the evidence of commercial success) and the merits of the invention.[111] Because it is "often cheaper to take licenses than to defend infringement suits," a prior litigation license may not be useful to show that the patented invention enjoyed commercial success, and the patentee is responsible to demonstrate the nexus between the fees paid and the patent's value.[112]

The takeaway from the *ResQNet* line of cases is that any prior licenses used to prove a reasonable royalty must be presented in a way that is useful to the fact-finder in calculating the reasonable royalty. If the prior licenses include a re-bundling agreement and service contracts, the evidence must be presented in a way that coherently links the license to the patent-in-suit and accounts for the value of the other licensed items. If the license is for a running royalty and the patentee is seeking a lump sum, the license must be presented in a way that allows the jury to confidently value the running royalty in terms of the bargaining parties' expectations, so that the running royalty can be translated into a lump sum.

The more similar the licenses are to the hypothetical negotiation at issue, the greater their probative value. As the link between the prior license and the current

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[107] Georgia-Pacific Corp. v. U.S. Plywood Corp., 318 F. Supp. 1116 (S.D.N.Y. 1970), *modified*, 446 F.2d 295 (2d. Cir. 1971).

[108] *Id.* at 1139.

[109] *Id.* ("The rights granted by USP to the foreign licensees were completely different from the rights appropriated by GP, which sold its infringing product in competition with USP throughout the United States.").

[110] *Id.*

[111] One way to demonstrate patent validity is by showing that the patented invention enjoyed commercial success—that is, that it was well-received in the market. One way to evidence commercial success is by showing the existence of prior licenses—if a great number of entities licensed the patented invention, this indicates (but generally does not conclusively prove) patent validity. Because it does not directly demonstrate validity, but instead merely provides circumstantial evidence of validity (*e.g.*, nonobviousness), commercial success is known as a secondary consideration. GSI Grp., Inc. v. Sukup Mfg. Co., No. 05-3011, 2008 U.S. Dist. LEXIS 80088, at *14 (C.D. Ill. Oct. 8, 2008).

[112] Iron Grip Barbell Co. v. USA Sports, Inc., 392 F.3d 1317, 1324 (Fed. Cir. 2004) (internal quotations omitted).

litigation becomes more tenuous—for example, if the patent-in-suit was in the prior license, only one patent in a very large patent portfolio involved in a cross-license agreement resulting from litigation—the probative value of the license decreases. And, of course, the licenses must be at least minimally comparable in order to be at all probative.

Once the licenses meet a low threshold similarity requirement, the differences and similarities must be explained in a way that allows the jury to account for the differences in determining the relationship of the licenses to the reasonable royalty at issue. In other words, the jury must have some "testimony with which to recalculate in a meaningful way the value of [the offered agreements] to arrive at the . . . damages award."[113] The non-offering party will attempt to highlight the distinctions between the offered license and the hypothetical negotiation.

3) Bases for Exclusion of Litigation Licenses: Rules 402, 403, and 408

Courts that have excluded litigation licenses from evidence have relied primarily on three Federal Rules of Evidence in reaching their conclusion. The first is Rule 402 (relevance).[114] The second is Rule 408 (settlement offers and agreements).[115] Finally, some courts exclude litigation licenses based on a Rule 403 balancing of the probative value and the prejudicial effect of the licenses.[116]

Following *ResQNet*, courts remain divided as to discovery and admissibility of litigation licenses. Some courts have continued to impose a broad exclusion, noting that the seemingly off-hand remarks regarding litigation licenses in *ResQNet* were not sufficient to upset established case law.[117] Other courts have determined that, following *ResQNet*, litigation licenses may be admissible.[118] Courts following the second path have subdivided into two camps: those that allow discovery of (and

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[113] Lucent Techs. v. Gateway, Inc., 580 F.3d 1301, 1330 (Fed. Cir. 2009).

[114] *See, e.g.*, GE v. DR Sys., No. CV 06-5581, 2007 U.S. Dist. LEXIS 44644, at *6 (E.D.N.Y. June 20, 2007) ("[S]ettlement agreements reached to resolve litigation or threatened litigation are generally not relevant to the issue of what may constitute a reasonable royalty."); Monsanto Co. v. Bayer Bioscience N.V., No. 4:00CV01915, 2005 U.S. Dist. LEXIS 46068, at *56 (E.D. Mo. Oct. 28, 2005) ("Based on the overwhelming case law on the subject, the settlement agreements are not relevant to the reasonable royalty rate . . . .").

[115] *See, e.g.*, Cornell Univ. v. Hewlett-Packard Co., No. 01-CV-1974, 2008 U.S. Dist. LEXIS 39343, at *9–14 (N.D.N.Y May 8, 2008) (excluding the negotiation offer amounts under Rule 408).

[116] Alpex Computer Corp. v. Nintendo Co., 1994 U.S. Dist. LEXIS 3343, at *28–38 (S.D.N.Y. Mar. 16, 1994) ("In light of the foregoing substantive law governing damage calculations in patent cases, the court finds evidence of Alpex' [sic] licensing offers inadmissible under Rule 403.").

[117] *See, e.g.*, Software Tree, LLC v. Red Hat, Inc., No. 6:09-CV-097, 2010 U.S. Dist. LEXIS 70542, at *10–11 (E.D. Tex. June 24, 2010) (distinguishing *ResQNet*, as the admission of litigation related agreement was not before that court); *see also* MSTG, Inc. v. AT&T Mobility LLC, No. 08 C 7411, 2011 U.S. Dist. LEXIS 5533, at *37–38 (N.D. Ill. Jan. 20, 2011) (describing the parties' disagreements of *ResQNet*'s meaning); Williams & Grab, *supra* note 5.

[118] Caluori v. One World Techs., Inc., No. CV-07-2035-CAS, 2012 WL 630246, at *4 (C.D. Cal. Feb. 27, 2012); *MSTG, Inc.*, 2011 U.S. Dist. LEXIS 5533, at *37–38; Williams & Grab, *supra* note 5.

potentially admission of) settlement negotiations surrounding a litigation license,[119] and those that do not.[120] This section examines the exclusion of litigation licenses under each of the three rules discussed above.

a) Rule 402

Rule 402 provides that irrelevant evidence is inadmissible.[121] Evidence with any probative value—that is, evidence having any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence—is relevant.[122]

i) *Federal Circuit Precedent*

Courts excluding litigation licenses for lack of probative value under Rule 402 usually rely on the Supreme Court's oft-cited statement in *Rude v. Westcott*:

> 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. . . . The avoidance of the risk and expense of litigation will always be a potential motive for a settlement.[123]

The Court's statement in *Rude* is quite accurate in the established royalty context in which that case was decided; a litigation license does not necessarily reflect the *proper royalty*, so a royalty agreed upon in the midst of litigation would not result in an established royalty. But courts have extended this statement to exclude

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[119] *See, e.g.*, Auto. Merch. Sys., Inc. v. Crane Co., No. 3:03-CV-88, 2011 WL 5025907, at *6 (N.D. W. Va. Oct. 21, 2011) (granting motion to compel disclosure of settlement negotiations); Delphi Auto. Sys., LLC v. Vehicle Occupant Sensing Sys., LLC, No. 10-10886, 2011 U.S. Dist. LEXIS 42236 (E.D. Mich. Apr. 19, 2011) (granting motion to compel documents related to negotiations of litigation licenses and concluding that, after *ResQNet*, both the agreement and the contemporaneous negotiations were discoverable); *MSTG, Inc.*, 2011 U.S. Dist. LEXIS 23417, at *13 (granting motion to compel documents pertaining to settlement negotiations); Datatreasury Corp. v. Wells Fargo & Co., No. 2:06-CV-72, 2010 U.S. Dist. LEXIS 25291, at *19–20 (E.D. Tex. Mar. 4, 2010) (granting discovery of negotiations surrounding litigation licenses).

[120] *See, e.g.*, Avocent Redmond Corp. v. Raritan Americas, inc., No. 10-CV-6100 (S.D.N.Y. Sept. 26, 2011) (acknowledging potential relevance of confidential mediation communications related to litigation license but foreclosing discovery); Pandora Jewelry, LLC v. Bajul Imps., Inc., No. 1:10-CV-135SNLJ, 2011 U.S. Dist. LEXIS 27340, at *6 (E.D. Mo. Mar. 17, 2011) (allowing discovery of litigation licenses, but not allowing discovery of related settlement agreements or negotiations).

[121] FED. R. EVID. 402 ("All relevant evidence is admissible, except as otherwise provided by the Constitution of the United States, by Act of Congress, by these rules, or by other rules prescribed by the Supreme Court pursuant to statutory authority. Evidence which is not relevant is not admissible.").

[122] FED. R. EVID. 401.

[123] Rude v. Westcott, 130 U.S. 152, 164 (1889).

litigation licenses in the context of a reasonable royalty,[124] and have often inaccurately described *Rude* as a reasonable royalty case.[125]

The extension of *Rude* to the reasonable royalty context is unwarranted because, in the reasonable royalty context, the offering party is not seeking to establish the litigation license as the royalty standard. Instead, the offering party is seeking to use it—with appropriate caveats and explanations—as evidence of a reasonable royalty.[126] Thus, it is a mistake—though an oft-committed one—for courts to treat *Rude* (reversing an award of damages where the award relied on a litigation license to determine an established royalty) as though it involved a determination of a reasonable royalty. And, although the first *Georgia-Pacific* factor is sometimes stated as "[t]he royalties received by the patentee for the licensing of the patent in suit, *proving or tending to prove an established royalty,*"[127] it is not obvious why evidence relevant to a reasonable royalty should be limited to evidence relevant to an established royalty.[128] Put another way, "the necessarily speculative hypothetical negotiation is rendered less speculative by use of as many facts as can be gleaned from the evidence to create a reasonable royalty."[129]

Sitting by designation in a district court, Chief Judge Rader, the chief judge of the Federal Circuit, authored the most notable opinion excluding litigation licenses under Rule 402 in a reasonable royalty case, *Cornell University v. Hewlett-Packard*

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[124] *See* Spreadsheet Auto. Corp. v. Microsoft Corp., 587 F. Supp. 2d 794, 797 (E.D. Tex. 2007); Williams & Grab, *supra* note 5, at 2 ("Although the royalty at issue in *Rude v. Westcott* was an established royalty, courts have often cited the above-referenced language to support the prohibition of the use of settlement licenses in the context of a reasonable royalty.").

[125] *See, e.g.*, ePlus, Inc. v. Lawson Software, Inc., 764 F. Supp. 2d 807, 813 (E.D. Va. 2011) (citing *Rude* for the proposition that, "[a]t one time, it was the rule that settlement agreements simply could not be considered at all in the reasonable royalty calculus."); Wang Labs., Inc. v. Mitsubishi Elecs. Am., 860 F. Supp. 1448, 1452–53 (C.D. Cal. 1993) ("It is a century-old rule that royalties paid to avoid litigation are not a reliable indicator of the value of a patent, and should therefore be disregarded when determining reasonable royalty rates. This is because royalties paid under threat of suit may reflect the licensee's desire to avoid the risk and expense of litigation.").

[126] *See* Chapman, *supra* note 5, at 323 ("The fundamental difference between an established royalty and a reasonable royalty is that an established royalty represents an actual, transaction-based measure of the market value or price—under specific terms and conditions—of a particular patent, while a reasonable royalty is an estimate of damages owed to a patent holder due to the infringement of his or her patent."); *id.* at 324–25 (contrasting the stringent requirements of precision in proving an established royalties with the more lax standards for proving a reasonable royalty and the differences in the admissible evidence to prove each).

[127] Georgia-Pacific Corp. v. United States Plywood Corp., 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970), *modified*, 446 F.2d 295 (2d Cir. 1971) (emphasis added).

[128] *See* Cincinnati Car Co. v. N.Y. Rapid Transit Corp., 66 F.2d 592, 595 (2d Cir. 1933) (Hand, J.) ("Though the payments were not established royalties, we need not disregard them, any more than the master did. It is true that they were settlements for infringements, but both parties may have been influenced by a wish to be done with litigation; that consideration is a sword with two edges."); *see also* Chapman, *supra* note 5, at 323 (describing important distinctions between a reasonable royalty and an established royalty).

[129] Studiengesellschaft Kohle, m.b.H. v. Dart Indus., Inc., 862 F.2d 1564, 1573 (Fed. Cir. 1988).

Co.[130] In his unpublished opinion, Judge Rader cited two Federal Circuit cases—*Studiengesellschaft Kohle, m.b.H. v. Dart Industries, Inc.*,[131] and *Deere & Co. v. International Harvester Co.*,[132]—as establishing "a body of case law excluding license agreements 'eroded by litigation' as irrelevant to the *Georgia-Pacific* reasonable royalty analysis."[133] Judge Rader held that

> [b]ecause the . . . licenses [were] signed under threat of litigation . . . [the] license amounts do not speak to 'the amount which a prudent licensee—who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention—would have been willing to pay as a royalty.' Accordingly, the offer and license amounts were eroded by litigation and are therefore irrelevant and inadmissible.[134]

Neither of the two cases referenced in *Cornell* demand a broad exclusion of litigation licenses under Rule 402. In *Studiengesellschaft*, the Federal Circuit affirmed the district court's reversal of a special master's damages determination.[135] The special master admitted a prior litigation license into evidence, but largely ignored it.[136] The district court held that the special master erred by undervaluing this license, because the earlier litigation license was entered by the prior parties after a court of appeals held the patent to be valid and infringed; the only issue remaining in the earlier litigation was an accounting for damages.[137] At the time of the prior license, the patentee and infringer occupied the same position as the hypothetical negotiators in a reasonable royalty calculation; the patent was unquestionably valid, enforceable, and infringed.[138] This license was more relevant—not less relevant—than a non-litigation license, under which the parties may still differ on the validity or infringement of the patent.[139] Rather than holding litigation licenses to be irrelevant to a reasonable royalty determination, the Federal Circuit in *Studiengesellschaft* affirmed the district court's holding ascribing error to the spe-

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[130] No. 01-CV-1974, 2008 U.S. Dist. LEXIS 39343, at *9–14 (N.D.N.Y May 8, 2008).

[131] 862 F.2d 1564 (Fed. Cir. 1988).

[132] 710 F.2d 1551 (Fed. Cir. 1983).

[133] Cornell Univ. v. Hewlett-Packard Co., No. 01-CV-1974, 2008 U.S. Dist. LEXIS 39343 at *11–12 (N.D.N.Y May 8, 2008).

[134] *Id.* at *14.

[135] Studiengesellschaft Kohle, m.b.H. v. Dart Indus., Inc., 862 F.2d 1564, 1580 (Fed. Cir. 1988).

[136] *Id.* at 1571.

[137] *Id.* at 1570–71 (affirming the district court's finding of validity, and reversing the district court's finding of non-infringement with respect to the relevant patent).

[138] Studiengesellschaft Kohle m.b.H. v. Dart Indus., Inc., 666 F. Supp. 674, 682 (D. Del. 1987).

[139] *Id.* The patentee and third-party licensee entered into the litigation license after the infringer began infringing the patent, so the litigation license was not a precise fit: the hypothetical negotiation is presumed to occur immediately prior to the infringer's first infringement. Nevertheless, the license was highly probative.

cial master for ignoring the litigation license under the particular set of facts in that case.[140]

In *Deere & Co.*, the district court excluded a prior license on the basis of Rule 408.[141] The Federal Circuit held that this exclusion was error, because there was no evidence that the prior licensee had ever infringed the patent prior to the license agreement—in other words, there was no evidence of a disputed "claim" for the purposes of invoking Rule 408.[142] Nevertheless, the Federal Circuit found that the error was harmless, because the district court alternatively found the prior license to be of such little probative value that it would not change the outcome.[143] The Federal Circuit expressly noted that the district court did not find the prior license inadmissible under Rule 402, but instead merely found the prior license to be "of little or no significance to the issues of an established royalty or a reasonable royalty."[144] The court held that the district court could "properly discount" the value of the prior license given the defendant's ongoing infringement in the market and the ongoing litigation, but that does not suggest that the license was irrelevant, particularly given the Federal Circuit's express conclusion that the district court did not find the license inadmissible under Rule 402.[145]

ii) *Courts' Conflation of Imperfection and Irrelevance*

Neither *Rude* nor the Federal Circuit's prior cases have held litigation licenses irrelevant to a reasonable royalty determination. But this does not answer the more important question of whether such licenses are, in fact, irrelevant. The reasoning employed in *Cornell*—that litigation licenses are irrelevant because they do not mirror the hypothetical negotiation's standard of a prudent licensee who desired, as a business proposition, to obtain a license to manufacture and sell an article em-

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[140] Courts now universally recognize the probative value of a litigation license where the prior settlement occurred *after* a determination of validity and infringement but before a final damages award. *See, e.g.*, Snellman v. Ricoh Co., 862 F.2d 283, 289 (Fed. Cir. 1988). In fact, such a license more closely approximates the conditions of a hypothetical negotiation than the traditional license. A traditional license may run the gamut in terms of the parties' beliefs regarding patent strength—thus, a traditional license may reflect a discount for uncertain infringement and validity. In a post-verdict litigation license, such doubts have been significantly reduced. There could still have been the possibility of reversal on appeal in the lawsuit giving rise to the litigation license, but the uncertainties have been greatly reduced relative to a traditional license, because reversal on appeal is a rarity.

[141] Deere & Co. v. Int'l Harvester Co., 710 F.2d 1551, 1554 (Fed. Cir. 1983).

[142] *Id.* at 1557.

[143] *Id.* at 1558.

[144] *Id.* at 1556.

[145] *Id.* at 1557 ("Moreover, as the White license was negotiated against a backdrop of continuing litigation and IH infringement of the Schreiner patent, the district court could properly discount the probative value of the White license with regard to a reasonable royalty."). The prior license in *Deere* was not a litigation license, but was instead a license with a "relatively minor competitor" who held "3% or less of the market." Additionally, the license was entered into against the backdrop of the ongoing patent litigation between Deere and International Harvester.

bodying a patented invention—goes too far, because it conflates imperfection and irrelevance.

While the dissimilarities between an existing license's circumstances and those of the hypothetical royalty affect the precision with which the existing licenses suggest a reasonable royalty, such dissimilarities do not render existing licenses irrelevant. This logic would compel a finding of irrelevance for any license taken under circumstances differing from the hypothetical negotiation, including many kinds of licenses uncontroversially admitted into evidence. For instance, courts routinely admit and consider licenses entered well before or well after the date of the hypothetical negotiation, even though these licenses are often entered into under different prevailing circumstances existing at the time of the hypothetical license.[146] In fact, Judge Rader has recognized that although these licenses are not exact matches they are still relevant.[147] Like litigation licenses, these licenses are not perfect carbon copies of the hypothetical license, but neither are they irrelevant.

In the case of a license entered into at a different time than the hypothetical negotiation, the fact-finder must determine if any material market conditions or other circumstances differed at the time of the hypothetical negotiation. If there were material changes, the fact-finder must then determine how the existing conditions were reflected in the valuation of the prior license and how those conditions would affect the valuation of the hypothetical license. This is a difficult chore, and may limit the probative value of such a license, but it does not render it irrelevant. Likewise, it is unquestionably difficult to extract value-related considerations in a litigation license from the external considerations not related to the value of the patented invention. However, the litigation license still reflects, to some degree, the value of the patented invention (that is, the amount the prudent licensee would be willing to pay). As long as the value of the invention makes up any component of

[146] The hypothetical negotiation is assumed to occur immediately prior to the first infringement by the infringer. *See, e.g.*, Lucent Techs. v. Gateway, Inc., 580 F.3d 1301, 1324 (Fed. Cir. 2009) ("[T]he hypothetical negotiation or the 'willing licensor-willing licensee' approach[] attempts to ascertain the royalty upon which the parties would have agreed had they successfully negotiated an agreement just before infringement began."); Wang Labs., Inc. v. Toshiba Corp. 993 F.2d 858, 870 (C.A. Fed. 1993) ("The key element in setting a reasonable royalty . . . is the necessity for return to the date when the infringement began." (quoting Hanson v. Alpine Valley Ski Area, Inc., 718 F.2d 1075, 1079 (Fed. Cir. 1983))).

[147] *See* IP Innovation L.L.C. v. Red Hat, Inc., 705 F. Supp. 2d 687, 691 (E.D. Tex. 2010) ("Mr. Gemini should have at least inaugurated his analysis with reference to the existing licenses to the patents-in-suit . . . . Mr. Gemini disregarded these licenses because Xerox entered into these agreements in the mid-1990's, a decade before the alleged hypothetical negotiation date. However, these licenses are far more relevant than the general market studies on which Mr. Gemini primarily relied in his expert report."); *see also* Studiengesellschaft Kohle m.b.H. v. Dart Indus., Inc., 862 F.2d 1564, 1571–72 (Fed. Cir. 1988) (holding that district court did not err in relying on licenses entered into ten years after the hypothetical negotiation because the reasonable royalty standard is sufficiently flexible to accommodate such licenses).

the litigation license, it is relevant to answer the question of what the proper value of the invention is (that is, what value should be ascribed to a reasonable royalty).

iii) *The Effect of Litigation Considerations on Non-Litigation Licenses*

Litigation licenses do not become irrelevant simply because litigation considerations factor into the royalty amount. Royalties are usually paid to avoid litigation—most people who thought that they could infringe a patent with impunity would likely do so.[148]

Even in licensing discussions occurring prior to any potential infringement, the parties incorporate assumptions regarding the prospect of litigation into their analysis. For example, the recipient of a given licensing offer faces four alternatives. It may (1) accept or otherwise negotiate to obtain a license; (2) manufacture the contemplated product without a license and face potential litigation; (3) attempt to design around the patent (or, in cases where the party does not believe the contemplated product to infringe, redesign the contemplated product to give the patent a wider berth), then manufacture the re-designed product, and face potential litigation; or (4) abandon any plans regarding the contemplated product.[149] The recipient of the offer will attempt to factor in the likelihood and projected outcomes of litigation under the various scenarios in order to determine the most efficient option. Judge Easterbrook has it right:

> [P]eople may settle patent litigation to reduce the costs of the legal process. The terms of a settlement reflect these costs as well as the parties' estimates about the probable outcome on the merits if the case proceeds . . . . Yet deciding whether to take a license entails a similar assessment of the risks posed by litigation—prediction and avoidance of costs before suit begins . . . .[150]

iv) *The Inescapable Role of the Patent's Value in a Litigation License*

Like any other settlement, the amount a party is willing to pay or accept for a litigation license (LL) generally consists of three core components: the likelihood of liability (L, the party's assessment of patent strength); the expectation value of the damages (D, the party's assessment of the patent's value); and the party's ex-

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[148] This is not a normative assertion merely a descriptive one.

[149] In addition, the offeree could initiate litigation for declaratory relief or initiate reexamination proceedings in the PTO but, in the meantime, it must still decide whether to go forward with its manufacturing plans in the absence of a license.

[150] *In re* Mahurkar Double Lumen Hemodialysis Catheter Patent Litig., 831 F. Supp. 1354, 1379 (N.D. Ill. 1993) (Easterbrook, J., sitting by designation).

pected litigation costs (LC).[151] In the absence of externalities,[152] a rational patent-infringement defendant should be willing to pay in settlement an amount less than or equal to the expectation value of the total exposure in the litigation, $LL_{Def.} \leq L_{Def.} * D_{Def.} + LC_{Def.}$[153] Similarly, a rational patent-infringement plaintiff should be willing to accept in settlement an amount greater than or equal to the expectation value of the net recovery in litigation, $LL_{Pla.} \geq L_{Pla.} * D_{Pla.} - LC_{Pla.}$[154] Even where a license is almost exclusively the product of considerations external to the value of the license (such as costs of litigation and the likelihood of non-infringement), there is still some component of the settlement reflecting the patent's value—or its lack of value—to the parties.

Because the patent's value represents a necessary consideration in reaching a litigation license, the cost of a litigation license can provide information about the patent's non-litigation value to the parties to the license. Imagine a litigation license reflecting a lump-sum royalty of $500,000. If we can discover the parties' belief of the patent strength (the likelihood of a finding that the patent is valid, enforceable, and infringed) and their expected costs of litigation, we can learn something about the patent's non-litigation value to the parties.[155] For example, if the plaintiff perceived only a 10% chance of liability, and estimated litigation costs to be $250,000, then we know that the value of the patent as gauged by the patentee is less than $7.5 million.[156] Similarly, if the defendant's expected litigation costs were $400,000 and it perceived a 10% patent strength, it would settle for $500,000 only if the patent value is greater than or equal to $1 million. Royalty value is less likely to be a driving force in the settlement amount as the chances of recovery decrease, or as expected litigation costs increase, but the only way to eliminate royalty value

[151] *See* J. ALEXANDER TANFORD, THE PRETRIAL PROCESS 344–349 (2003). The settlement calculations also take into account other considerations, such as the time-value of money and the parties' immediate need for funds or resolution. *Id.*

[152] In some cases, a party's financial circumstances could create settlement pressure. Or other externalities—such as a contemplated sale—could create pressure on a party to resolve litigation. There are numerous considerations besides the three core components that may drive settlement demands.

[153] This formula is simplified, because most parties do not identify only a single potential damages award. A party might decide that there is a 10% chance of a finding of no infringement, a 10% chance of a finding of invalidity, and an 80% chance of a finding of a valid and infringed patent. The party may further decide that there is a 20% chance of a reasonable royalty award of $500,000, a 40% chance of an award of $1 million, and a 20% chance of an award of $1.5 million. These estimates add complexity to the formula, but do not change its basic underlying structure.

[154] As with litigation outcomes, a party may consider the likelihood of different litigation costs and incorporate each into its formula. The emphasis is not on what the actual litigation costs will be, or on what the actual damages award would be, but on the parties' expectations of those costs or awards at the time of the negotiation.

[155] We would also need to learn of and eliminate any external factors creating settlement pressure or settlement resistance.

[156] If the value were, for example, $10 million, the plaintiff would have calculated its likely recovery based on its assessment of patent strength as $1 million, and reduced that by the $250,000 in expected litigation costs to calculate a settlement threshold of $750,000. It would not have settled for less.

as a consideration in a litigation license (and, consequently, to eliminate any chance that the license has probative value in future litigation) is for both parties to be certain of a defense verdict.

Of course, the non-patent-value components of a settlement amount must be peeled away in order to glean any probative value. The fact-finder has to draw substantial inferences as she attempts to determine the settling parties' assessments of patent strength and litigation costs. But, as Judge Friendly put it in a case outside of the patent context, "the length of the chain of inferences necessary to connect the evidence with the ultimate fact to be proved . . . does not render the evidence irrelevant."[157] Put another way, "so long as a chain of inferences leads the trier of fact to conclude that the proffered submission affects the mix of material information, the evidence cannot be excluded at the threshold relevance inquiry."[158] As the chain of inferences upon which evidence depends for its probative value lengthens, the probative value decreases proportionately, but that is a question for Rule 403—not Rule 402.[159]

The real question is not whether litigation licenses have probative value, but whether the probative value is large enough and reliable enough to be worth the effort of uncovering it. This question is addressed in the sections that follow.

b) Rule 408

Despite having some probative value, litigation licenses may nevertheless be excluded under Rules 403 or 408. Rule 408 precludes admission of settlement offers or agreements "when offered to prove . . . [the] amount of a claim that was disputed."[160] In the context of litigation licenses, courts often conflate a litigation license's diminished probative value with inadmissibility as a Rule 408 settlement communication.[161] A Rule 408 exclusion, however, does not depend on the ab-

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[157] United States v. Ravich, 421 F.2d 1196, 1204 n.10 (2d Cir. 1970).

[158] United States v. Quattrone, 441 F.3d 153, 188 (2d Cir. 2006).

[159] *Ravich*, 421 F.2d at 1204 n.10 (rejecting common law "inference upon inference" test and noting that drawn out inferential chains do not defeat relevance but subject challenged evidence to Rule 403 considerations); *see also* ePlus, Inc. v. Lawson Software, Inc., 764 F. Supp. 2d 807, 813 (E.D. Va. 2011) ("It is now . . . well-settled that settlement agreements entered into in the context of litigation may be considered, but that they have minimal probative value respecting the calculation of reasonable royalties.").

[160] The language of the rule makes inadmissible evidence of "(1) furnishing or offering or promising to furnish—or accepting or offering or promising to accept—a valuable consideration in compromising or attempting to compromise the claim; and (2) conduct or statements made in compromise negotiations regarding the claim." FED. R. EVID. 408(a). The rule was amended, effective December 1, 2011, to provide that settlement evidence "is not admissible—on behalf of any party—either to prove or disprove the validity or amount of a disputed claim."

[161] Cornell Research Found., Inc. v. Hewlett-Packard Co., No. 5:01-CV-1974, 2007 WL 4349135, at *17 (N.D.N.Y. 2007) ("[M]any of the cases addressing the issue now presented tend to conflate two separate, often competing concepts both of which are often at play—the privilege interposed by Rule 408, under which otherwise potentially relevant information is excluded in order to foster the policy

sence of probative value—the probative value or reliability of the offered license is generally irrelevant to exclusion under the language of Rule 408.[162] Consequently, the Federal Circuit's statement about the reliability of the litigation license in *ResQNet* would not impact a Rule 408 analysis.[163]

i) *The Operation of Rule 408 in the Reasonable Royalty Context*

It has been argued that Rule 408 does not apply in the reasonable royalty context because "evidence considered in reaching a reasonable royalty determination does not purport to 'prove' the amount of the claim," but is instead "used in conjunction with all other relevant evidence to assist the fact-finder in determining an amount of damages."[164] This argument parses too finely—it fails to account for the difference between evidence offered to prove the amount of the claim (any evi-

favoring compromise of disputed claims, and relevance under Rule 402 of the Federal Rules of Evidence."); *see also* Pioneer Corp. v. Samsung SDI Co., No. 2:06-CV-334, 2008 U.S. Dist. LEXIS 107079, at *14–15 (E.D. Tex. Oct. 2, 2008) ("Numerous Courts have relied on the Supreme Court's reasoning in *Rude v. Westcott* and likewise found that license fees negotiated under the threat of litigation are inherently unreliable and properly excludable under Rule 408.").

[162] PAUL F. ROTHSTEIN, FEDERAL RULES OF EVIDENCE § 408 (3d ed. 2010) ("Some jurisdictions do not apply the ban where the size of the offer approaches the amount of the claim on the theory that the probative value of the evidence is high. Rule 408 does not make such a distinction. Apparently the drafters were more concerned with encouraging settlement than with probative value."); *Cornell Research Found.*, 2007 WL 4349135, at *17 (noting that Rule 408 is not grounded in considerations of relevance but in privilege); *but see* FED. R. EVID. 408, 1972 advisory committee notes (describing potential irrelevance as one basis for exclusion). Some early commentators argued that the rationale for Rule 408 was the lack of relevance. The advisory committee rejected this theory in favor of the theory that the purpose of the rule is to promote settlement. 2 CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, FEDERAL EVIDENCE § 4:57, at 134 (3d ed. 2007).

[163] Courts disagree as to whether the admissibility of a litigation license as evidence of a reasonable royalty is governed by Federal Circuit law or by regional circuit law. *Compare* Small v. Nobel Biocare United States, 2011 U.S. Dist. LEXIS 77838, at *11 n.2 (S.D.N.Y. July 19, 2011) (stating that where the determination of a discovery dispute implicates substantive patent law, Federal Circuit law applies), *with* Big Baboon Corp. v. Dell, Inc., 2010 U.S. Dist. LEXIS 108027, at *12 (C.D. Cal. Oct. 8, 2010) (concluding that regional circuit law controls a discovery dispute regarding discovery of settlement agreements for reasonable royalty purposes). Courts also disagree about whether the Rule applies to exclude settlement evidence related to a prior lawsuit against a different party. *Compare, e.g.*, Donnelly Corp. v. Gentex Corp., 918 F. Supp. 1126, 1133–34 (W.D. Mich. 1996) ("[I]t is obvious that [Rule 408] itself does not preclude evidence of these compromises . . . because the offers to compromise the claims do not concern the claim being litigated in this case."), *with, e.g.*, Cornell Univ. v. Hewlett-Packard Co., No. 01-CV-1974, 2008 U.S. Dist. LEXIS 39343, at 9–14 (N.D.N.Y May 8, 2008) ("To facilitate settlement, Rule 408 protects negotiations between one of the parties to a case and a third party."). It is not necessary to resolve these disputes for purposes of this Article.

[164] Chapman, *supra* note 5, at 327. Similarly, one might argue that the litigation license is being used to prove the amount of the current claim—not the amount of the previous claim. (The rule seems to be concerned with using the evidence to prove liability for, invalidity of, or amount of the prior claim—not some different claim.) The problem with this argument is that the probative value of the litigation license is derived solely from its use in proving the value of the prior claim—in fact, external considerations like litigation costs must be peeled from the royalty amount in order to reach the probative aspect of a litigation license. *See supra* Part 3(a); *see also* Chapman, *supra* note 5, at 355 ("By considering the settlement license terms and the circumstances leading to the settlement, an expert or fact-finder can appropriately adjust the settlement license terms for use in a reasonable royalty determination.").

dence offered for the purpose of proving the amount of the claim) and an assertion that the amount stated in the evidence is the correct amount of the claim. Stated differently, the rule does not require that the offeror be seeking to prove that the settlement amount is the correct amount of the claim, but merely that the offeror is offering the license as evidence of the amount of the claim.[165] Such is the case in the reasonable royalty context.

Moreover, the policy considerations behind Rule 408 apply to litigation licenses. Rule 408 was drafted to encourage settlement and to encourage full and frank negotiations.[166] The admission of settlement agreements in subsequent infringement litigation as evidence of a reasonable royalty would, at least to some degree, inhibit settlement. This is because settlement generally reflects a compromise—a resolution in which neither party fully receives that to which they believe they are entitled.[167] Because of the compromising nature of a settlement, a patentee may hesitate to settle for an amount less than what he believes is the patent's value if he knows that the settlement amount will be later used to prove the value of the patent. In other words, the parties now must include an additional consideration into the settlement calculus. Thus, instead of the patentee settling if $LL_{Pla.} \geqslant L_{Pla.}*D_{Pla.} - LC_{Pla,}$[168] the patentee will settle only if $LL_{Pla.} \geqslant L_{Pla.}*D_{Pla.} - LC_{Pla.} + SL_{Pla.}$, where SL_{Pla} equals the plaintiff's expected decrease in subsequent reasonable royalty awards.[169]

Consider an overly-simple potential settlement from a hypothetical patentee's point of view. The patentee intends to file two infringement lawsuits against similarly situated defendants, both of whom sold approximately 1 million infringing

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[165] *See* Belton v. Fibreboard Corp., 724 F.2d 500, 505 (5th Cir. 1984) (finding reversible violation of Rule 408 where jury instructions "directed the jury to consider the settlement *as part of* the proof of the amount of the claim" (emphasis added)).

[166] *See supra* note 163.

[167] Where the plaintiff does not actually compromise below the legitimate value of the patent, but instead receives more than the patent is actually worth (where for example, the defendant's settlement is driven more by expected litigation expenses or fear of injunction than the value of the patent), settlement would likely not be inhibited at all by the prospect of the later use of the license in infringement litigation. The use inures to the plaintiff's benefit, so the plaintiff is not deterred from settlement, and the defendant is likely to perceive itself to be unaffected by the potential use of the license in future litigation. To the extent the defendant has an interest, that interest may militate in favor of settlement, because the defendant may expect that potential future infringers would be the defendant's competitors, and anything that increases the price that competitors pay for a license inures to the defendant's benefit.

[168] *See* TANFORD, *supra* note 151 and accompanying text.

[169] The same would be true of an alleged infringer, to the extent the alleged infringer perceived any possibility of an increase in the reasonable royalty rate of potential future infringement, but the infringer is less likely to take this into account than the patentee because future infringement suits are more speculative for the infringer than for the patentee. Because any future infringement suit against this defendant would involve a different patent, courts are more likely to exclude this litigation license from consideration in the later litigation, and juries are less likely to give it significant weight.

widgets. The patentee believes, after an honest evaluation, that its patent should command a royalty of $1 per infringing widget manufactured, for a royalty of $1 million for past infringement. The patentee also believes that trial would cost $500,000[170] and, for present purposes, we will assume that the patentee is unusually confident in his success at trial,[171] so that the patentee's settlement range begins at $500,000.[172] After negotiations, Defendant 1 has offered to settle for $650,000, or $0.65 per infringing widget. Leaving aside the possibility of an injunction or enhanced damages (assume that neither defendant willfully or knowingly infringed),[173] the patentee should accept the settlement agreement. But, if the patentee believes that the litigation license would be admitted into the trial against Defendant 2, the patentee must consider not only the discount in the settlement amount in this case from the amount it is entitled to receive ($0.35 per infringing widget), but also the settlement's discounting effect on the future lawsuit, which instantly becomes worth less as a result of the settlement. With the litigation license in evidence, the patentee would no longer expect a jury to award $1 per infringing widget as a reasonable royalty, despite the patentee's best efforts to explain away the reduced litigation license as a concession due to costs of litigation and the like.[174] So, if the patentee were to settle with Defendant 1, it may believe the best it could do at trial against Defendant 2 is only $0.75 per infringing widget.[175] Settlement now costs the patentee $600,000 instead of $350,000. With litigation costs of $500,000, the patentee should go to trial instead of settling. If, on the other hand,

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[170] This is a conservative estimate based on statistical data. *See* AMERICAN INTELLECTUAL PROPERTY LAW ASSOCIATION, REPORT OF THE ECONOMIC SURVEY 35 (2011) (noting that, in 2011, median costs through discovery of patent-infringement litigation with less than $1 million at risk through discovery was $350,000, and median cost through completion was $650,000. Median cost of infringement litigation with $1 million-$25 million at risk was $1.5 million through discovery and $2.5 million through completion).

[171] *See, e.g., ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860, 880 (Fed. Cir. 2010) (Newman, J., dissenting) (arguing that patent litigation is notoriously unpredictable). No litigant knows with certainty that it will recover all of the damages it is seeking, but adding litigation uncertainty into the mix would only complicate the math without materially altering the analysis. The point of this exercise—that admission of litigation licenses into evidence adds another cost into the cost of settlement, and that this cost may be settlement-prohibitive—remains unchanged by litigation uncertainty.

[172] *See* TANFORD, *supra* note 151, at 344–49 (explaining settlement range calculations).

[173] 35 U.S.C. § 283–85 (2006). Enhanced damages and attorneys' fees are fairly rare. In a survey of 1209 patent cases that reached verdict, Professor Kimberly Moore found that some measure of enhanced damages was awarded in 147 of them (about 12%), and attorneys' fees were awarded in 84 (about 7%). Kimberly A. Moore, *Judges, Juries, and Patent Cases: An Empirical Peek Inside the Black Box*, 99 MICH. L. REV. 365, 380, 394 (2000).

[174] *See* Alpex Computer Corp. v. Nintendo Co., No. 86-CV-1749, 1994 U.S. Dist. LEXIS 3343, at *28–38 (S.D.N.Y. Mar. 16, 1994) ("Alpex has claimed damages exceeding $200 million. Nintendo's experts, on the other hand, will testify that damages should be approximately $400,000. Although they can testify to this figure without reference to the licensing offers at issue here, Nintendo's damages experts have asserted that admissibility of Alpex's offers to license the patent for $400,000 would probably cap Alpex's recovery at that amount.").

[175] The patentee's settlement range in the lawsuit against Defendant 2 would also be reduced as a result of the reduction in expected damages.

the agreement were inadmissible against Defendant 2, the patentee should settle with lawsuit against Defendant 1.[176] Thus, if Rule 408 was designed to promote settlement, its purposes support exclusion of litigation licenses.

ii) *Rule 703 as an Exception to Rule 408*

Even if a litigation license is excluded from evidence under Rule 408, it may enter through the back door in the form of expert testimony. This is because Rule 703 allows an expert to rely on inadmissible evidence in forming her opinion, if the evidence is "of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject."[177] Some courts have held that experts generally may rely on litigation licenses and negotiations, as long as the expert does not rely on them exclusively.[178] This does not automatically make evidence of the litigation license admissible through the expert, however, because otherwise inadmissible facts "shall not be disclosed to the jury by the proponent of the opinion or inference unless the court determines that their probative value in assisting the jury to evaluate the expert's opinion substantially outweighs their prejudicial effect."[179] At least one court has "decline[d] to eviscerate Rules 408 and 403 by admitting the evidence of [litigation licenses] through the back door of Rule 703."[180] Thus, even if the court permits an expert to rely on litigation licenses in forming her opinion, evidence of those litigation licenses will not reach the jury unless the proponent convinces the court that its probative value substantially outweighs its prejudicial effect. Because this requires a balancing test similar to that performed under Rule 403 (but with a different burden placement), the probative value versus prejudice dichotomy will be discussed in the next section, dealing with the admissibility of litigation licenses under Rule 403.

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[176] It has been suggested that in "most circumstances, the incremental costs associated with possible consideration of a settlement license in subsequent litigation are likely to be too small relative to other considerations that affect a patent holder's decision to settle" and the only settlement agreements that will be affected are those in which the patentee contemplates the possibility of suing other alleged infringers. Chapman, *supra* note 5, at 330. But the NPE, who makes a business out of litigation and often simultaneously or consecutively sues multiple parties, obviously places significant weight on the likely effect of settlement on pending and future litigation. And there is no reason to think that any other patentee is so myopic as to completely ignore the possibility of additional infringement litigation.

[177] FED. R. EVID. 703.

[178] *See, e.g.*, Pioneer Corp. v. Samsung SDI Co., No. 2:06-CV-384, 2008 U.S. Dist. LEXIS 107079, at *19–21 (E.D. Tex. Oct. 2, 2008) (stating that experts need not be entirely excluded for having considered litigation royalty rates, provided they do not rely exclusively on such evidence); Spreadsheet Auto. Corp. v. Microsoft Corp., 587 F. Supp. 2d 794, 801 (E.D. Tex. 2007) ("As to whether the entire report should be excluded, the Court finds that because Mr. Gemini does not rely exclusively upon settlement agreements reached under threat of litigation, he may properly consider such royalty rates and the underlying agreements in the formation of an opinion." (emphasis omitted)).

[179] FED. R. EVID. 703.

[180] Alpex Computer Corp. v. Nintendo Co., No. 86-CV-1749, 1994 U.S. Dist. LEXIS 3343, at *38 (S.D.N.Y. Mar. 16, 1994).

c) Rule 403 and the Probative Versus Prejudicial Balance

Rule 703-based admissibility requires a balancing test, with the default rule being inadmissibility.[181] Rule 403 requires a similar balancing test, but the default rule is admissibility.[182] Under Rule 403, relevant evidence "may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence."[183] Thus, if the litigation license is excluded under Rule 408, it may only come in through expert opinion, and only when the proponent shows that the probative value substantially outweighs the prejudicial effect. If it is not excludable under Rule 408, the party seeking exclusion must show under Rule 403 that the prejudicial effect substantially outweighs the probative value. Either rule requires a comparison of probative value and prejudicial effect, though the burdens rest on different parties under the two rules.

i) *The Slight Probative Value of Litigation Licenses*

As discussed in Part 3(a), *supra*, litigation licenses have some probative value to a reasonable royalty determination. The probative value will vary depending on the circumstances surrounding the litigation and the license, but most courts recognize that the probative value is usually limited by the myriad considerations that go into a litigation settlement.[184] If litigation licenses were afforded determinative value in determining a litigation license, "the giants of a given industry [could] use threats of costly and protracted litigation to extort an unreasonably low royalty from an impecunious patentee and then to force the patentee into the litigation while maintaining the hedge that the unreasonably low royalty rate would put a ceiling on damages."[185] But, "[e]ven where the circumstances are likely to [have altered] the terms of a settlement license relative to a non-settlement license, an expert or fact-finder can determine the extent to which the settlement license terms are influenced by the initiation or anticipation of litigation. By considering the settlement license terms and the circumstances leading to the settlement, an expert or

[181] The presumption is apparent because the offering party must prove that the probative value "substantially outweighs" the prejudicial effect.

[182] Under Rule 403, the objecting party must show that the probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence. FED. R. EVID. 403.

[183] FED. R. EVID. 403.

[184] Honeywell Int'l, Inc. v. Nikon Corp., No. 04-1337, 2009 U.S. Dist. LEXIS 17115, at *7–8 (D. Del. Mar. 4, 2009) ("On conducting its own independent review of the caselaw, the Court, like the Special Master, is unable to identify any cases, either from this District or the Federal Circuit, in which licenses taken under threat of litigation were given significant weight, particularly in jury cases.").

[185] Tights, Inc. v. Kayser-Roth Corp., 442 F. Supp. 159, 165 (M.D.N.C. 1977). The counter-argument, of course, is enhanced damages—that the "giants of the industry" could be forced to pay for willful infringement.

fact-finder can appropriately adjust the settlement license terms for use in a reasonable royalty determination."[186]

The probative value of litigation licenses depends on the circumstances of the case. If a litigation license is the only available license, the necessity for its admission increases, although the parties must still be given the chance to place it in context and argue why it does or does not accurately reflect the royalty value of the patent.[187] If, on the other hand, other licenses are available, or the industry has generally-established licensing practices, the probative value of the litigation license decreases significantly.[188] In the case of NPEs, litigation licenses will often be the only available licenses, and may have increased probative value.[189] For example, in *Clear With Computers, LLC v. Bergdorf Goodman Inc.*, the court commented that the settlement agreements at issue were important to any damage calculation because they would likely be the only licenses of the patents-in-suit, particularly since "[the Plaintiff's] business is to litigate and license the patents; it does not compete with Defendants in the marketplace."[190] Where the owner practices or actively licenses its patent, other evidence may be sufficient to establish a

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[186] Chapman, *supra* note 5, at 355.

[187] *See, e.g.*, Clear with Computers, LLC v. Bergdorf Goodman, Inc., 753 F. Supp. 2d 662, 663–64 (E.D. Tex. 2010) (noting the importance of discovery pertaining to settlement negotiations related to litigation licenses because, "[i]n this case, the settlement communications are likely to be key in determining whether the settlement agreements accurately reflect the inventions' value or were strongly influenced by a desire to avoid or end full litigation").

[188] Volumetrics Med. Imaging, LLC v. Toshiba Am. Med. Sys., 1:05-CV-955, 2011 U.S. Dist. LEXIS 65422, at *57 (M.D.N.C. June 20, 2011) ("For example, a settlement license may lack significant probative value in the reasonable royalty calculus if the record contains other comparable, non-settlement licenses. Conversely, if few (or no) licenses of the latter sort exist, licenses from settlements may serve a more useful (or even necessary) function in the 'hypothetical negotiation' analysis." (footnote omitted)).

[189] It may be technically inaccurate to frame this in terms of increased probative value. Technically, it is the *need* for this evidence that renders it desirable in such circumstances. Where it is cumulative or other sufficiently probative evidence exists, the court should exclude the litigation license because its *marginal* probative value (the probative value to be gained after consideration of the other evidence) is likely not worth the intrusive discovery into settlement negotiations, the significant unpacking (and, in reality, guesswork) required to extract the probative value from the litigation license, and the mini-trial on infringement and validity that would likely result from the admission of the litigation license. And, most people agree that the probative value of litigation licenses is usually less than non-litigation licenses. *See* Honeywell Int'l, Inc. v. Nikon Corp., No. 04-1337, 2009 U.S. Dist. LEXIS 17115, at *7–8 (D. Del. Mar. 4, 2009).

[190] *Clear with Computers*, 753 F. Supp. at 664 ("Moreover, in this case, the settlement agreements will likely be the only licenses of the patents-in-suit, making an accurate understanding of them more important. . . . CWC has not shown that there are other non-litigation licenses that reflect the value of the invention. Therefore, the settlement negotiations have increased relevance, and the prejudice to CWC is of decreased significance. The Court expects that its finding here allowing discovery will be the exception, not the rule, and in most cases discovery of the negotiations will not be warranted.").

reasonable royalty even without the admission of litigation licenses with questionable probative value.[191]

Of course, where the differences between a prior license of any kind and the hypothetical negotiation at issue are too great, rendering the probative value of the prior license vanishingly small so that the offering party is unable to provide a "sound basis for a meaningful comparison,"[192] the district court should exercise its gatekeeping role to exclude the evidence.[193] If a prior license is sufficiently distinguishable, then the probative value may be so small, and require such guesswork, that it is error to include it in the reasonable royalty calculation.[194] Thus, in *ePlus, Inc. v. Lawson Software, Inc.*,[195] the court excluded expert testimony where the expert selectively relied on litigation licenses with cross-licensed patents and a lump-sum royalty in a case in which the plaintiff sought a running royalty.[196] The court found it "difficult to perceive a 'fit' between a hypothetically negotiated reasonable royalty rate in the context of this case and the assumptions used by [the expert] to arrive at the royalty base on which he produced the royalty rates which he sponsors."[197] Similarly, in *Alpex Computer Corp. v. Nintendo Co.*, the court excluded under Rule 403 a litigation license where the patentee was in bankruptcy at the time of the prior licensing, the patentee's patent counsel testified that the patentee ac-

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[191] When the entity is a practicing entity, even if there are no non-litigation licenses, there are other sources of evidence likely more helpful than a litigation license would be. For example, "when the patent's owner . . . also makes the patented article, the profitability of the owner's manufacture and sale also determines the royalty that would be charged." *In re* Mahurkar Double Lumen Hemodialysis Catheter Patent Litig., 831 F. Supp. 1354, 1383 (N.D. Ill. 1993), *aff'd* 71 F.3d 1573 (Fed. Cir. 1995). Presumably, an owner practicing the patent would license the patent, even to a competitor, if the licensing fee were greater than its expected profit (which may include some amount for goodwill and name recognition to be generated by the product).

[192] Georgia-Pacific v. U.S. Plywood Corp., 318 F. Supp. 1116, 1139 (S.D.N.Y. 1970), *modified*, 446 F.2d 295 (2d Cir. 1971).

[193] *See, e.g.*, Clear with Computers, L.L.C. v. Bergdorf Goodman, Inc., 753 F. Supp. 2d 662, 663 (E.D. Tex. 2010) ("Whether the settlement agreements are admissible will likely depend on whether they are an accurate reflection of the inventions' value."). In *Lucent*, the court declined to examine the admissibility of the licenses, because Microsoft failed to object to them at trial. Lucent Techs. v. Gateway, Inc., 580 F.3d 1301, 1325 (Fed. Cir. 2009).

[194] *See* Uniloc USA, Inc. v. Microsoft Corp., 632 F.3d 1292, 1317 (Fed. Cir. 2011) (finding reversible error in using 25% rule of thumb, even as merely a "starting point" for the reasonable royalty calculation, because "[b]eginning from a fundamentally flawed premise and adjusting it based on legitimate considerations specific to the facts of the case nevertheless results in a fundamentally flawed conclusion. This is reflected in *Lucent Technologies*, in which unrelated licenses were considered under *Georgia-Pacific* factor 1, but this court held that the entire royalty calculation was unsupported by substantial evidence.").

[195] 764 F. Supp. 2d 807, 813–14 (E.D. Va. 2011) (granting motion to exclude expert's testimony and noting that "[t]he disparity of circumstances between the settlement agreement lump sum licenses and the hypothetical negotiation for a running royalty and the temporal differences make it difficult to find that the 'fit' component is met").

[196] The expert, without offering an adequate explanation, rejected the use of litigation licenses that had low royalty rates. ePlus, Inc. v. Lawson Software, Inc., 764 F. Supp. 2d 807, 814 (E.D. Va. 2011).

[197] *Id.*

cepted the license "because it did not have sufficient funds to take its lawsuit to trial," and both parties agreed that "the admissibility of [this evidence] could have a profound effect on potential damages" in the case.[198] In other words, as the Federal Circuit explained in *Uniloc*, the "licenses relied on by the patentee in proving damages [must be] sufficiently comparable to the hypothetical license at issue in suit," and the patentee's failure to demonstrate comparability "weighs strongly against" any use of such non-comparable licenses.[199]

To make the necessary comparison, the fact-finder must understand the relative strengths and weaknesses of the original parties' case and, more importantly, the original parties' beliefs (even if incorrect) regarding the relative strengths and weaknesses of their case. How likely is it that the defendant believed (even incorrectly) the patent to be invalid or not infringed? How great did the parties perceive the likelihood of an injunction to be, and how important was it to the defendant to avoid an injunction?[200] A litigation settlement undoubtedly gives us some insight into the parties' perceived value of the claim,[201] but the value of the claim does not by itself prove the patent's value. A given settlement may reflect a discount for lack of certainty in validity or infringement, or it may significantly overcompensate the patentee because of the infringer's fear of an injunction or enhanced damages. And, of course, the settlement also incorporates the parties' litigation-cost expectations. All of these considerations (in addition to the other issues that are typical of non-litigation licenses) must be explored and removed if we are to bestow significant probative value on a litigation license.

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[198] No. 86-CV-1749, 1994 U.S. Dist. LEXIS 3343, at *32–33 (S.D.N.Y. Mar. 16, 1994).

[199] Uniloc USA, Inc. v. Microsoft Corp., 632 F.3d 1292, 1316 (Fed. Cir. 2011) (quoting Lucent Techs. v.Gateway, Inc., 580 F.3d 1325, 1332 (Fed. Cir. 2009)) (alteration in original).

[200] Professors Lemley and Shapiro argue that "the threat of an injunction can enable a patent holder to negotiate royalties far in excess of the patent holder's true economic contribution." Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 1993 (2007). This threat may be diminished in the wake of Supreme Court's decision in *eBay*, requiring a patentee to meet the traditional standards in order to obtain a preliminary injunction. eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388, 394 (2006).

[201] *See* Chapman, *supra* note 5, at 349 ("[T]he mere fact that the terms of a settlement license may be influenced in part by a desire to avoid litigation expenses does not mean that settlement license terms are inherently biased or unreliable for the purpose of determining a reasonable royalty. . . . [A] settlement agreement for $50,000—less than the expected costs of litigation—is likely to provide valuable information about the value of the underlying infringement claim. In the latter case, a reasonable inference that the value of the claim is less than the expected costs of litigation can be drawn, unless some other rationale is provided to explain the patent holder's willingness to accept such a settlement."). Other explanations exist for the settlement of a given claim, including "the patent holder's lack of resources to pursue litigation, significant uncertainty in establishing liability, or strategic licensing considerations (such as . . . a reluctance to adopt an aggressive licensing stance against a key customer)." *Id.* at n.141.

A quick overview of the analogous issue of property valuation provides some helpful insights into the use of litigation licenses.[202] Courts determining the fair market value of property traditionally hold that recent sales are the best evidence of the property's fair market value.[203] On the other hand, "[t]o the extent that a sale is motivated in part by considerations other than the value of the property sold, the sale price carries [little] weight as evidence of actual value."[204] When the sale occurs at arm's length, a recent sale price is presumed to be the fair market value, and the opposing party bears the burden to identify other circumstances negating its reliability.[205] Sales resulting from litigation settlements, however, are not arm's-length transactions giving rise to such a presumption.[206] Indeed, these sales may hold "negligible" probative value.[207]

Although litigation licenses have some probative value, that probative value may be inextricably intertwined with irrelevant—and, worse, prejudicial and confusing—information. If the probative material—the value of the patent to the parties—cannot with reasonable certainty be extracted from the other considerations that factored into the litigation license's amount, the license adds little to the reasonable royalty evidence in the case. If the use of the litigation license is at all prejudicial, it should be excluded in those circumstances. The next section discusses the potential prejudices resulting from the use of a litigation license, and compares and contrasts them with prejudices resulting from the use of non-litigation licenses.

ii) *The Prejudicial Effect of Litigation Licenses*

Under Rules 703 and 403, the probative value of the litigation license must be balanced against the prejudicial effect of admission of a litigation license into evidence. These potential prejudices include: (a) mini-trials (distractions from the main issues in the case by forcing sub-litigation of the prior case); (b) prejudice

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[202] Because the reasonable royalty inquiry is, in essence, an inquiry into the fair market value of the patent, it is no surprise that the language of a reasonable royalty inquiry is almost identical to the language of a fair-market-value inquiry: "the price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of relevant facts." United States v. Cartwright, 411 U.S. 546, 551 (1973) (quoting Treas. Reg. § 20.2031-1(b)).

[203] *See, e.g.*, Schonfeld v. Hilliard, 218 F.3d 164, 178 (2d Cir. 2000) (quoting Suitum v. Tahoe Reg'l Planning Agency, 520 U.S. 725, 741–42 (1997)).

[204] Josten-Wilbert Vault Co. v. Bd. of Equalization for Buffalo Cnty., 138 N.W.2d 641, 643 (Neb. 1965).

[205] *Schonfeld*, 218 F.3d at 178–79.

[206] Union Oil of Cal. v. Bd. of Educ. of Gahanna-Jefferson Pub., 526 N.E.2d 309, 313–16 (Ohio App. 1987) (holding that price reached for real property in settlement of lawsuit was insufficient evidence to support the Board of Tax Appeals's valuation of the property at the sale price).

[207] *Id.* at 315.

through a jury's over-reliance on litigation licenses; and (c) increased and invasive discovery into settlement negotiations.

(1) "Mini-Trials"

One obvious potential for prejudice in the admission of litigation licenses is that their probative value in a reasonable royalty determination (their utility in determining the amount of the hypothetical license) is buried beneath layers of external considerations contributing to the license value. In other words, the litigation license requires further explanation and analysis before it can be helpful in determining a reasonable royalty.

At the extreme, this further explanation could take the form of "a 'mini-trial' on similarities and differences in the facts regarding the 'same' claims against the other defendants to determine what, if any, light the [license] sheds on the value of the claim" against the alleged infringer.[208] The defendant seeks to prove that the patentee had no viable claim against the prior defendants, so that the settlement value did not reflect the patent value, but was largely attributable to litigation costs and risks. The patentee, on the other hand, seeks to prove that the settlement value was discounted from the patent's value as a function of its own litigation costs and risks. Consequently, both of the parties ask the jury to analyze the strengths of the claims and defenses in the prior case in order to "show whether and to what extent the rate from a prior license agreement is the result of a compromise or reflects a desire to avoid litigation."[209] Thus, the use of litigation licenses invites "mini-trials" into the merits of the prior claim, in order to interpret the settlement value.

(A) *Non-Litigation Licenses and "Mini-Trials"*

Few would dispute the point that the use of litigation licenses may require an in-depth analysis of the prior licensing circumstances, but an objection might nevertheless be raised: even a non-litigation license that differs from the hypothetical negotiations in any material way necessitates some explanation in order to demonstrate its probative value.[210] Indeed, that was the lesson of *ResQNet* and its progeny.[211]

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[208] Pioneer Hi-Bred Int'l, Inc. v. Ottawa Plant Food, Inc., 219 F.R.D. 135, 145 (N.D. Iowa 2003).

[209] Tyco Healthcare Grp. LP v. E-Z-EM, Inc., No. 2:07-CV-262, 2010 U.S. Dist. LEXIS 18253, at *5 (E.D. Tex. Mar. 2, 2010).

[210] *See* Chapman, *supra* note 5, at 337–40 (describing the "comparable method" mode of analysis, which involves examining licensing terms of comparable licenses to create terms for a hypothetical license).

[211] *See, e.g.*, Richard Raysman and Peter Brown, *Settlement Licenses and Reasonable Royalties*, LAW TECH. NEWS, May 11, 2011 ("Courts performing reasonable royalty calculations typically exercise vigilance when considering past licenses to technologies other than the patent-in-suit or to different types of licenses for the same technology and take into account the economic circumstances of the contracting parties." (describing BIAX Corp. v. NVIDIA Corp., No. 09-CV-01257, 2010 WL 4038728 (D. Colo. Oct. 14, 2010))).

For example, the hypothetical negotiation usually assumes that the parties are negotiating toward an unrestricted "bare" license.[212] In contrast, a prior licensee may have received a discount if its licensed territory were limited, or paid a premium if it received an exclusive license.[213] Where a license grants rights to a bundle of patents, rather than just to the patent-in-suit, the licensee would presumably pay more than the hypothetical negotiator, because the licensee of a bundled license that includes the litigation patent would receive more than the licensee of a single license for only the litigation patent. Similarly, cross-licenses add a wrinkle because the licensee pays for a license to the patent in suit in part by granting a license to its own patents.[214] In order to extract usable information from one of these licenses, the fact-finder must draw conclusions regarding the value of the discounts associated with limited rights, or the premiums associated with additional rights (relative to the unrestricted bare license). In a cross-license, for example, the fact-finder must isolate the litigation patent on one side of the equation and monetize the other patents (or cancel them out) in order to gain insight into the value of the litigation patent to the prior parties.[215] In essence, a mini-trial is required on the value of all of the patents exchanged by and received by the Patentee.[216]

Even a traditional bare license of only the litigation patent is not necessarily perfectly representative of the reasonable royalty analysis. The reasonable royalty analysis assumes that the parties know that the patent is valid, enforceable, and in-

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[212] The reasonable royalty is almost always (though not necessarily) based on a "bare" or "naked" unrestricted license. JOHN M. SKENYON ET AL., PATENT DAMAGES LAW AND PRACTICE, § 3:23 (2011).

[213] *Id.* (relating to the third *Georgia-Pacific* factor: "The nature and scope of the license, as exclusive or non-exclusive; or as restricted or [non-restricted] in terms of territory or with respect to whom the manufactured product may be sold.").

[214] *See, e.g.*, LG Display Co., Ltd. v. AU Optronics Corp., 722 F. Supp. 2d 466, 472–73 (D. Del. 2010) (in assessing reasonable royalty, considering expert testimony regarding eight cross-licenses in which each party licensed its entire patent portfolio and one party paid a "balancing payment" to the other).

[215] Consider the following example, where P_L is the Litigation Patent, and P with a subscript numeral represents a different patent. Patentee licenses P_L, P_1, P_2, and P_3 in exchange for $500,000 and licenses to P_4 and P_5. The equation is $P_L+P_1+P_2+P_3=P_4+P_5+500{,}000$. When P_L is isolated, the equation becomes $P_L=P_4+P_5+500{,}000-P_1-P_2-P_3$. In order to have useful information about the value of P_L, the fact-finder must either assign monetary values to the remaining patents or be able to cancel them out. The Patentee will argue that P_1, P_2, and P_3 were not worth very much, while P_4 and P_5 were very valuable (to maximize the value of P_L), while the infringer will argue the opposite.

[216] There is tension between the negotiating posture that the patentee likely would have assumed in the earlier license negotiations and the arguments the patentee would make in the later litigation. In the prior license negotiations, the patentee would have downplayed the value of a license of the third party's patents as it attempted to maximize its negotiating position (*i.e.*, "Your patents are not very valuable. Mine are very valuable. Therefore, you must pay me a significant royalty in addition to the cross-licenses or give me a license to more patents."). In seeking a reasonable royalty in later litigation, the patentee will argue that the third party's patents held significant value (*i.e.*, "I only agreed to this cross-license because the third party's patents are very valuable, just like the patent-in-suit is very valuable."). Thus, the litigation defendant should look at the negotiations between the patentee and the prior licensee for helpful evidence.

fringed by the defendant's product:[217] in Lemley and Shapiro's helpful shorthand, that the patent has a "patent strength" of 100%.[218] In the traditional setting, on the other hand, the royalty is discounted for uncertainties related to the patent strength.[219] Stated differently, the parties to a traditional license do not know with certainty that the patent is valid or would be infringed by the licensee's product. Consequently, the level of uncertainty should result in a proportional discount on the royalty.[220]

Moreover, the market conditions surrounding a prior license may be different from those existing at the time of the hypothetical negotiation,[221] and the infringer may always argue that it would have paid—and the patentee would have accepted—significantly less than the amount of any prior license because of the size of the infringer,[222] the infringer's expected sales volume,[223] or the existing commercial relationship between the parties and associated goodwill.[224] Roy Epstein summarized some of the dangers and difficulties involved in using any license in proving a reasonable royalty:

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[217] Paul M. Janicke, *Contemporary Issues in Patent Damages*, 42 AM. U. L. REV. 691, 722–23 (1993).

[218] Lemley & Shapiro, *supra* note 200, at 1996–99, 2022.

[219] *See Janicke*, *supra* note 217, at 722–23 (explaining that in a real life situation, "there is always substantial doubt about patent validity"); Chapman, *supra* note 5, at 352 (citing Edward F. Sherry & David J. Teece, *Royalties, Evolving Patent Rights, and the Value of Innovation*, 33 RES. POL'Y 179, 184–85 (2004)).

[220] *See Janicke*, *supra* note 217, at 722–23 ("With the vagaries of claim interpretation, prosecution history estoppel, and so on, infringement is seldom 'known' short of trial and appeal . . . ." (footnotes omitted)); *see also* Alpex Computer Corp. v. Nintendo Co., No. 86 Civ. 1749 (KMW), 1994 U.S. Dist. LEXIS 3343, at *28–38 (S.D.N.Y. Mar. 16, 1994).

[221] The hypothetical negotiation occurs just prior to the infringement. Lucent Techs., Inc. v. Gateway, Inc., 580 F.3d 1301, 1324–25 (Fed. Cir. 2009). If the prior license was entered much earlier or later than that time, the market conditions may have changed, affecting the royalty that the patent would command. In addition, the patentee may suggest that ongoing infringement of his patent deflated the licensing fees that he was able to command earlier. *See* Alpex Computer Corp. v. Nintendo Co., 1994 U.S. Dist. LEXIS 3343, 28–38 (S.D.N.Y. Mar. 16, 1994) ("In cases involving widespread infringement, the deflationary pressures on license rates may be especially strong.").

[222] *See, e.g.*, Uniloc USA, Inc. v. Microsoft Corp., 632 F.3d 1292, 1317 (Fed. Cir. 2011) (noting absurdity of applying same royalty rate even to begin royalty discussions "between, for example, (a) TinyCo and IBM over a strong patent portfolio of twelve patents covering various aspects of a pioneering hard drive, and (b) Kodak and Fuji over a single patent to a tiny improvement in a specialty film emulsion").

[223] If a large number of products incorporating the technology are expected to be sold, the Patentee would presumably agree to a smaller running royalty than if only a few patent-incorporating products are expected to sell.

[224] *See* Finjan, Inc. v. Secure Computing Corp., 626 F.3d 1197, 1211–12 (Fed. Cir. 2010) ("We have recently reiterated that use of past patent licenses under factors 1 and 2 must account for differences in the technologies and economic circumstances of the contracting parties. . . . Parr explained that Finjan did not compete with Microsoft but does compete against Secure; that Finjan received significant intangible value from Microsoft's endorsements of Finjan; and that the license involved a lump sum instead of a running royalty. These differences permitted the jury to properly discount the Microsoft license." (citations omitted)).

> The Georgia-Pacific factors invite the use of actual negotiated royalties as benchmarks. Comparables are always desirable in a damages analysis but they can be treacherous. It is necessary to control for many different license characteristics. However, the number of publicly disclosed royalty rates is limited, as is the amount of information on the terms of each license. There are probably few cases where an arm's length royalty is available for a similar product negotiated at a similar time under similar terms for a similarly situated infringer/licensee.
>
> Ensuring comparability raises a host of issues. License terms involving duration, field of use, and exclusivity, can vary widely. A particular rate may reflect a larger transaction in IP that includes cross-licenses. There may be non-cash features such as know-how transfer and product support that obscure the stand-alone value of the patent.[225]

This point is well taken—the use of any prior license to prove a reasonable royalty may involve a complex comparison and contrast between that license and the hypothetical negotiation.

(B) *Litigation-Licenses and "Mini-Trials"*

Although any license creates some risk of "sideshow" litigation by requiring a potentially-complex comparison in order to prove its utility to the reasonable royalty calculation, litigation licenses are unique in some significant ways. One important difference between the use of non-litigation licenses and litigation licenses is that the mini-trials required for a litigation license will usually be longer and more complicated than the mini-trials required for a non-litigation license.

The relevant comparisons between a prior license and a hypothetical negotiation can generally be carried out by the parties' damages experts, who can offer an opinion as to the market value of the patent-in-suit as part of the prior licensees' products relative to the infringer's products. The damages expert can likely also analyze the marketplace similarity of the prior product and the infringing product. These analyses are necessary to both non-litigation licenses as well as litigation licenses. But a damages expert would likely not be competent to read the claims of the patent-in-suit onto the prior defendant's accused products, and therefore could not opine on the relative strengths and weaknesses of the prior defendant's case.

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[225] Roy J. Epstein, *Modeling Patent Damages: Rigorous and Defensible Calculations*, 5–6 (2003), http://www.royepstein.com/epstein_aipla_2003_article_website.pdf. Similarly, where the license at issue is a license taken by the infringer to "comparable" technology, the parties will dispute how comparable the previously-licensed technology is, in order to dispute its probative value to the reasonable royalty. *See* Wi-Lan v. Research in Motion, Civil No. 10cv859-W (CAB), 2010 WL 2998850, at *3–4 (S.D. Cal. Jul. 28, 2010).

Nor would the damages expert ordinarily be able to opine on the potential merits of the validity arguments made in the prior litigation (which may have rested on different prior art than the validity arguments raised by the later accused infringer). In other words, in addition to testimony about marketplace distinctions between the prior licensed product and the infringer's product, a litigation license requires an analysis of the infringement and invalidity contentions raised by the prior parties.

The use of a litigation license may necessitate a full trial of the merits of the earlier case as part of a damages analysis in the later case. Not only is this time-consuming, but it is almost certain to confuse the issues for the jury, as the merits of one patent case become intertwined in the damages of another. The district court can invoke Rule 403 to exclude this time-consuming and confusing testimony regarding the prior infringement case, but any exclusion of this information severely decreases the probative value of the license, and increases the odds that the jury will erroneously assess the value of the license.[226]

On top of this, there is the potential for added confusion as to which court's claim construction should be read onto the prior accused products. If the prior litigation reached the claim construction stage (in which the district court construes the language in the asserted patent claims), it is almost certain that the first court construed the claims differently from the second.[227] Of course, the previously-settling defendant would have been operating under the earlier claim construction, and that construction may be relevant to the strengths and weaknesses of the prior defendant's infringement analysis. The later court surely will want to exclude the prior court's construction out of fear of confusion, but to the extent it affects the claim analysis for the previous lawsuit, it is particularly relevant to assigning the appropriate weight to the previous settlement.

(2) Jury Over-Reliance on Litigation Licenses

The risks of prejudice resulting from the misuse or overemphasis of a litigation license are generally greater than the risks of prejudice associated from other kinds of licenses. In the case of litigation licenses, the litigation-created differences between the prior license and the hypothetical negotiations are not as apparent as they are with other kinds of licenses. For example, a jury presented with a prior bundled license including the patent-in-suit and two other patents will know that

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[226] *See* Insight Tech., Inc. v. Surefire LLC, No. 04-CV-74-JD, 2009 U.S. Dist. LEXIS 97183, at *4 (D.N.H. Oct. 8, 2009) ("The introduction of the Glock settlement terms would necessitate a lengthy explanation to the jury of the economics of litigation risk, competition, and other considerations that inform a litigation settlement. All of this evidence would be collateral, and therefore confusing and a waste of time.").

[227] It is extremely common for different district courts to construe the same claims differently. For instance, in *American Piledriving Equipment, Inc. v. Geoquip, Inc.*, 637 F.3d 1324, 1326–27 (Fed. Cir. 2011), the patentee initiated seven lawsuits in seven different district courts, and "no two . . . construed all three [claim] terms the same way."

the patentee gave up more value in that license than in the hypothetical license for the single patent-in-suit. The jury should also recognize that, without some additional explanation, it cannot properly evaluate the relative value of the patents.[228] The patent-in-suit would have accounted for an unknown proportion of the licensing rates, and common sense should alert the jury that it needs additional information to give significant probative value to the bundled license.[229]

In the case of a litigation license, however, it is less obvious that the license includes considerations external to the value of the patent; those considerations are not necessarily on the face of the license. Even if the jury learns that this is a litigation license and appreciates that settlements may be entered into to avoid litigation, the jury is extremely unlikely to appreciate the very significant costs of litigation, and the monetary value placed on avoiding litigation.[230] The litigation license appears on its face to be highly probative of the reasonable royalty question, and the jury is less likely to recognize that it needs additional information.[231] Moreover, because juries inevitably tend to view settlements as an admission of the defendant's liability,[232] a jury learning of a prior litigation license will tend to assign the full value of the license to the patent by assuming—perhaps incorrectly—that the prior defendant infringed. Thus, there is a very substantial risk that the jury will assign the litigation license more probative value than it is due, both because it appears to be more similar to the hypothetical negotiation than it actually is and because it appears to be an admission of infringement.[233]

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[228] In *Trell v. Marlee Elecs.*, 912 F.2d 1443, 1446 (Fed. Cir. 1990), the Federal Circuit held that the district court improperly relied on an exclusive European license fee because the license was exclusive and conveyed broader rights than the hypothetical license. The patentee had the burden of demonstrating the probative value of this license for purposes of the reasonable royalty; the infringer "did not have the burden of going forward with evidence to rebut proof of a royalty paid by another for an exclusive license involving additional inventions." *Id.* at 1447.

[229] The Federal Circuit emphasized this in *Lucent*, when it declared the absence of probative value of a particular cross-license in which the jury "never learned anything about [the cross-licensed] patent rights and how valuable or essential those rights were." Lucent Techs. v. Gateway, Inc., 580 F.3d 1301, 1331 (Fed. Cir. 2009).

[230] Justice Breyer was famously flabbergasted and outraged to learn the cost of discovery in complex commercial cases. Daniel Fisher, *The Data Explosion*, FORBES (Oct. 1, 2007), http://members.forbes.com/forbes/2007/1001/072.html. If Supreme Court justices are shocked at the cost of litigation, it is hardly surprising that juries lack such knowledge.

[231] *See generally* Fenner Invs., Ltd. v. Hewlett-Packard Co., No. 6:08-CV-273, 2010 WL 1727916, at *1–2 (E.D. Tex. Apr. 28, 2010) (holding that litigation licenses risk juror confusion, and collecting cases).

[232] Stockman v. Oakcrest Dental Ctr., P.C., 480 F.3d 791, 800 (6th Cir. 2007) ("'The almost unavoidable impact of the disclosure of such evidence is that the jury will consider the offer or agreement as evidence of a concession of liability.'" (quoting JACK B. WEINSTEIN & MARGARET A. BERGER, WEINSTEIN'S EVIDENCE 408–31 (1991))).

[233] The litigation license also creates a potential for prejudice on the merits—as opposed to damages—of the infringement claim. If a prior defendant settled despite raising an invalidity argument similar to that raised in this case, the jury may wrongly conclude that the prior defendant's invalidity claim—which is the same as the current defendant's invalidity claim—lacked merit. This prejudice could be

(3) Litigation Licenses and the Need for Discovery of Negotiations

Most courts and commentators agree that permitting the routine discovery of settlement negotiations—even negotiations related to the settlement of a prior case—creates an atmosphere hostile to settlement.[234] If that holds true in the patent context, then permitting discovery of the negotiations surrounding a litigation license inhibits patent litigation settlements, a result contrary to the general policy favoring settlement.[235] Even if it is not accurate in patent litigation,[236] discovery regarding the negotiations and the full details of the prior case is likely to be voluminous and time-consuming, so that its burden outweighs its benefit in most cases.[237] Just as a litigation license creates a mini-trial that is a "case within a case," the discovery of the circumstances surrounding the prior litigation stands to make all or almost all of the discovery from the prior litigation relevant to the later litigation, plus additional discovery into the parties' negotiations.

Some courts, concerned about allowing discovery of settlement negotiations, have opted to admit litigation licenses into evidence while foreclosing discovery of the accompanying negotiations.[238] This solution is unworkable, because discovery of the negotiations is a necessary corollary of the admission of litigation licenses. As explained below, such discovery allows the parties to extract the probative value

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avoided by bifurcating the trial to separate the liability portion of the trial and the damages portion, but, in the absence of bifurcation, it presents an important consideration to the admission or exclusion of a litigation license.

[234] *See, e.g.*, Wayne D. Brazil, *Protecting the Confidentiality of Settlement Negotiations*, 39 HASTINGS L.J. 955, 985 (1988) ("[C]ourts that admit evidence from settlement negotiations discourage communication about settlement and impair the rationality of settlement discussions, and thus help to defeat the policy of encouraging consensual resolution of disputes."); Kuhl, *supra* note 5, at 2295–98.

[235] *See* Thomas v. Law Firm of Simpson & Cybak, 244 F. App'x 741, 744 (7th Cir. 2007) (discussing general policy of encouraging settlement expressed in Rule 408).

[236] There is some reason to think that admitting settlement negotiations to prove a reasonable royalty would not inhibit settlement in the patent context. Concessions made by a patentee in settling prior litigation will inure to the Patentee's benefit when damages are assessed in the subsequent litigation, because the patentee can use them to persuade the jury that the royalty rate was discounted by litigation costs or uncertainty, so that the rate in the litigation license understates the patent's actual value. For example, if the patentee conceded in the prior litigation that its infringement claim was tenuous, it can argue that the value of the patent is higher, but it settled for less in the earlier litigation because of the doubtful infringement claim. The same is true where the defendant was the licensee in the prior suit, and the license is being used to show rates paid by the defendant for comparable technology under the second *Georgia-Pacific* factor. Of course, a patentee would not want its earlier concessions regarding liability (for example, that the patent might be invalid) in a later infringement suit, but those worries could be substantially eliminated through bifurcation of the trial into a liability phase and a damages phase.

[237] *See* FED. R. CIV. P. 26(b)(2)(C) (requiring courts to limit discovery where the burden or expense outweighs the likely benefit).

[238] *See* Kuhl, *supra* note 5, at 293–98 (referring to the Northern District of California as an example of a court that prohibits discovery of settlement negotiations).

of the license[239] and eliminates the unfair advantage otherwise held by the party involved in the prior settlement.[240] Consequently, courts that are concerned about the potential impact of discovery of settlement negotiations should exclude the litigation licenses from evidence rather than admit them while denying discovery of the negotiations.[241]

(A) *Extracting the Probative Value from Litigation Licenses*

As discussed above, along with the value of the patent, the parties' perceptions regarding patent strength, litigation costs, and enhanced damages are incorporated into the amount of their litigation license. As a result, discovery of those perceptions—as reflected in negotiations—enhances the probative value of the litiga-litigation license.[242]

One traditional response to this point is that the settlement communications lack relevance because they are full of self-serving statements and hyperbole. The argument suggests the necessity of negotiations makes sense in theory, but is untrue because

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[239] As one court put it, without the context surrounding the negotiations, such as "the parties' respective assessments of their claims," "the royalty paid by [the prior defendant] has minimal, if any, relevance to this litigation." Creative Internet Adver. Corp. v. Yahoo! Inc., No. 6:07-CV-354, 2009 U.S. Dist. LEXIS 129938, at *5–6 (E.D. Tex. May 7, 2009).

[240] *See* Hickman v. Taylor, 329 U.S. 495, 507 (1947) ("[M]utual knowledge of all the relevant facts gathered by both parties is essential to proper litigation. To that end, either party may compel the other to disgorge whatever facts he has in his possession.").

[241] There remains some question as to whether the "prejudice" contemplated in Rule 403 includes prejudice to extrinsic social policies (such as the general policy in favor of promoting settlement), as opposed to prejudice to the parties or the individual case at issue, but there is much support for the proposition that Rule 403 "prejudice" includes prejudice to broader social policies. *See* Edward J. Imwinkelried, *The Meaning of Probative Value and Prejudice in Federal Rule of Evidence 403: Can Rule 403 Be Used to Resurrect the Common Law of Evidence?*, 41 VAND. L. REV. 879, 889–891 (1988) (discussing case law that supports the idea that judges may consider extrinsic social policies).

[242] *See* Tyco Healthcare Group LP v. E-Z-EM, Inc., No. 2:07-CV-262 (TJW), 2010 U.S. Dist. LEXIS 18253, at *7–8 (E.D. Tex. Mar. 2, 2010) ("[T]he district court should make 'factual findings that account[] for the technological and economic differences between [previous] licenses and the [patent-in-suit].' It necessarily follows that, in light of the admissibility and importance of prior related settlement agreements, . . . the underlying negotiations are relevant to the calculation of a reasonable royalty using the hypothetical negotiation damages model.") (citations omitted); Clear with Computers, L.L.C. v. Bergdorf Goodman, Inc., 753 F. Supp. 2d 662, 663–64 (E.D. Tex. 2010) ("Whether the settlement agreements are admissible will likely depend on whether they are an accurate reflection of the inventions' value. In this case, the settlement communications are likely to be key in determining whether the settlement agreements accurately reflect the inventions' value or were strongly influenced by a desire to avoid or end full litigation.") (citations omitted); Cornell Res. Found., Inc. v. Hewlett-Packard Co., No. 5:01-CV-1974, 2007 WL 4349135, at *17 (N.D.N.Y. Jan. 31, 2007) ("The determination of admissibility of the challenged evidence may well turn upon an analysis of context, informed by the history of the parties' negotiations, and the question of whether a threat of litigation was made and had advanced sufficiently, at the time of the negotiations, to undermine significance of the resulting license or the parties' discussions and effectively negate the reliability of any benchmarks established during those negotiations, for purposes of determining a reasonable royalty . . . .").

> [t]he words spoken during a negotiation are not necessarily true representations of a party's position. The nature of negotiations, and indeed often the key to negotiating to one's own advantage, is to reveal only that which enhances one's position. Thus negotiations can be filled with significant posturing and half-truths that convey little useful information as the parties seek to feel out the other side, establish trust, and gain some advantage.[243]

This argument inaccurately assumes that self-serving statements in a prior negotiation are irrelevant to the use of the resulting license in later litigation. Even if negotiating parties make no concessions and only offer "significant posturing and half-truths" during settlement negotiations, such self-serving statements reveal important information about the negotiating posture of the parties in the prior litigation.[244] The later parties must be able to identify the arguments raised and relied upon in the prior litigation to assess the patent strength (or, more accurately, the parties' assessment of the patent strength at the time they entered into the litigation license). For example, if the alleged infringer in the later litigation is arguing that the royalty value of the patent is lower due to a cheap design-around,[245] it becomes important to know whether the prior alleged infringer raised the same argument before settling. If a realistic design-around argument were raised, it would be included in the prior defendant's self-serving statements made to seek a concession during the negotiations. And, if there is in fact a realistic design-around, the reasonable royalty is much lower than what would have been agreed to by a licensee who did not consider, or who could not use, the design-around option.

More importantly, it is inaccurate to suggest that negotiation statements—even if self-serving—are inherently untrustworthy. Even self-serving statements must be supported by facts and law. In fact, there is less room for blustering in negotiations after litigation inception than outside litigation, because positions regarding invalidity, unenforceability, and infringement are solidified or weakened based on what is revealed during discovery.

> During litigation, the scope of each party's private information is likely to shrink, as the discovery process forces each party to share critical information with the other party. As information becomes

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[243] Kuhl, *supra* note 5, at 295.

[244] Kuhl, *supra* note 5, at 295.

[245] A design-around suggests that the patent holds little value because there is an alternative to infringement—the infringer can accomplish substantially the same results without infringing the patent, by using some other process or product. The design-around argument does not hinge on a non-infringing alternative that perfectly replicates the result of the patented invention. The design-around may be less efficient, less attractive, or less user-friendly. But, at some point, the infringer would opt to employ even a sub-optimal design-around rather than take a license at what it considers to be too high a rate. In other words, design-around options serve to reduce the reasonable royalty by capping what a prospective licensee would agree to pay in lieu of using the sub-optimal design-around.

> available to both parties, the parties will begin to cooperate from a common set of facts and understandings. This common set of facts and understandings permits a settlement license negotiated using this information to reflect a more accurate assessment of the value of the patent-at-issue.[246]

So, for example, a party may say, "Your patent will probably be determined to be invalid at trial," even if it doubts the veracity of this assertion, but the party must include the reasons for its position—what facts and what law support its claim of invalidity.[247] From these reasons, we can get a better understanding of how strong the argument is and, generally, the prior parties' likely assessments of that argument. The strength of this position—rather than the potentially self-serving words the party uttered—help to determine the probative value of the amount of the litigation license.

MSTG, Inc. v. AT&T Mobility L.L.C. reflects the dilemma courts face in this context, where settlement negotiations are clearly probative, but general policy militates against the production or admission of such negotiations.[248] There, the court held that settlement negotiations were discoverable, because they would likely "provide grounds for deciding if MSTG's prior licenses are—or are not—sufficiently comparable to the patents-in-suit to be used in calculating a reasonable royalty."[249] At the same time, the court hesitated to permit discovery of settlement negotiations because of the potential impact on future settlements.[250] In the end, the court permitted discovery, but limited its decision to "the specific facts at issue between the parties in this case."[251]

(B) *Avoiding Asymmetry in the Parties' Knowledge of Relevant Facts*

The purpose of discovery is to foster the exchange of relevant information between the parties.[252] This Article has already shown settlement negotiations to be

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[246] Chapman, *supra* note 5, at 353.

[247] THOMAS A. MAUET, PRETRIAL 401 (Viki Bean et al. eds., 7th ed. 2008) (noting that parties in negotiation must "justify their positions with supporting facts, and challenge the other side's positions with contradictory facts"); *id.* at 403 (stating that, at settlement conferences, presentations should be "factually based and shorn of emotional rhetoric"); J. ALEXANDER TANFORD, THE PRETRIAL PROCESS 360 (2003) (differentiating between unproductive "haggling" and productive "negotiation, [which] consists not only of exchanging offers and demands, but of supporting them with arguments based on the merits of the case").

[248] No. 08-C-7411, 2011 U.S. Dist. LEXIS 23417, at *11 (N.D. Ill. Mar. 8, 2011).

[249] *Id.*

[250] *See id.* at *13 (noting traditional reluctance of courts to order discovery of settlement negotiations).

[251] *Id.*

[252] *See* FED. R. CIV. P. 26 advisory committee's note (1983) ("The purpose of discovery is to provide a mechanism for making relevant information available to the litigants. 'Mutual knowledge of all the

highly relevant in assessing the probative value of a litigation license as evidence of a reasonable royalty. In the absence of discovery, however, only the party involved in the prior litigation holds that relevant information. There is a clear asymmetry of relevant knowledge at the outset of the case. Foreclosing discovery permits the previous litigant to hold on to that asymmetrical knowledge. This is not unheard of—various privileges, such as the attorney-client privilege or the physician-patient privilege, act similarly in other contexts;[253] but, like other privileges, any settlement-negotiating privilege could presumably be strategically waived.

A discovery privilege allows the settling party to unilaterally decide when to produce beneficial settlement communications, while depriving the other party of the right to inspect settlement communications that may be harmful to the settling party's position.[254] For instance, imagine a scenario in which the patentee, in settlement communications, made a significant concession in its settlement demands—a concession that it attributed to unusually-high anticipated litigation expenses. The patentee would then produce this communication in discovery and, presumably, use it at trial.[255] On the other hand, if the alleged-infringer from the previous litigation had agreed to settle for $1 million because its litigation expenses would be at least that much, the infringer in the later litigation would not have any way of discovering this fact or introducing it at trial. In other words, in the absence of discovery, the settling party has exclusive knowledge of relevant facts and gets

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relevant facts gathered by both parties is essential to proper litigation.'" (quoting Hickman v. Taylor, 329 U.S. 495, 507 (1947))).

[253] The Sixth Circuit, in *Goodyear Tire & Rubber Co. v. Chiles Power Supply, Inc.*, 332 F.3d 976, 979–980 (6th Cir. 2003), applied a broad privilege to statements made in the course of settlement negotiations. In the reasonable royalty context, most courts have not applied this privilege, and one court that did (the Eastern District of Texas) has changed course in the wake of *ResQNet*. *See, e.g.*, Big Baboon Corp. v. Dell, Inc., No. CV-09-01198-SVW, 2010 U.S. Dist. LEXIS 108027, at *15–16 (C.D. Cal. Oct. 8, 2010) (ruling against a broad settlement privilege); Tyco Healthcare Group LP v. E-Z-EM, Inc., No 2:07-CV-262 (TJW), 2010 U.S. Dist. LEXIS 18253 (E.D. Tex. Mar. 2, 2010) (noting a shift in the court's approach toward the discoverability of settlement negotiations).

[254] The point is not that the settling party could employ a selective waiver—when a party waives a privilege, the scope of the waiver generally extends to the entire subject-matter of that privilege. *See* New Phoenix Sunrise Corp. and Subsidiaries v. Comm'r of Internal Revenue, 408 F. App'x 908, 919 (6th Cir. 2010) (noting that privilege will be waived by any material relating to the subject matter at issue). Instead, the point is that the settling party could choose to waive the privilege when production of the settlement negotiations as a whole would tip in its favor.

[255] Although "[t]he protections of Rule 408 cannot be waived unilaterally," FED. R. EVID. 408 advisory committee's note to 2006 amendments, Rule 408 governs admission, not discoverability. *See* Phoenix Solutions, Inc. v. Wells Fargo Bank, N.A., 254 F.R.D. 568, 584 (N.D. Cal. 2008) (noting that the rule applies to the admissibility of evidence at trial, not to whether evidence is discoverable). The Sixth Circuit's expanded discovery *privilege* can, of course, be waived unilaterally, simply through disclosure of the evidence. Even if the court excluded the negotiation statement itself at trial, the patentee could have a person who participated in the settlement decision to testify that the litigation license reflects a significant concession based on unanticipated litigation expenses. The infringer, on the other hand, has no real insight into such positions.

to use them or hold silent about them depending on the perceived benefit of each course.

(C) *Removing the Incentive to Inflate Patent Licenses*

The admission of litigation licenses has the potential to work significant mischief when combined with the exclusion of settlement negotiations and surrounding circumstances—patentees will begin to creatively settle litigation to enlarge the apparent license value. The potential for this mischief has been recognized by practicing lawyers, who have recommended that "if your company is a defendant in a multi-defendant case, you may be able to entice the patent owner to settle for a lower dollar amount in exchange for structuring your settlement to reflect a high effective royalty rate that the patentee can use in pursuing other larger defendants."[256]

One way of manipulating the effective license rate is for patentees to shift the royalty from past infringement to the forward-looking license for future use of the invention.[257] Suppose, for example, that Patentee sues BigCo, who has manufactured 1 million infringing products and, during settlement negotiations, informs Patentee that it intends to manufacture 500,000 more infringing products. If the parties would otherwise agree to a running royalty of $1 per manufactured product, Patentee could offer simply to dismiss the litigation with prejudice[258] or covenant not to sue for past infringement in a separate agreement, and then agree to a running royalty of $2.75 per manufactured product, with a guaranteed up-front payment of $1,375,000 to be applied toward the first 500,000 products. This scheme saves BigCo $125,000 based on its expectations, and may prove a wise investment for Patentee, who expects to use this license in litigation against other entities.[259] If the settlement negotiations are not discoverable or admissible,[260] the jury may not be provided the context with which to see through this manipulation, and would instead only be presented with a license reflecting an inflated royalty rate of $2.75 per infringing product.

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[256] Brian Pandya, *Why Pay More? Using Patent Settlements to Calculate Reasonable Royalty Rates*, CORPORATE COUNSEL (May 31, 2010), *available at* http://www.law.com/jsp/cc/PubArticleFriendlyCC.jsp?id=1202458974224.

[257] A litigation license may include a license for past use of the patented invention (the infringement at issue in the litigation) and a license for future use of the patented invention. Some commentators have argued that "the forward-looking portions of many settlement licenses are very similar to non-settlement licenses," and "forward-looking settlement licenses provide valuable insight in determining a reasonable royalty." Chapman, *supra* note 5, at 351–52.

[258] While this is not technically a license, the doctrine of res judicata would prevent Patentee from re-asserting its claims for any prior infringement.

[259] Just as any patentee must consider the effect of a settlement discount on future litigation, so, too, will it consider the effect of an over-valued settlement on future litigation.

[260] If the negotiations are discoverable but not admissible, the court might exclude a license like this based on Rule 403 grounds when the court is confronted with the circumstances surrounding the license.

(D) *The Federal Rules of Evidence and Settlement Negotiations*

There is no basis in the Federal Rules of Evidence under which a court could properly admit a litigation license but exclude the accompanying settlement negotiations.[261] Rule 408 applies equally to a settlement agreement and to negotiations,[262] so if the rule does not bar the license, it also does not bar the negotiations. Rule 408 does not allow a party to "have it both ways" by arguing for admission of the settlement agreements but exclusion of the accompanying negotiations.[263] If the litigation license is probative, so, too, are the negotiations.

While a court might rely on Rule 403 to admit a litigation license but exclude the corresponding negotiations, this reliance would be misplaced. As explained above, the negotiations serve to strengthen the probative value and decrease the prejudice—at least to the non-settling party—resulting from admission of the litigation license.

d) Summarizing the Considerations Impacting the Admission of Litigation Licenses

As demonstrated in *ResQNet*, *Lucent*, *Wordtech*, and *Uniloc*, the Federal Circuit in recent years has taken a strong stance against what it has perceived to be district courts' and juries' over-reliance on evidence with little probative value. The court's emphasis on the need for a substantive connection between the license offered and the pending litigation does not result in the wholesale exclusion of litigation licenses, but it should instruct trial judges to be especially cautious in handling such licenses.

The preceding sections underscore how attenuated the probative value of litigation licenses can be. There will be cases where the probative value is significantly greater than average, either because of the settlement circumstances[264] or because of the lack of any other kinds of useful licenses or evidence in general.[265] Thus,

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[261] It is possible that there could be grounds outside of the Federal Rules for prohibiting discovery of negotiations, such as local rules restricting disclosure of confidential mediation communications. In *Avocent Redmond Corp. v. Raritan Americas, Inc.*, No. 10-CV-6100 (S.D.N.Y. Sept. 26, 2011), the court relied on the Federal Circuit's local rules to foreclose discovery of confidential mediation communications related to a litigation license.

[262] *See* FED. R. EVID. 408(a)(2) (indicating both conduct and statements made in compromise negotiations are treated equally).

[263] Pharmastem Therapeutics, Inc. v. Viacell, Inc., No. 02-148 GMS, 2003 U.S. Dist. LEXIS 27869, at *5 (D. Del. Oct. 7, 2003).

[264] For example, the probative value of a settlement is significant when the settlement is reached following a finding of validity and infringement. *See* Studiengesellschaft Kohle m.b.H. v. Dart Indus., Inc., 666 F. Supp. 674, 682 (D. Del. 1987) (noting the significant probative value of particular litigation licenses).

[265] *See* Clear with Computers, L.L.C. v. Bergdorf Goodman, Inc., 753 F. Supp. 2d 662, 664 (E.D. Tex. 2010) ("Moreover, in this case, the settlement agreements will likely be the only licenses of the pa-

there may be situations in which litigation licenses should be admitted. Nevertheless, the court should begin its analysis with a thumb on the scale against the admission of litigation licenses as a result of the questionable and speculative probative value weighed against the prejudices that inhere in the use of litigation licenses.

A court deciding whether to admit litigation licenses under Rule 403, Rule 703, or both, should consider a number of factors. First, it should consider the availability of any non-litigation licenses, which are likely more probative and almost certainly less prejudicial. The court should also consider other available probative evidence on the reasonable royalty question, such as industry standards or other factors enumerated in *Georgia-Pacific*.[266] The court should examine the arguments likely to be raised if the litigation license is admitted—that is, how extensive and confusing any resulting mini-trial would be.[267] The court should consider the likely probative value of the license, bearing in mind that the offering party must be able to establish a sufficient link to the hypothetical negotiation before the license is sufficiently useful to warrant admission, even in the absence of any prejudicial effect.[268] The court should consider the need for and extent of discovery into the surrounding negotiations, as well as the effect that such discovery—and its potential admission at trial—may have on settlements more generally.[269] Finally, the court should consider any particulars of the case, such as whether the prior negotiations reveal that the patentee manipulated the litigation license to give it an inflated value.[270]

In the usual case, the probative value of the litigation license will be slight and difficult to extract, while the risk of prejudice and confusion resulting from its admission will be significant. In other words, in the usual case, the license's "probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay,

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tents-in-suit, making an accurate understanding of them more important. CWC's business is to litigate and license the patents; it does not compete with Defendants in the marketplace. CWC has not shown that there are other non-litigation licenses that reflect the value of the invention. Therefore, the settlement negotiations have increased relevance, and the prejudice to CWC is of decreased significance.").

[266] *See supra* note 38 (setting forth the factors potentially relevant to reasonable royalty calculations).

[267] *See supra* notes 208–227 and accompanying text (considering potential burdens of necessary mini-trials).

[268] *See supra* notes 184–207 and accompanying text (discussing how probative value will vary depending on circumstances surrounding litigation).

[269] *See supra* notes 234–263 and accompanying text (discussing costs and benefits of allowing discovery regarding settlement negotiations).

[270] *See supra* notes 256–260 and accompanying text (discussing opportunity for manipulation of license values in context of inflation).

waste of time, or needless presentation of cumulative evidence,"[271] and the license should be excluded.

Conclusion

Litigation licenses have a long and controversial history in the realm of the reasonable royalty. These licenses have, however, stirred even more controversy in recent years due at least in part to the substantial increase in litigation by non-practicing patent owners and to the Federal Circuit's *ResQNet* decision. Although some courts have indicated that *ResQNet* fully resolves the litigation-license controversy, that conclusion is unwarranted.

Courts that have referred to litigation licenses as "irrelevant" to a reasonable royalty determination have done so based on their conflation of imperfection with irrelevance; although litigation licenses are not a perfect match for the hypothetical negotiation, they are certainly capable of informing the analysis. Thus, it is inaccurate to say that they are irrelevant under Rule 402. Nevertheless, litigation licenses often have a very small probative value, because it is difficult to distinguish the role played by patent value in a litigation license from settlement considerations that do not speak to the reasonable royalty at all.

Balanced against the slight probative value of the litigation license is the risk of substantial prejudice and confusion that results from litigation licenses. In particular, the use of litigation licenses risks long and complex mini-trials in which the merits of the prior litigation are tried as part of the damages evaluation in the later litigation—a full case within a case. These licenses also risk over-reliance by juries, who may not fully appreciate the heavy role that litigation considerations external to the patent's value play in a decision to settle an infringement case. Finally, any use of these licenses requires voluminous and intrusive discovery into the prior parties' settlement negotiations. Consequently, litigation licenses should generally be excluded from evidence under the probative versus prejudicial balancing tests set forth in Rule 403 and Rule 703.

[271] FED. R. EVID. 408.

The Power of Music: Applying First Amendment Scrutiny to Copyright Regulation of Internet Radio

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Music has power. It can change attitudes, relax or energize the body, animate the spirit, influence cognitive development, enhance the body's self-healing mechanisms, amuse, entertain, and foster a general response which can be a state of comfort, or in some instances even discomfort.[1]

A pamphlet, no matter how good, is never read more than once, but a song is learned by heart and repeated over and over; and I maintain that if a person can put a few cold, common sense facts into a song and dress them up in a cloak of humor . . . he will succeed in reaching a great number of workers who are too unintelligent or too indifferent to read . . . .[2]

Introduction

Music is everywhere. We wake up to it; we exercise with it; it accompanies us on the drive to work; we take it with us on our iPods; it fills the elevator compartment; it keeps us company when we are waiting on the phone; we listen to it at work; we hear it in department stores and doctors' offices; our romantic dinner is not complete without it; and we seek it out at concerts halls.

Music is also powerful. Modern scholarship and research indicates that music has benefits for the individual as well as for the social group. The benefits of music therapy for the individual range from aiding individuals with autism spectrum disorders[3] to helping the body manage pain and heal after trauma.[4] At the societal lev-

[1] DANIEL J. SCHNECK & DORITA S. BERGER, THE MUSIC EFFECT: MUSIC PHYSIOLOGY AND CLINICAL APPLICATIONS 27 (2006).

[2] GIBBS M. SMITH, JOE HILL 19 (1969). Joe Hill was a labor activist, songwriter, and member of the Industrial Workers of the World (IWW) at the turn of the nineteenth century. *Id.* at 15–20. Professor of political science Courtney Brown has noted "[n]o single person contributed more to the development of the genre of political music in the American labor movement than Joe Hill. (However, some might argue that the *legend* of Joe Hill is the greatest contributor rather than Joe Hill himself.)." COURTNEY BROWN, POLITICS IN MUSIC: MUSIC AND POLITICAL TRANSFORMATION FROM BEETHOVEN TO HIP-HOP 111 (2008).

[3] *See, e.g.*, Hayoung A Lim, *Use of Music in the Applied Behavior Analysis Verbal Behavior Approach for Children with Autism Spectrum Disorders*, 28 MUSIC THERAPY PERSPECTIVES 95, 95–104 (2010) (exploring use of music in treating children with autism spectrum disorders); Rory Allen & Pamela Heaton, *Autism, Music, and the Therapeutic Potential of Music in Alexithymia*, 27 MUSIC PERCEPTION 251, 259 (2010) (observing that music is a powerful tool for inducing fundamental emotional states in individuals with autism spectrum disorders and suggesting that such inducting of emo-

el, music has the potential to aid in conflict transformation and peace building,[5] but it has also been used during wartime to rally the troops and manipulate the masses.[6] Music can provide a unifying element for political movements, and songs can be powerful devices to educate and inspire listeners.[7]

Deeply expressive and evocative, music is protected both by copyright law and the First Amendment. Copyrights, as authorized by the United States Constitution, are intended "[t]o promote the Progress of Science . . . by securing for limited Times to Authors . . . the exclusive Right to their . . . Writings . . . ."[8] On the other hand, the First Amendment in the Bill of Rights ensures that "Congress shall make

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tions can aid individuals suffering from alexithymia, where they have difficulty identifying and describing feelings and emotional states).

[4] *See, e.g.*, Joke Bradt, *The Effects of Music Entrainment on Postoperative Pain Perception in Pediatric Patients*, 3 MUSIC & MED. 150, 150–57 (2010) (finding live music entrainment by a music therapist to be an effective post-operative pain management technique for children and adolescents); SIMON GILBERTSON & DAVID ALDRIDGE, MUSIC THERAPY AND TRAUMATIC BRAIN INJURY: A LIGHT ON A DARK NIGHT 22–35 (2008) (discussing research literature on music therapy for individuals with traumatic brain injuries); Jill M. Sullivan, *Music for the Injured Soldier: A Contribution of American Women's Military Bands During World War II*, 44 J. MUSIC THERAPY 282 (2007) (concluding that women's military bands that performed for convalescing World War II soldiers in hospitals may have been the impetus for the music therapy profession); *see also* Charles Marwick, *Music Therapists Chime in with Data on Medical Results*, 283 JAMA 731 (2000) (discussing range of benefits of rhythmic auditory stimulation).

[5] *See, e.g.*, Johan Galtung, *Peace, Music and the Arts: In Search of Interconnections*, *in* MUSIC AND CONFLICT TRANSFORMATION: HARMONIES AND DISSONANCES IN GEOPOLITICS 53, 53–62 (Olivier Urbain ed., 2008) (exploring the uplifting and uniting power of music, and how it can be used to promote peace); Cynthia Cohen, *Music: A Universal Language?*, *in* MUSIC AND CONFLICT TRANSFORMATION: HARMONIES AND DISSONANCES IN GEOPOLITICS 26, 38 (Olivier Urbain ed., 2008) ("Music is a powerful medium for expression, communication, healing, and transformation. As peace builders, we can access this potential when we embrace not only musics' [sic] universal appeal, but their particularities as well.").

[6] *See, e.g.*, Joseph J. Moreno, *Orpheus in Hell: Music in the Holocaust*, *in* MUSIC AND MANIPULATION: ON THE SOCIAL USES AND SOCIAL CONTROL OF MUSIC 264 (Steven Brown & Ulrik Volgsten eds., 2006) (discussing the complex ways music was used during the Holocaust: for humiliation, torment, and deception by the Nazis, and for distraction and self-affirmation by the prisoners); George Kent, *Unpeaceful Music*, *in* MUSIC AND CONFLICT TRANSFORMATION: HARMONIES AND DISSONANCES IN GEOPOLITICS 108–09 (Olivier Urbain ed., 2008) (explaining that the purpose of war music or hate music is to "build solidarity, whether among racist politicians, neo-Nazis, or combat soldiers," and that such ties are important because group members often seek and are motivated by the approval of their cohorts); Marie Korpe, et al., *Music Censorship from Plato to the Present*, *in* MUSIC AND MANIPULATION: ON THE SOCIAL USES AND SOCIAL CONTROL OF MUSIC 252–58 (Steven Brown & Ulrik Volgsten eds., 2006) (exploring link between censorship of music and propaganda in Nazi Germany, the Soviet Union, and Apartheid South Africa).

[7] *See, e.g.*, PAT GILBERT, PASSION IS A FASHION: THE REAL STORY OF THE CLASH 364 (2004) ("The Clash may have woken up Midwest teenagers to the terrible things their government was doing in their name in Nicaragua and El Salvador."); RON EYERMAN & ANDREW JAMISON, MUSIC AND SOCIAL MOVEMENTS: MOBILIZING TRADITIONS IN THE TWENTIETH CENTURY 24 (1998) ("[I]n the context of the social movements of the 1960s, American folk-inspired rock music became a major source of knowledge about the world and their own place in it for millions of youth around the globe.").

[8] U.S. CONST. art. I, § 8, cl. 8. To this end, Congress created copyright law to protect original expression fixed in a tangible medium of expression. 17 U.S.C. § 102 (2006).

no law . . . abridging the freedom of speech . . . ."[9] Generally, these two stalwart protectors of freedom of expression coexist peacefully.[10] But what would happen if the scope of federal copyright law were expanded in such a way as to infringe the First Amendment rights of others?

Copyright is a limited statutory entitlement.[11] Modern copyright law gives a copyright holder a "bundle" of legal rights.[12] The legal rights for music are unique

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[9] U.S. CONST. amend. I. Notwithstanding the simplicity and elegance of the text of the First Amendment, "'[s]peech' is an elusive term, and judges and scholars have debated its bounds for two centuries." Universal City Studios, Inc. v. Corley, 273 F.3d 429, 446 (2d Cir. 2001).

[10] Courts generally deny any conflict between copyright laws and the First Amendment. *See, e.g.*, Harper & Row Publ'rs, Inc. v. Nation Enters., 471 U.S. 539, 556 (1985) (approving the argument that copyright's idea/expression dichotomy "strikes a definitional balance between the First Amendment and the Copyright Act by permitting free communication of facts while still protecting an author's expression"); Zacchini v. Scripps-Howard Broad. Co., 433 U.S. 562, 577 n.13 (1977) ("[C]opyright law does not abridge the First Amendment because it does not restrain the communication of ideas or concepts."); Mazer v. Stein, 347 U.S. 201, 217 (1954) ("[P]rotection is given only to the expression of the idea–not the idea itself."); Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 594 (1994) (concluding that 2 Live Crew's parody of Roy Orbison's "Oh Pretty Woman" may be a fair use within the meaning of the Copyright Act without exploring First Amendment concerns); Roy Export Co. Establishment of Vaduz, Liechtenstein v. CBS, 672 F.2d 1095, 1100 (2d Cir. 1982) (observing that the "fair use doctrine" resolves conflicts between interests protected by copyright laws and the First Amendment).

[11] Modern copyright law provides that for certain rights—like the right to make a "cover" version of a song—a copyright holder has no ability to exclude others, but is compensated with a compulsory, statutory license. When a copyright holder is compelled by statute to license a work, and thus may not deny a user permission, such a license is referred to as a "compulsory" or "statutory" license. In exchange for being compelled to license a work, the copyright holder is entitled to receive a royalty. For example, a "compulsory mechanical license" allows a musician to record her own version of a song even when the musical composition copyright—and the corresponding right to exclude others from making such a derivative work—belongs to someone else. If a musician (Alien Ant Farm) wants to record a song ("Smooth Criminal"), the copyright holder of the musical composition (Michael Joe Jackson) cannot deny permission and is compensated with a mechanical license. *See* 17 U.S.C. § 115 (2006 & Supp. IV 2010) (defining scope of rights for copyright holders of musical compositions); *see also* AL KOHN & BOB KOHN, KOHN ON MUSIC LICENSING 732 (4th ed. 2010) (explaining that "[e]ven though far removed from the mechanical reproduction of music by piano rolls and music boxes, recordings of music in records, tapes, compact discs, and digital downloads continue to be referred to as mechanical reproductions," for which a "mechanical license" is needed) (emphasis omitted). It would be administratively costly, if not impossible, for individual songwriters to grant licenses and collect royalty payments for the mechanical reproductions. Accordingly, songwriters often use representatives, like the Harry Fox Agency, to license their songs for use in sound recordings. *See About HFA*, HARRYFOX.COM, http://www.harryfox.com/public/AboutHFA.jsp (Harry Fox Agency describing itself as "the foremost mechanical licensing, collection, and distribution agency for music publishers in the U.S."). In addition to mechanical licenses, songwriters also grant public performance licenses to users who publicly play their music, like restaurants, shopping malls, and broadcast stations. As with the administration of mechanical licenses, performing rights organizations (PROs) emerged to help songwriters "police, license, and otherwise administer" their public performance right. MARSHALL LEAFFER, UNDERSTANDING COPYRIGHT LAW 362 (4th ed. 2005). These organizations, including ASCAP and BMI, each represent a large number of songwriters and function as the middleman between songwriters and radio and television stations by licensing their constituents' songs and collecting the royalty fees. KOHN & KOHN, *supra*, at 1263. For users that make frequent public performances, PROs grant "blanket licenses." Such licenses authorize a fee-paying station to play all of the songs within an organization's repertoire, as often as the station wants for a stated term, usually a year. *See* KOHN & KOHN, *supra*, at 1263.

in that each piece of recorded music embodies two copyrights: the musical composition and the sound recording.[13]

Historically, sound recordings had no public performance right. This meant that recording artists had no authority to prohibit others from publicly playing their recorded music, and they had no authority to collect a royalty payment.[14] Today, holders of sound recording copyrights have a limited public performance right; this right is limited to digital audio transmissions (online music).[15] As explained next, recording artists are now entitled to a royalty fee for music transmitted online.

Under existing copyright law, traditional, over-the-air AM/FM radio stations[16] are exempt from paying royalties to recording artists when broadcasting sound recordings.[17] This means that recording artists receive no royalties for traditional radio play.[18] Traditional radio stations compensate only the composer of the underly-

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[12] Generally, these include the exclusive right to (1) reproduce, (2) prepare derivatives, (3) distribute copies, (4) perform the work publicly, (5) display the work publicly, and (6) in the case of sound recordings, to perform the work publicly by means of a digital audio transmission. 17 U.S.C. § 106 (2006). A copyright holder's bundle of rights is divisible. 17 U.S.C. § 201(d)(2) (2006); KOHN & KOHN, *supra* note 11, at 379–80. The ability to assign and license rights, as well as to exclude others from using a work, is a fundamental feature of copyright law. For example, a copyright holder may assign the publishing rights to one entity, assign the public performance rights to another, and retain the right to prepare derivatives. In practice, music publishers, rather than songwriters, typically hold all of the musical composition copyrights. M. WILLIAM KRASILOVSKY & SIDNEY SHEMEL, THIS BUSINESS OF MUSIC: THE DEFINITIVE GUIDE TO THE MUSIC INDUSTRY 162, 174 (10th ed., Watson-Guptill 2007); WILLIAM W. FISHER, PROMISES TO KEEP: TECHNOLOGY, LAW, AND THE FUTURE OF ENTERTAINMENT 51, 54 (2004). Similarly, record companies, rather than recording artists, often hold the copyrights to the sound recordings. In addition to the right to assign, copyright holders have the right to exclude other users.

[13] These two copyrights may be held by different people and each copyright has different protections. The musical composition may be written by one individual (Irving Berlin), for which a copyright is available ("White Christmas"), and a sound recording of the work may be made by another (Bing Crosby), for which a separate copyright exists. For simplicity, the creator of a musical composition will be referred to as a "songwriter" or "composer" and the sound recording performer as a "musician" or "recording artist." Admittedly, these labels are overbroad and may not apply to all musical works; however these short-hand descriptions are used in this Article to illustrate the various rights and royalties available for copyrighted music.

[14] Joshua P. Binder, *Current Developments of Public Performance Rights for Sound Recordings Transmitted Online: You Push Play, but Who Gets Paid?*, 22 LOY. L.A. ENT. L. REV. 1, 15 n.157 (2001).

[15] 17 U.S.C. § 106(6) (2006) (providing copyright holders the exclusive right, "in the case of sound recordings, to perform the copyrighted work publicly by means of a digital audio transmission").

[16] *See* 17 U.S.C. § 114(d)(1)(B)(i)(I) (2006) (referring to a traditional, AM/FM radio station, licensed by the Federal Communications Commission, as a "terrestrial broadcast station").

[17] LEAFFER, *supra* note 11, at 367 ("[W]hen a radio station plays a popular song, only the copyright owner of the musical work may claim royalties for the performance of the musical composition.").

[18] *See* 17 U.S.C. § 114(d)(1) (2006). Or more specifically, the record label does not get compensated. Typically, the rights holder of a sound recording is the record company that commissioned the work. KOHN & KOHN, *supra* note 11, at 588. *See also* Kimberly L. Craft, *The Webcasting Music Revolution is Ready to Begin, As Soon As We Figure Out the Copyright Law: The Story of the Music Industry at War with Itself*, 24 HASTINGS COMM. & ENT. L.J. 1, 9–10 (2001) ("The actual artist usually retains

ing musical work—the actual notes and lyrics of a song.[19] While traditional radio stations are exempt from paying the sound recording royalties, Internet radio stations that transmit music digitally must pay a royalty fee for both the musical composition and the sound recording copyright.[20]

Over and above the obligation to pay two types of royalty fees for playing the music, Webcasters who play recorded music are saddled with statutory restrictions on the content and arrangement of their playlists. Among the proscriptions on Webcasters' transmissions, copyright law provides that within a three-hour period, Webcasters may not play more than two songs in a row from the same album, may not play more than three songs in a row by the same artist, and may not play more than four songs by the same artist (or four different songs from the same compilation).[21] These numerical limitations are called the "sound recording performance complement."[22] The Supreme Court has indicated that Congress's amendments to the copyright act are tolerable if the scope of copyright protection is within its "traditional contours" because these contours provide sufficient free speech protec-

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very few intellectual property rights in the work; in a standard recording or publishing contract, the artist serves in a work-for-hire capacity and gives away most existing intellectual property rights to the publisher and/or label in exchange for their efforts of manufacturing, promoting and distributing the work. In exchange, the artist receives a percentage of sales, either negotiated or statutory, called royalties.").

[19] *See* KOHN & KOHN, *supra* note 11, at 699–700 (explaining that the standard songwriter publishing contract provides that the songwriter assign his or her copyrights in the composition to the music publisher in exchange for royalty fees).

[20] *See* Lionel S. Sobel, *A New Music Law for the Age of Digital Technology*, 17 ENT. L. REP., Nov. 1996, at 2 ("[T]o get broadcasters and music publishers to agree to a public performance right for record companies and recording artists, it was necessary for the record industry to agree to accept a very narrow and specific right. Thus this new right for public performances by means of 'digital audio transmission' is the only type of public performance right enjoyed by owners of the copyrights to sound recordings.").

[21] The statute defines "sound recording performance complement" as :

> [T]he transmission during any 3-hour period, on a particular channel used by a transmitting entity, of no more than—
>
> (A) 3 different selections of sound recordings from any one phonorecord lawfully distributed for public performance or sale in the United States, if no more than 2 such selections are transmitted consecutively; or
>
> (B) 4 different selections of sound recordings—
>
> (i) by the same featured recording artist; or
>
> (ii) from any set or compilation of phonorecords lawfully distributed together as a unit for public performance or sale in the United States, if no more than three such selections are transmitted consecutively:
>
> *Provided*, That the transmission of selections in excess of the numerical limits provided for in clauses (A) and (B) from multiple phonorecords shall nonetheless qualify as a sound recording performance complement if the programming of the multiple phonorecords was not willfully intended to avoid the numerical limitations prescribed in such clauses.

17 U.S.C. § 114(j)(13) (2006).

[22] *Id.*

tions.[23] However, the additional statutory restrictions on the content of Webcasters' music transmissions are not within the "traditional contours" of copyright law and offer no free speech safeguards.

These copyright regulations, which limit the number and arrangement of songs a Webcaster may transmit within a three-hour period, infringe the First Amendment interests of (1) the listeners, (2) the speaker, and (3) the uninhibited marketplace of ideas. As outlined in this Article, music can affect us individually, and it can affect our larger social groups. Moreover, the Internet offers a unique platform from which anyone of us can be a Webcaster.[24]

Without the diversity that Internet radio can foster, today's media-conglomerate-dominated marketplace threatens to commodify music and thereby render it politically impotent.[25] The interests implicated by the digital transmission of music extend beyond the private interests of the copyright holders and the lobbying efforts of these copyright holders have helped extend the scope of copyright protection beyond its "traditional contours."[26] Accordingly, copyright is no longer an engine of free expression.[27] Rather, it now functions as a censor on a medium and a message that deserve greater breathing space.[28]

Part I of this Article discusses the intersection of copyright law and the First Amendment and provides an overview of the 2003 *Eldred v. Ashcroft* decision, where the Supreme Court declined to apply First Amendment scrutiny to the 1998 Sonny Bono Copyright Term Extension Act (CTEA).[29] The Supreme Court's most

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[23] Eldred v. Ashcroft, 537 U.S. 186, 219 (2003) (concluding that when copyright protection is within its "traditional contours," copyright law's "built-in First Amendment accommodations," namely the idea/expression dichotomy and fair use defense, provide adequate free speech protections).

[24] Eric S. Slater, *Broadcasting on the Internet: Legal Issues for Traditional and Internet-Only Broadcasters*, 6 MEDIA L. & POL'Y 25, 26 (1997) ("The Internet enables all of us to potentially become broadcasters."). *See also* Steven M. Marks, *Entering the Sound Recording Performance Right Labyrinth: Defining Interactive Services and the Broadcast Exemption*, 20 LOY. L.A. ENT. L. REV. 309, 312 (2000) (Webcasting has "enabled anyone with Internet access to perform sound recordings worldwide merely by setting up a personal computer. The result was the ability to bypass the significant infrastructure necessary for traditional over-the-air broadcasting or cable or satellite transmission.").

[25] George Kent, a professor of political science, argues that "[t]he music system, especially that for popular music, reinforces global inequities, and diverts resources away from where they are most needed." George Kent, *Unpeaceful Music*, *in* MUSIC AND CONFLICT TRANSFORMATION: HARMONIES AND DISSONANCES IN GEOPOLITICS 109–10 (Olivier Urbain ed., 2008). Kent further explains that "[i]n this commodification process there is a systematic trivialization of music." *Id.* at 110.

[26] Eldred v. Ashcroft, 537 U.S. 186, 221 (2003).

[27] *See* Harper & Row, Publ'rs, Inc. v. Nation Enters., 471 U.S. 539, 558 (1985) (referring to copyright's economic incentives as "the engine of free expression").

[28] *Cf.* Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 579 (1994) (describing the fair use doctrine, one of copyright law's built-in First Amendment accommodations, as a "guarantee of breathing space within the confines of copyright").

[29] *Eldred*, 537 U.S. at 208 (upholding the 20-year extension conferred by the Sonny Bono Copyright Term Extension Act (CTEA), Pub. L. No. 105-298, 112 Stat. 2827 (1998)).

recent pronouncement on applying First Amendment scrutiny for copyright regulation is the logical starting point for the present discussion. While the *Eldred* decision provides a starting point for applying First Amendment scrutiny to copyright regulation, it does not decide the matter since the issue before the *Eldred* Court was the extension of the term rather than the scope of copyright protection.

Part II explores a growing body of literature documenting the power of music, from promoting the well-being of individuals to fostering reconciliation of cross-cultural disputes. The scholarship from these diverse disciplines underscores that the value of music extends beyond the private interests of the copyright holders. The current dialogue about the First Amendment interests affected by modern copyright law has not fully acknowledged the research that supports the unique communicative potential of music. Part II introduces this research into the legal literature.

Part III discusses Supreme Court jurisprudence that extends First Amendment protection to music, including a listener's right to hear it and a speaker's interest in playing it. Part IV traces the progression of copyright protection for music from its inception to the tangled mess of the royalty debate saga, including an explanation of the sound recording performance complement. This evolution of copyright protection informs the discussion of the "traditional contours" of copyright protection. Part V explores how the ever-expanding copyright protections have been used by incumbents to maintain market dominance without consideration of the First Amendment interests of listeners or Webcasters. And Part VI argues that current copyright regulations, which limit the number and arrangement of Webcasters' playlists, fail First Amendment scrutiny.[30]

I. The Intersection of Copyright Law and the First Amendment

Our Founding Fathers used the English copyright system as a model[31] and included within our constitutional framework the congressional authority to create copyrights as well as patents.[32] Historically, the First Amendment and copyright law have co-existed with little conflict. The first Copyright Act, promulgated in

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[30] *See generally* Amanda S. Reid, *Play It Again, Sam: Webcasters' Sound Recording Complement as an Unconstitutional Restraint on Free Speech*, 26 HASTINGS COMM. & ENT. L.J. 317, 344 (2004) (arguing that the sound recording performance complement fails First Amendment scrutiny).

[31] Tonya M. Evans, *Sampling, Looping, and Mashing . . . Oh My! How Hip Hop Music is Scratching More than the Surface of Copyright Law*, 21 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 843, 871 (2011). *See also* KOHN & KOHN, *supra* note 11, at 399 ("In this country, the copyright laws governing the original 13 states were based largely upon the Statute of Anne."); L. Ray Patterson & Craig Joyce, *Copyright in 1791: An Essay Concerning the Founders' View of the Copyright Power Granted to Congress in Article I, Section 8, Clause 8 of the U.S. Constitution*, 52 EMORY L.J. 909, 931–32 (2003) (same).

[32] U.S. CONST. art. I, § 8, cl. 8 (Congress has the authority "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.").

1790, was adopted by Congress one year before the First Amendment was approved by the states.[33] As the Supreme Court has indicated, "The Copyright Clause and First Amendment were adopted close in time. This proximity indicates that, in the Framers' view, copyright's limited monopolies are compatible with free speech principles."[34] Constitutional challenges to copyright laws on First Amendment grounds are a relatively new phenomenon. As Marybeth Peters observed, "[u]ntil recently, the body of constitutional law relating to copyright was almost nonexistent."[35]

The body of constitutional law relating to copyright is growing as a result of litigation challenging Congress's recent amendments to the Copyright Act.[36] In 1998, Congress passed the Sonny Bono Copyright Term Extension Act, which extended the term of all existing copyrights by an additional twenty years.[37] In *Eldred v. Ashcroft*, petitioners argued the CTEA not only exceeded Congress's power under the Copyright Clause but also violated the First Amendment.[38] In 2003, the Supreme Court ruled 7-2 that the CTEA did not violate the Copyright Clause's limitation that the monopoly endures only for "limited times."[39]

In rebuffing the First Amendment challenge, the Court characterized the CTEA not as a burden on "the communication of particular facts or ideas," but as the protection of "authors' original expression from unrestricted exploitation."[40] The Court also suggested that simple copying may not deserve full First Amend-

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[33] Patterson & Joyce, *supra* note 31, at 943 n.94.

[34] *Eldred*, 537 U.S. at 219. The Court seems predisposed to conclude that the Founding Fathers would not promulgate laws incompatible with free speech principles, but perhaps the Court should not be so generous. *See* Alien and Sedition Acts, four different acts passed over several weeks in 1798, which were used to curtail criticism of the government: Naturalization Act of June 18, 1798, ch. 54, 1 Stat. 566; Alien Friends Act of June 25, 1798, ch. 58, 1 Stat. 570; Alien Enemies Act of July 6, 1798, ch. 66, 1 Stat. 577; Sedition Act of July 14, 1798, ch. 74, 1 Stat. 596. For a deeper discussion on the Alien and Sedition Acts, *see generally* JAMES M. SMITH, FREEDOM'S FETTERS: THE ALIEN AND SEDITION LAWS AND AMERICAN CIVIL LIBERTIES (1956).

[35] Marybeth Peters, *Constitutional Challenges to Copyright Law*, 30 COLUM. J.L. & ARTS 509, 509 (2007).

[36] *See, e.g.*, *Eldred*, 537 U.S. 186 (upholding copyright amendment that extended copyright term for existing copyrighted works by 20-years); Luck's Music Library, Inc. v. Gonzales, 407 F.3d 1262 (D.C. Cir. 2005) (upholding copyright amendment that restored copyright protection to certain foreign works that had fallen into the public domain); Kahle v. Gonzales, 487 F.3d 697 (9th Cir. 2007) (upholding copyright amendment that changed the copyright system from an opt-in system to an opt-out system), *cert. denied* 552 U.S. 1096 (2008); Golan v. Holder, 609 F.3d 1076 (10th Cir. 2010) (upholding copyright amendment that restored copyright protection to works that had entered the public domain), *cert. granted* 131 S. Ct. 1600 (Mar. 7, 2011).

[37] Sonny Bono Copyright Term Extension Act (CTEA), Pub. L. No. 105-298, 112 Stat. 2827 (1998).

[38] *Eldred*, 537 U.S. at 186.

[39] *Id.* at 198–99. Justices Stevens, *id.* at 222 (Stevens, J., dissenting), and Breyer, *id.* at 242 (Breyer, J., dissenting), wrote separately, opining that the CTEA's retrospective term extension did indeed violate the Copyright Clause's limitation that the protection endure only for "limited [t]imes."

[40] *Id.* at 221.

ment protection: "The First Amendment securely protects the freedom to make — or decline to make — one's own speech; it bears less heavily when speakers assert the right to make other people's speeches."[41]

In concluding that Congress's extension of the copyright term did not run afoul of the First Amendment, the Court expressed strong confidence in "copyright's built-in free speech safeguards" to protect free speech interests.[42] These "built-in First Amendment accommodations" are two-fold: the first accommodation is the "idea/expression dichotomy."[43] Copyright law distinguishes between ideas and expression and protects only original expression.[44] For example, the idea of an anthropomorphic, bipedal, animated cartoon mouse is not protectable, but Walt Disney's expression of the character Mickey Mouse is protectable. The idea/expression dichotomy prevents an individual from gaining monopoly privileges over an idea by only protecting an individual's original expression of an idea, rather than extending protection to the idea itself.[45] Not only are ideas unprotected by copyright law, but facts also fall outside of the protection as well.[46] Ideas and facts are freely available for anyone to use.

The second First Amendment accommodation is the "fair use doctrine." The fair use doctrine protects individuals who use an author's original expression in certain circumstances.[47] These circumstances include criticism, comment, news re-

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[41] *Id.* This phrasing has not escaped criticism. *See, e.g.*, Arlen W. Langvardt & Tara E. Langvardt, *Caught in the Copyright Rye: Freeing First Amendment Interests from the Constraints of the Traditional View*, 2 HARV. J. SPORTS & ENT. L. 99, 137 (2011) ("The Court probably was incorrect in arguing that the First Amendment 'bears less heavily when speakers assert the right to make other people's speeches.'"); Christina Bohannan, *Copyright Infringement and Harmless Speech*, 61 HASTINGS L.J. 1083, 1086 (2010) ("Unfortunately, the Court's simplistic distinction between speaking and 'making other people's speeches' cannot support the analytical weight it is being forced to bear. The use of copyrighted material has substantial speech value to both the user and the public, whether or not it is copied."); Rebecca Tushnet, *Copy This Essay: How Fair Use Doctrine Harms Free Speech and How Copying Serves It*, 114 YALE L.J. 535, 563 (2004) ("Explaining why intermediate scrutiny was not required, Justice Ginsburg distinguished *Turner* from *Eldred* by drawing a line between copiers and real speakers: 'The First Amendment securely protects the freedom to make—or decline to make—one's own speech; it bears less heavily when speakers assert the right to make other people's speeches.' As a matter of doctrine, this is false.").

[42] *See Eldred*, 537 U.S. at 221.

[43] *Id.* at 219.

[44] *See* Harper & Row, Publ'rs, Inc. v. Nation Enters., 471 U.S. 539, 556 (1985) (noting that the "idea/expression dichotomy strike[s] a definitional balance between the First Amendment and the Copyright Act by permitting free communication of facts while still protecting an author's expression.") (internal quotation omitted).

[45] *Eldred*, 537 U.S. at 190 ("[C]opyright gives the holder no monopoly on any knowledge, fact, or idea . . . .").

[46] 17 U.S.C. § 102(b) (2006); *see, e.g.*, *Eldred*, 537 U.S. at 219; Feist Publ'ns, Inc. v. Rural Telephone Serv. Co., 499 U.S. 340, 349–50 (1991).

[47] *Eldred*, 537 U.S. at 219 (explaining that the fair use doctrine "allows the public to use not only facts and ideas contained in a copyrighted work, but also expression itself in certain circumstances").

porting, teaching, scholarship, and research.[48] The Copyright Act enumerates four factors courts can use to determine whether a use is fair:

> (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work.[49]

These four statutory factors must be "weighed together, in light of the purposes of copyright."[50]

The Court's confidence in the idea/expression and fair use safeguards was so strong that it noted that when "Congress has not altered the traditional contours of copyright protection, further First Amendment scrutiny is unnecessary."[51] By implication, copyright protection that steps outside the "traditional contours" is subject to First Amendment review.[52] The Court refused to go so far as to say that copyright protection is "categorically immune from challenges under the First Amendment."[53] However, the Court acknowledged that Congress is given wide latitude to enact legislation that is within the traditional contours of copyright protection: "[w]e are not at liberty to second-guess congressional determinations and policy judgments of this order, however debatable or arguably unwise they may be."[54] While Congress is given broad deference to enact copyright protection that is within its traditional contours, such deference is not warranted when the protection ex-

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[48] 17 U.S.C. § 107 (2006); *see also* Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 594 (1994); *Harper & Row*, 471 U.S. at 560 (discussing "the latitude for scholarship and comment traditionally afforded by fair use").

[49] 17 U.S.C. § 107 (2006).

[50] *Campbell*, 510 U.S. at 578.

[51] *Eldred*, 537 U.S. at 221. The Court also suggested that "copying" is speech that may not deserve full First Amendment protection: "The First Amendment securely protects the freedom to make–or decline to make–one's own speech; it bears less heavily when speakers assert the right to make other people's speeches." *Id.*

[52] *See, e.g.*, Daniel A. Farber, *Conflicting Visions and Contested Baselines: Intellectual Property and Free Speech in the "Digital Millennium,"* 89 MINN. L. REV. 1318, 1349 (2005) ("The implication [of *Eldred*] clearly seems to be that further First Amendment scrutiny is in order when Congress has altered those [traditional] contours [of copyright protection]."); NEIL WEINSTOCK NETANEL, COPYRIGHT'S PARADOX 185–94 (2008) (observing that *Eldred* leaves room for First Amendment scrutiny); *see also* Order Granting Motion to Dismiss, Kahle v. Ashcroft, No. C-04-1127 MMC, 2004 WL 2663157, at *17 (N.D. Cal. Nov. 19, 2004) (stating that unless statutes alter the scope of copyright protection, they do not alter the traditional contours); Golan v. Gonzales, 501 F.3d 1179, 1188-89 (10th Cir. 2007) (noting that "the term ['traditional contours of copyright protection'] seems to refer to something broader than copyright's built-in free speech accommodations").

[53] *Eldred*, 537 U.S. at 221 (rejecting the assertion made in *Eldred v. Reno*, 239 F.3d 372, 375 (D.C. Cir. 2001)) (internal quotation marks omitted).

[54] *Id.* at 208.

ceeds its traditional contours. Before exploring the traditional contours of copyright protection of music, we must explore the power of music as well as the First Amendment protections for music.

II. The Power of Music

Music is often at the heart of our most profound personal and social experiences.[55] As professor of musicology and anthropology Thomas Turino observes: "[p]eople in societies around the world use music to create and express their emotional inner lives, to span the chasm between themselves and the divine, to woo lovers, to celebrate weddings, to sustain friendships and communities, to inspire mass political movements, and to help their babies fall asleep."[56] Music has a long history in the human experience.[57] Researchers speculate that Neanderthals used a form of holistic song to communicate, to find a mate, soothe their progeny, and cement their social groupings.[58] Music is used in strikingly similar ways today.

A. Music Therapy Can Be Used to Promote Healing and Wellness

Modern research shows that music has tangible and articulable benefits for us individually as well as for our collective social groups. Music therapy can assist with a range of medical and behavioral issues from reducing the likelihood of drug

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[55] Exploring the exact metes and bounds of the notion of "music" is beyond the scope of this Article. That task will be left in the capable hands of others. *See generally* PETER KIVY, INTRODUCTION TO A PHILOSOPHY OF MUSIC (2002); LEONARD B. MEYER, EMOTION AND MEANING IN MUSIC (1961); WHAT IS MUSIC?: AN INTRODUCTION TO THE PHILOSOPHY OF MUSIC (Philip Alperson ed., 1994); PHILIP DORRELL, WHAT IS MUSIC?: SOLVING A SCIENTIFIC MYSTERY (2005); JOHN POWELL, HOW MUSIC WORKS: THE SCIENCE AND PSYCHOLOGY OF BEAUTIFUL SOUNDS, FROM BEETHOVEN TO THE BEATLES AND BEYOND (2010).

[56] THOMAS TURINO, MUSIC AS SOCIAL LIFE: THE POLITICS OF PARTICIPATION 1 (2008). *See also* David Huron, *Is Music an Evolutionary Adaptation?*, *in* THE COGNITIVE NEUROSCIENCE OF MUSIC 57, 63 (Isabelle Peretz & Robert J. Zatorre eds., 2003) ("There is no human culture known in modern times that did not, or does not, engage in recognizably musical activities."); ARNOLD PERRIS, MUSIC AS PROPAGANDA: ART TO PERSUADE, ART TO CONTROL 1 (1985) ("No society yet studied is without music, neither in the tiny, lost tribe of the Philippine Tasaday nor in the rigorously censored lives of the eight hundred million Chinese during the Cultural Revolution.").

[57] The Supreme Court has observed that "[m]usic is one of the oldest forms of human expression." Ward v. Rock Against Racism, 491 U.S. 781, 790 (1989). *See also* SCHNECK & BERGER, *supra* note 1, at 22 (2006) ("The history of music in the human experience is at least as old as our civilized past, and probably even older."); KOHN & KOHN, *supra* note 11, at 670 ("Archeologists have unearthed evidence dating back to the dawn of antiquity of man's creating music throughout Asia, Europe, Africa, the Americas, and other parts of the globe.").

[58] *See generally* STEVEN MITHEN, THE SINGING NEANDERTHALS: THE ORIGINS OF MUSIC, LANGUAGE, MIND, AND BODY (2007); *see also* SCHNECK & BERGER, *supra* note 1, at 29 (2006) ("The voice was perhaps the first instrument through which *Homo sapiens* (or perhaps even earlier species with vocal abilities) could call out to one another, attract animals, convey needs, communicate within groups, establish presence of self and others, and, most of all, to express human conditions such as needs, desires, fears, pain, joy, excitement, etc. . . ."); Steven Brown, *The "Musilanguage" Model of Music Evolution*, *in* THE ORIGINS OF MUSIC 271–300 (Nils L. Wallin, et al. eds., 2000) (suggesting music and language evolved from a common ancestor, namely the "musilanguage" stage of evolution).

abuse relapse[59] to engaging with autistic children.[60] Music therapy has also been shown to benefit individuals of all ages, by reducing the pain of heel-stick procedures on premature infants,[61] helping troubled adolescents engage with their therapists,[62] and reducing confusion and agitation in elderly adults after surgery.[63] Music has been shown to help with healing[64] as well as pain management.[65]

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[59] Teresa L Lesiuk, *A Rationale for Music-Based Cognitive Rehabilitation Toward Prevention of Relapse in Drug Addiction*, 28 MUSIC THERAPY PERSP. 124, 124–29 (2010) (discussing how music-based cognitive rehabilitation may successfully reduce the likelihood of drug addiction relapse); Ted Ficken, *Music Therapy with Chemically Dependent Clients: A Relapse Prevention Model*, *in* MUSIC THERAPY AND ADDICTIONS 103 (David Aldridge & Jörg Fachner, eds., Jessica Kingsley Publishers 2010); Marko Punkanen, *Music Therapy as a Part of Drug Rehabilitation: From Adhering to Treatment to Integrating the Levels of Experience*, *in* MUSIC THERAPY AND ADDICTIONS 123 (David Aldridge ed., Jessica Kingsley Publishers 2010). *See also* Jaakko Erkkilä, *Gambling Addiction: Evaluation of a Multimethod Treatment Programme Including Music Therapy*, *in* MUSIC THERAPY AND ADDICTIONS 132 (David Aldridge ed., Jessica Kingsley Publishers 2010).

[60] *See, e.g.*, Alaine E. Reschke-Hernández, *History of Music Therapy Treatment Interventions for Children with Autism*, 48 J. MUSIC THERAPY 169, 169 (2011) (reviewing history of music therapy research and treatment of children with autism); Hayoung A. Lim, *Use of Music to Improve Speech Production in Children with Autism Spectrum Disorders: Theoretical Orientation*, 27 MUSIC THERAPY PERSP. 103, 103–14 (2009) (explaining that because music and speech are closely related, both neurologically and developmentally, music can be an effective tool for language and speech development for children with ASD because their perception of musical elements appears intact); Hayoung A. Lim, *Effect of "Developmental Speech and Language Training Through Music" on Speech Production in Children with Autism Spectrum Disorders*, 47 J. MUSIC THERAPY 2, 2 (2010) (studying 50 children with ASD and observing that, while both high and low functioning participants improved their speech production after receiving either music or speech training, the low functioning participants showed a greater improvement after the music training than the speech training); Dawn C. Wimpory & Susan Nash, *Musical Interaction Therapy: Therapeutic Play for Children with Autism*, 15 CHILD LANGUAGE TEACHING & THERAPY 17, 17 (1999) (suggesting music therapy is an appropriate means of both motivating a child with autism and addressing deficits in social timing).

[61] Mark Jude Tramo, et al., *Effects of Music on Physiological and Behavioral Indices of Acute Pain and Stress in Premature Infants: Clinical Trial and Literature Review*, 3 MUSIC & MED. 72, 72–83 (2011) (finding controlled music stimulation appears to be a safe and effective way to ameliorate pain and stress in premature infants following heel-stick procedures).

[62] *See* Alexander W. Keen, *Using Music as a Therapy Tool to Motivate Troubled Adolescents*, 39 SOC. WORK IN HEALTH CARE 361 (2004) (discussing how music can successfully help adolescents with emotional disorders who have problems in peer and adult relationships engage in therapeutic processes with minimized resistance when they relate via music, including song discussion, listening, writing lyrics, composing music, and performing music). *See also* Roy Kennedy & Amanda Scott, *A Pilot Study: The Effects of Music Therapy Interventions on Middle School Students' ESL Skills*, 42 J. OF MUSIC THERAPY 244, 245 (2005) ("Music therapy can be used as a holistic approach to develop language comprehension, dissolve cross-cultural barriers, and enhance specific knowledge using structure provided by repeated rhythmic assignment of information utilizing verbal and nonverbal communication.").

[63] Ruth G. McCaffrey, *The Effect of Music on the Cognition of Older Adults Undergoing Hip and Knee Surgery*, 1 MUSIC & MED. 22, 22–28 (2009) (observing that while acute confusion is common in older adults after hip or knee surgery, a music-listening group of post-surgery adults had higher levels of cognitive function and less confusion than those who did not listen to music after surgery); *see also* Yu Lin, et al., *Effectiveness of Group Music Intervention Against Agitated Behavior in Elderly Persons With Dementia*, 26 INT'L J. GERIATRIC PSYCHIATRY 670, 670 (2011) (exploring the effectiveness of group music intervention against agitated behavior in elderly persons with dementia); Adarsh M. Kumar, et al., *Music Therapy Increases Serum Melatonin Levels in Patients with Alzheimer's Disease*,

The scientific literature shows that music has an observable effect on our brains.[66] Studying the way the brain processes music provides unique and helpful insights into the way the brain processes information, emotions, and speech.[67] This research is fruitful because listening to music involves many cognitive and emotional components with distinct brain substrates.[68]

The music we enjoy has been shown to trigger the pleasure and reward centers of the brain.[69] Specifically, music has been seen to affect the limbic and

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ALTERNATIVE THERAPIES IN HEALTH & MED., Nov. 1999, at 49, 49–57 (concluding increased levels of melatonin following music therapy may have contributed to the relaxed and calm mood of patients with Alzheimer's disease); Amee Baird & Séverine Samson, *Memory for Music in Alzheimer's Disease: Unforgettable?*, 19 NEUROPSYCHOL. REV., 2009, at 85 (finding that procedural musical memory, including the ability to play a musical instrument, may be unforgettable for some musicians with Alzheimer's disease).

[64] *See, e.g.*, Teppo Särkämö, et al., *Music Listening Enhances Cognitive Recovery and Mood After Middle Cerebral Artery Stroke*, 131 BRAIN, 866, 866 (2008) (finding that stroke patients who listened to music had significantly enhanced cognitive functioning in the domains of verbal memory and focused attention, as well as less depression and confused mood); Cathie E. Guzzetta, *Soothing the Ischemic Heart*, 94 AM. J. OF NURSING 24, (1994) (discussing benefits of music therapy for cardiac patients); Soo Ji Kim, *Music Therapy Protocol Development to Enhance Swallowing Training for Stroke Patients with Dysphagia*, 47 J. MUSIC THERAPY102, 102–19 (2010) (finding pilot study of music-enhanced swallowing protocol with stroke patients suffering from abnormality in swallowing fluids and/or foods, where patients risk aspirating food or liquid, causing pneumonia, or malnutrition, showed statistically significant changes in swallowing functions); Teri Randall, *Music Not Only Has Charms to Soothe, But Also to Aid Elderly in Coping with Various Disabilities*, 266 J. AM. MED. ASS'N 1323 (1991) (discussing advantages of using music therapy during rehabilitation exercises of geriatric patients).

[65] *See, e.g.*, Joanne V. Loewy & Ralph Spintge, *Music Soothes the Savage Beast*, 3 MUSIC & MEDICINE 69, 69–70 (2011) (exploring music's effect on pain management); Lauren Dimaio, *Music Therapy Entrainment: A Humanistic Music Therapist's Perspective of Using Music Therapy Entrainment with Hospice Clients Experiencing Pain*, 28 MUSIC THERAPY PERSPECTIVES 106, 106–15 (2010) (discussing use of music therapy entrainment with hospice patients experiencing pain).

[66] *See generally* DANIEL J. LEVITIN, THIS IS YOUR BRAIN ON MUSIC: THE SCIENCE OF A HUMAN OBSESSION (2006) (examining from a neuropsychological perspective how music affects our brains); OLIVER SACKS, MUSICOPHILIA: TALES OF MUSIC AND THE BRAIN (2007) (examining the effects of music on the brain and how music affects the human condition).

[67] Robert Zatorre, *Music, the Food of Neuroscience?*, NATURE, Mar. 17, 2005 at 313 (observing that while the research suggests that "music and speech processing do not use completely overlapping neural substrates," neuroimaging research indicates that "the ability to organize a set of words into a meaningful sentence and the ability to organize a set of notes into a well-structured melody might engage brain mechanisms in a similar way"). *See also* Stefan Koelsch, et al., *Music in the Treatment of Affective Disorders: An Exploratory Investigation of a New Method for Music-Therapeutic Research*, 27 MUSIC PERCEPTION 307, 308 (2010) (suggesting that one of the great powers of music is to evoke activity in the hippocampus and amygdala structures of the brain, which are key to generating emotions like joy and happiness, such that music therapy may be able to assist patients with depression or post-traumatic stress disorder, who have reduced activity in these brain structures).

[68] *See, e.g.*, Isabelle Peretz & Robert J. Zatorre, *Brain Organization for Music Processing*, 56 ANN. REV. OF PSYCHOL. 89, 89 (2005) (examining the effect of musical training on brain plasticity); Lauren Stewart, et al., *Music and the Brain: Disorders of Musical Listening*, 129 BRAIN 2533, 2533–53 (2006).

[69] Anne J. Blood & Robert J. Zatorre, *Intensely Pleasurable Responses to Music Correlate With Activity in Brain Regions Implicated in Reward and Emotion*, 98 PROCEEDINGS OF THE NAT'L ACAD. OF SCI.

paralimbic structures of the brain, including the amygdala, ventral striatum, and hippocampus, which are our emotion processing centers.[70] This research thus suggests that because our emotion processing structures of the brain are activated by music, the emotions triggered by music are "real" emotions, not merely illusions.[71]

In addition to activating our emotion centers, making music has even been shown to alter the physical structures of the brain, from enhancing certain neural systems to changing the anatomical structure and tissue density.[72] Long-term musical training may even affect how we process information, by enhancing auditory and visual memory functions.[73] Such research is still ongoing; although there is lit-

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11818, 11818–23 (2001) (measuring intensely pleasant emotional responses to music and linking music with biologically relevant, survival-related stimuli by increasing blood flow to pleasure and reward centers of the brain); Anne J. Blood, et al., *Emotional Responses to Pleasant and Unpleasant Music Correlate with Activity in Paralimbic Brain Regions*, 2 NATURE NEUROSCI. 382, 382 (1999) (measuring cerebral blood flow in response to music, researchers posit that music may elicit brain responses similar to those previously associated with pleasant/unpleasant emotional states); Stefan Koelsch, et al., *Music in the Treatment of Affective Disorders: An Exploratory Investigation of a New Method for Music-Therapeutic Research*, 27 MUSIC PERCEPTION 307, 313 (2010) (finding that "[m]usic making positively changed mood, as indicated by a decrease of depression/anxiety, a decrease in fatigue, and an increase in vigor").

[70] *See, e.g.*, Katie Overy & Istvan Molnar-Szakacs, *Being Together In Time: Musical Experience and The Mirror Neuron System*, 26 MUSIC PERCEPTION 489, 490 (2009) ("different aspects of musical processing recruit almost all regions of the brain—including prefrontal cortex, premotor cortex, motor cortex, somatosensory cortex, temporal lobes, parietal cortex, occipital cortex, cerebellum, and limbic regions including the amygdala and thalamus—unlike any other stimulus or cognitive process."); Stefan Koelsch, et al., *Music in the Treatment of Affective Disorders: An Exploratory Investigation of a New Method for Music-Therapeutic Research*, 27 MUSIC PERCEPTION 307, 307–08 (2010) (discussing the limbic and paralimbic correlates of music–evoked emotions); Anne J. Blood & Robert J. Zatorre, *Intensely Pleasurable Responses to Music Correlate With Activity in Brain Regions Implicated in Reward and Emotion*, 98 PROCEEDINGS OF THE NAT'L ACAD. OF SCI. 11818, 11818–23 (2001).

[71] *See, e.g.*, Stefan Koelsch, et al., *Music in the Treatment of Affective Disorders: An Exploratory Investigation of a New Method for Music-Therapeutic Research*, 27 MUSIC PERCEPTION 307, 308 (2010) (explaining that because music can activate core structures of emotion processing, namely the amygdala, music can evoke "real" emotions).

[72] *See, e.g.*, Robert Zatorre, *Music, the Food of Neuroscience?*, NATURE, Mar. 17, 2005, at 314.

[73] *See, e.g.*, Lorna S. Jakobson, et al., *Memory for Verbal and Visual Material in Highly Trained Musicians*, 26 MUSIC PERCEPTION 41, 41–55 (2008) (finding that musicians showed superior immediate and delayed recall of word lists, as well as superior learning, delayed recall, and delayed recognition for visual designs, which suggests that extensive music training is associated with a generalized enhancement of auditory and visual memory functions); Susanne Brandler & Thomas H. Rammsayer, *Differences in Mental Abilities Between Musicians and Non-Musicians*, 31 PSYCHOL. OF MUSIC 123, 123–28 (2003) (finding reliably higher performance on verbal memory assessment test for musicians than for non-musicians, which supports the notion that long-term musical training exerts beneficial effects on verbal memory—most likely due to changes in cortical organization); Michael S. Franklin, et al., *The Effects of Musical Training on Verbal Memory*, 36 PSYCHOL. OF MUSIC 353, 353–65 (2008) (suggesting that musical training may influence verbal working memory and long-term memory, and that these improved abilities are due to enhanced verbal rehearsal mechanisms in musicians); Thomas G. Bever & Robert J. Chiarello, *Cerebral Dominance in Musicians and Non-musicians*, 185 SCIENCE 537, 539 (1974) (seminal article on hemispheric specialization by musicians for music, revealing an apparent preference for left ear listening for music analysis, and by inference, right hemisphere for processing). *See also* Paulo Estévão Andrade & Joydeep Bhattacharya, *Brain Tuned to Music*, 96 J.

tle disagreement that music affects us and has deeply powerful advantages, only recently are we availing ourselves of the full potential of those benefits.[74]

B. Music Can Be a Vehicle for Cross-Cultural Education and Reconciliation

In addition to the benefits music therapy has for the individual, modern scholarship has tracked the use of music in instigating and resolving larger social conflicts.[75] The power of music can be harnessed to transform social conflicts by encouraging empathy, creativity, and nonviolence.[76] Researchers from fields as diverse as ethnomusicology and political science have examined the effect music can have on our larger social networks.[77] Music can be a vehicle for healing after a social conflict[78] as well as cross-cultural education and reconciliation.[79] For exam-

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OF ROYAL SOC'Y OF MED. 284, 284–87 (2003) (reviewing mechanisms by which music is processed in the brain).

[74] SCHNECK & BERGER, *supra* note 1, at 13 (2006) ("Introduced in the United States just after World War II, primarily as an intervention to help trauma victims of combat, music therapy has grown to be recognized internationally as a medical treatment.").

[75] *See generally, e.g.*, MUSIC AND CONFLICT (John Morgan O'Connell & Salwa El-Shawan Castelo-Branco eds., 2010) (collection of essays discussing how music can be used to both promote conflict and to advance conflict resolution, and illustrating how music can promote a shared musical heritage across borders, with specific focus on the music of Albania, Azerbaijan, Brazil, Egypt, Germany, Indonesia, Iran, Ireland, North and South Korea, Uganda, the United States, and the former Yugoslavia); MUSIC AND CONFLICT TRANSFORMATION: HARMONIES AND DISSONANCES IN GEOPOLITICS (Olivier Urbain ed., 2008) (collection of interdisciplinary articles exploring the role of music in conflict resolution).

[76] Olivier Urbain, *Preface*, *in* MUSIC AND CONFLICT TRANSFORMATION: HARMONIES AND DISSONANCES IN GEOPOLITICS 4–5 (Olivier Urbain ed., 2008); *see also* Katie Overy & Istvan Molnar-Szakacs, *Being Together In Time: Musical Experience and The Mirror Neuron System*, 26 MUSIC PERCEPTION 489 (2009) (proposing that it is music's ability "to communicate social and affective information and to create the feeling of 'being together' that makes it so appealing to humans across all ages and cultures").

[77] *See* SCHNECK & BERGER, *supra* note 1, 27 (2006) ("Why music exists and how it is able to affect such profound physiological responses are questions that have piqued the interest and imagination of investigators in fields as diverse as anthropology, biomedical engineering, education, physiology, psychology, psychiatry, philosophy, neuroscience, medicine, speech and language research, and of course artists and musicians.").

[78] Maria Elena López Vinader, *Music Therapy: Healing, Growth, Creating a Culture of Peace*, *in* MUSIC AND CONFLICT TRANSFORMATION: HARMONIES AND DISSONANCES IN GEOPOLITICS 147, 147–71 (Olivier Urbain ed., 2008) (exploring contributions that the profession of music therapy is making to the world through healing and promoting peace); Kjell Skyllstad, *Managing Conflicts through Music: Educational Perspectives*, *in* MUSIC AND CONFLICT TRANSFORMATION: HARMONIES AND DISSONANCES IN GEOPOLITICS 172, 172–86 (Olivier Urbain ed., 2008) (exploring use of inter-cultural music education in primary schools to foster empathy and tolerance and prevent ethnic conflicts).

[79] Olivier Urbain, *Art for Harmony in the Middle East: The Music of Yair Dalal*, *in* MUSIC AND CONFLICT TRANSFORMATION: HARMONIES AND DISSONANCES IN GEOPOLITICS 201, 201–11 (Olivier Urbain ed., 2008) (exploring the music and philosophy of peace of Yair Dalal, a self-described "Arab Israeli Jew"); Anne-Marie Gray, *Music as a Tool of Reconciliation in South Africa*, *in* MUSIC AND CONFLICT TRANSFORMATION: HARMONIES AND DISSONANCES IN GEOPOLITICS 63, 63–77 (Olivier Urbain ed., 2008) (discussing how vocal music of polarized South African societies can foster reconciliation and unforced nation building); June Boyce-Tillman, *Music and Peacemaking in Educational*

ple, ethnomusicologist Benjamin Brinner has investigated collaborations between Palestinian and Israeli musicians that combine Hebrew songs with Arabic arrangements to create new, unified musical expressions.[80] Scholars are exploring how music may provide a unique medium for examining the dynamic character of conflict as well as offering a vehicle for resolving conflict. In addition to aiding reconciliation efforts, music is an effective means of educating, mobilizing, and inspiring political change.[81]

C. Music Can Be a Vehicle to Educate and Inspire Political Change

Songs of protest and social awareness have been sung throughout our history.[82] As Mariana Whitmer, a historical musicology scholar, has noted, "[t]he history of America is reflected in our music, and readily discernible in the songs we have sung."[83] For her, "[t]here is nothing that so aptly reflects what Americans are experiencing and feeling than the songs we sing and listen to" because these

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Contexts, *in* MUSIC AND CONFLICT TRANSFORMATION: HARMONIES AND DISSONANCES IN GEOPOLITICS 212, 212–28 (Olivier Urbain ed., 2008) (proposing revisions to Western music curricula in primary schools to foster multiculturalism and diversity). *But cf.* MUSIC AND MANIPULATION: ON THE SOCIAL USES AND SOCIAL CONTROL OF MUSIC (Steven Brown & Ulrik Volgsten eds., 2006) (collection of essays exploring sociology of music and music's behaviorally manipulative effects, its morally questionable uses and control mechanisms, and its economic and artistic regulation through commercialization).

[80] BENJAMIN BRINNER, PLAYING ACROSS A DIVIDE: ISRAELI-PALESTINIAN MUSICAL ENCOUNTERS 3–4 (2009). *See also* Karen Abi-Ezzi, *Music as a Discourse of Resistance: The Case of Gilad Atzmon*, *in* MUSIC AND CONFLICT TRANSFORMATION: HARMONIES AND DISSONANCES IN GEOPOLITICS 93, 93–103 (Olivier Urbain ed., 2008) (exploring the work of Israeli-born jazz musician Gilad Atzmon, "a vociferous anti-Zionist," who uses his music to challenge Zionism and make a political statement).

[81] Reebee Garofalo, *Understanding Mega-Events: If We Are the World, Then How Do We Change It?*, *in* ROCKIN' THE BOAT: MASS MUSIC & MASS MOVEMENTS 35, 35 (Reebee Garofalo ed., 1999) ("[I]t would, perhaps, be fair to say that mega-events appear to be quite useful for priming the political pump.").

[82] Social and political issues have often animated mass-mediated popular music events. As professor of popular music studies Reebee Garofalo noted, "[h]unger and starvation in Africa, apartheid, the farm crisis, peace, political prisoner, the environment, child abuse, racism, black-on-black violence, AIDS, Central America, industrial plant closings, and homelessness have all been themes for fundraising concerts, popular songs, or both." *Id.* at 16. It is in the dialectic of speaking and listening through music that culture and politics emerge. Professor Garofalo has argued that, since the civil rights and anti-war movements of the 1960s, the power of such mass movements has declined; in the absence of these grassroots political movements, popular music now functions as the animating force to raise awareness of social issues and organize masses of people. Reebee Garofalo, *Understanding Mega-Events: If We Are the World, Then How Do We Change It?*, *in* ROCKIN' THE BOAT: MASS MUSIC & MASS MOVEMENTS 16, 16–17 (Reebee Garofalo ed., 1999) ("The civil rights and anti-war movements engaged millions of people in the politics of direct action primarily on the strength of the issues themselves. In the process, these movements exerted a profound influence on the themes and styles of popular music. Since the 1980s, music — which is to say, culture — has taken the lead in the relative absence of such movements. With the decline of mass participation in grassroots political movements, popular music itself has come to serve as a catalyst for raising issues and organizing masses of people.").

[83] Mariana Whitmer, *Songs with Social Significance: An Introduction*, MAGAZINE OF HISTORY, July 2005, at 9.

"[s]ongs have entertained us, distracted us, and inspired us."[84] Indeed, these songs "reflect the fabric of our lives as they provide a chronicle of the past and are a most effective tool for acquainting students with that history and culture."[85]

Political songs have been written for the Revolutionary War, the Civil War, the Vietnam War, the Civil Rights movement, the nuclear arms race, and for countless causes in between.[86] The purpose of these songs is often to provide a unifying ethos for a movement as well as a call to action.[87] As Mark Matten, a professor of political science, has observed, music can function as either "social cement or social solvent."[88] These songs serve to rally existing group members as well as to educate potential new recruits.[89] Education can come in the form of introducing new ideas and information, or providing a new lens through which to view old ideas, or connecting together ideas the listener may not have associated before.[90] Education may even come in the form of personal enlightenment because, as professor of sociology Rob Rosenthal notes, music "often crystallizes ideas that are floating around but have not yet coalesced into a coherent ideology for the individual, or that need an outside voice of authority to bring them to consciousness and self-acceptance."[91] While critics argue that music fails to have a hypodermic needle ef-

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[84] *Id.* at 22.

[85] *Id.*

[86] *See, e.g.*, Mariana Whitmer, *Songs with Social Significance: An Introduction*, MAGAZINE OF HISTORY, July 2005, at 9–22; Baruch Whitehead, *We Shall Overcome: The Roles of Music in the US Civil Rights Movement*, *in* MUSIC AND CONFLICT TRANSFORMATION: HARMONIES AND DISSONANCES IN GEOPOLITICS 78, 78–92 (Olivier Urbain ed., 2008) (exploring power and importance of music in the Civil Rights movement).

[87] RON EYERMAN & ANDREW JAMISON, MUSIC AND SOCIAL MOVEMENTS: MOBILIZING TRADITIONS IN THE TWENTIETH CENTURY 45 (1998) (observing that music can "help mobilize protest and create group solidarity . . ."). And as sociologist Serge Denisoff observed:

Songs of persuasion can be perceived as functioning to achieve six primary goals:

1. The song attempts to solicit and arouse outside support and sympathy for a social or political movement.
2. The song reinforces the value structure of individuals who are active supporters of the social movement or ideology.
3. The song creates and promotes cohesion, solidarity, and high morale in an organization or movement supporting its world view.
4. The song is an attempt to recruit individuals for a specific social movement.
5. The song invokes solutions to real or imagined social phenomena in terms of action to achieve a desired goal.
6. The song points to some problem or discontent in the society, usually in emotional terms.

SERGE R. DENISOFF, SING A SONG OF SOCIAL SIGNIFICANCE 2–3 (1983).

[88] MARK MATTERN, ACTING IN CONCERT: MUSIC, COMMUNITY, AND POLITICAL ACTION 144 (1998).

[89] Rob Rosenthal, *Serving the Movement: The Role(s) of Music*, POPULAR MUSIC & SOC'Y, Fall 2001, at 11.

[90] *Id.* at 13.

[91] *Id.* at 18.

fect of single-handedly changing listener attitudes, music may have some inculcating and priming effect for listeners, which predisposes them to support certain organizations and movements.[92]

As our postmodern sensibilities now appreciate, messages sent by the speaker are not always the same as those received by the listener.[93] Moreover, culture and politics shape music as much as music shapes culture and politics.[94] While the politics and the music of the 1960s is no exception, technological innovations in the mid-twentieth century affected the reach of the music and its messages. As professor of music Arnold Perris explained, "[t]he protest songs of past generations were spread slowly and often to a limited audience. The potential of the electronic media in the 1960s was of overwhelming power. A song heard on television was a message delivered to millions."[95]

The electronic media of today offers to expand the reach of music and its messages worldwide.[96] Internet radio can be used as a tool for social and political activists. Eric Lee, founding editor of an international trade union organization, uses Internet radio to play music: "authentic music of protest."[97] In describing the music, Lee says, "[a]ll this music, all of it, is utterly subversive. Listen to this mu-

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[92] *Compare* SERGE R. DENISOFF, SING A SONG OF SOCIAL SIGNIFICANCE 133 (1983) ("[T]here is little, if any, concrete or empirical evidence that songs *do* in fact have an independent impact upon attitudes in the political arena."), *with* ROBERT CANTWELL, WHEN WE WERE GOOD (1996) 15, 375–81 (suggesting that activists in the '60s had grown up listening to folk songs of the '40s and '50s, which predisposed them to support the Civil Rights movement). *See also* Marie Korpe, Ole Reitov & Martin Cloonan, *Music Censorship from Plato to the Present*, *in* MUSIC AND MANIPULATION: ON THE SOCIAL USES AND SOCIAL CONTROL OF MUSIC 239, 239–42 (Steven Brown & Ulrik Volgsten eds., 2006) (describing how Plato urged the rejection of bad music because it had the potential to undermine good order and society).

[93] Professor Rosenthal explained: "But if we have learned anything at all from postmodernism, it is that the product as created by the producer is unlikely to be the product as received or used by the audience. Between the minstrel declaring 'The emperor has no clothes' and the audience hearing that message lies a myriad of factors leading to a gap between message as intended (assuming even that is clear-cut) and message as received and then used." Rob Rosenthal, *Serving the Movement: The Role(s) of Music*, POPULAR MUSIC & SOCIETY, Fall 2001, at 15.

[94] *See* Mostafa Rejai & Kay Phillips, *Classical Music and Political Sociology: A Research Note*, 29 J. OF POL. & MIL. SOC. 177, 185 (2001) ("Music evolves in a cultural, social, and political context. Politics shapes much music; music is inseparable from the political universe. The music of an age is shaped by—and in turn it reflects—the politics of an age.").

[95] ARNOLD PERRIS, MUSIC AS PROPAGANDA: ART TO PERSUADE, ART TO CONTROL 182 (1985).

[96] *See* BROWN, *supra* note 2, at 3 ("What is new about the contemporary relevance of music as a conveyor of political ideas is not that music is being used at all in this regard. Rather, what is new is the magnitude of this phenomenon combined with technological advances in the distribution and accessability [sic] of music, minimally affecting hundreds of millions of mostly young adults across nearly all cultures in the world today.").

[97] ERIC LEE, HOW INTERNET RADIO CAN CHANGE THE WORLD 45 (2005).

sic and you'll want to change the world. And that's the whole point of the station."[98]

As discussed previously, the power of music can be harnessed in pursuit of peace as well as social change, but as Professor Kent notes, "[t]hat contribution is limited so long as it is held captive by those in power."[99] And those in power, namely the "globalized music industry," serve the market incumbents.[100] The Internet offers a vehicle to redistribute that power and diversify the marketplace of ideas.

D. Music Transmitted by Internet Radio Fosters Diversity

Music is an indispensable vehicle for adding to the marketplace of ideas. Internet radio fosters diversity of music and, correspondingly, of ideas.[101] The ubiquity and pervasiveness of radio allows it to permeate our daily lives and draw us together.[102] We multi-task while listening to it; it accompanies us while driving in the car, cooking dinner, or walking in the park.[103] Internet radio is rapidly gaining popularity, with more than a quarter of all Internet users in the U.S. listening to Webcasts each month.[104]

Internet radio is different from other modes of mass communication in that it is easy to access, inexpensive to operate, and almost anyone can be a Webcaster.[105] Unlike FCC-regulated broadcasters, we could all be Webcasters. The line between listener and speaker is thinner online than it has ever been with other modes of

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[98] *Id.* at 47.

[99] George Kent, *Unpeaceful Music*, *in* MUSIC AND CONFLICT TRANSFORMATION: HARMONIES AND DISSONANCES IN GEOPOLITICS 110, 110 (Olivier Urbain ed., 2008).

[100] *Id.*

[101] *See, e.g.*, Adriana Helbig, *The Cyberpolitics of Music in Ukraine's 2004 Orange Revolution*, 82 CURRENT MUSICOLOGY 81, 81–101 (2006) (analyzing the pivotal role music and the Internet played in the Orange Revolution, when between November 21 and December 26, 2004, nearly one million people protested in Kyiv, Ukraine against election fraud, media censorship, mass government corruption, and oligarchic market reforms).

[102] *See generally* STEVE CRAIG, OUT OF THE DARK: A HISTORY OF RADIO AND RURAL AMERICA (2009) (exploring how terrestrial radio spurred changes in U.S. culture between World War I and World War II by speeding the flow of information, news, music, entertainment, and advertising to once isolated areas, which had the effect of diminishing differences between urban and rural life and bringing rural citizens a greater sense of national belonging).

[103] ERIC LEE, HOW INTERNET RADIO CAN CHANGE THE WORLD 8, 50 (2005).

[104] Andrew Stockment, Note, *Internet Radio: The Case For A Technology Neutral Royalty Standard*, 95 VA. L. REV. 2129, 2133 (2009) ("More than 69 million Americans listen to internet radio every month, including at least 42 million weekly listeners, which is more than a quarter of all U.S. internet users.").

[105] *See, e.g.*, Bonneville Int'l Corp. v. Peters, 347 F.3d 485, 489 (3d Cir. 2003) ("Anyone with a computer, a reasonably speedy connection to the Internet, streaming software and the equipment to copy songs from CDs to a computer in the popular and compressed MP3 format ('rip' the songs) could webcast sound recordings through streaming.").

mass communication; new software and technologies make the line more blurred than ever before.[106]

Unlike the brick-and-mortar, hard-copy world, the digital sphere offers a uniquely equalizing force where extensive distribution networks are unnecessary because content can be distributed instantly on the Internet. Before the popularity of online music, "most consumers learned about new music from major media radio, television and print resources, and labels could predict, with some accuracy, what consumers would buy."[107] Now, as music business analysts note, "[t]he Internet is shifting the axis of control towards consumers."[108]

The modern music industry is characterized by radical inequality in ability to distribute music. The major music industry companies typically promote only a handful of musicians heavily and aggressively, rather than spreading their resources more evenly over a larger group of musicians.[109] The diversity of music offered online allows for greater variety to satisfy varying individual preferences.[110] Internet radio is ideally suited to cater to niche markets,[111] which are excluded from the

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[106] Robert J. Delchin, *Musical Copyright Law: Past, Present and Future of Online Music Distribution*, 22 CARDOZO ARTS & ENT. L.J. 343, 354 (2004) (noting that "webcasting spread rapidly, since anyone with a personal computer could set up their own Internet 'radio station,' and anyone with free RealAudio software could tune in"); ERIC LEE, HOW INTERNET RADIO CAN CHANGE THE WORLD 42 (2005) (observing that "no special technical skills are required, software is all free, and from the moment you think you might want to do an Internet radio station until it's actually on the air can be a matter of minutes"); Craft, *supra* note 18, at 12 (explaining that "anyone with an updated PC and a few pieces of relatively inexpensive equipment could now operate a cyber-radio station from home–or freely download and share music").

[107] DIANE RAPAPORT, A MUSIC BUSINESS PRIMER 5 (2003).

[108] *Id.* *See also* KRASILOVSKY & SHEMEL, *supra* note 12, at 399 (observing the Internet offers to "level the playing field between independent and major record labels, since on-line distribution affords even the smallest record labels the opportunity to reach as wide an audience as a major record label"); KOHN & KOHN, *supra* note 11, at 69 (stating that "the Internet has provided individual songwriters and artists an alternative means of reaching the public with their artistic creations, bypassing traditional distributors and publishers, and opening up opportunities for new entrants into the publishing and recording industries").

[109] FISHER, *supra* note 12, at 78 (describing the distributive inequality and observing that "only a few musicians received the exposure and support necessary to become stars and to earn correspondingly generous royalties").

[110] RAPAPORT, *supra* note 107, at 57 ("Consumers object strongly to having their tastes and listening habits dictated to by the marketing needs of major conglomerates."); ERIC LEE, HOW INTERNET RADIO CAN CHANGE THE WORLD 45 (2005) ("People grow tired of the same sterile commercial garbage played on most radio stations. Internet radio can bring back to life the sounds of a different culture.").

[111] *See* Claire Cain Miller, *Music Labels Reach Deal With Internet Radio Sites*, N.Y. TIMES, July 8, 2009, at B2 ("Online listening has become an increasingly valuable outlet for music companies and artists. Internet radio services can appeal to niche audiences by tailoring individual streams, and they feature independent artists who might never get played on broadcast stations."); RAPAPORT, *supra* note 107, at 206 ("The Internet provides new sources of distribution and promotion and is an ideal medium for serving niche interests.").

mainstream by market incumbents.[112] Indeed, as journalist Claire Cain Miller noted, "Internet radio is one of the few bright spots in the music industry, giving airplay to dozens of genres and thousands of artists that never received airplay before . . . ."[113] Airplay is critical to creating consumer demand[114] and consumer demand is critical to maintaining the saliency and economic value of a song.[115]

Internet radio offers the potential to unlock the current stranglehold the music industry has on the diversity of music in the marketplace.[116] The potential of Webcasting to challenge the hegemonic power of media conglomerates has not fully materialized[117] because the fledgling technology has been hamstrung by copyright regulations that were crafted by market incumbents.[118] These regulations are outlined in Part IV *infra* and the efforts of market incumbents to use copyright reg-

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[112] RAPAPORT, *supra* note 107, at 190 ("With only rare exceptions, independent labels receive no exposure in print media that is [sic] owned by the conglomerates. They receive virtually no exposure on major AM and FM radio stations.").

[113] Claire Cain Miller, *Music Labels Reach Deal With Internet Radio Sites*, N.Y. TIMES, July 8, 2009, at B2. *See also* KOHN & KOHN, *supra* note 11, at 69 ("[T]he Internet has provided individual songwriters and artists an alternative means of reaching the public with their artistic creations, bypassing traditional distributors and publishers, and opening up opportunities for new entrants into the publishing and recording industries.").

[114] KOHN & KOHN, *supra* note 11, at 36 ("Studies show that at one time nearly 90% of all CD purchases were influenced by radio airplay.").

[115] KOHN & KOHN, *supra* note 11, at 36 (urging that to develop a song's economic value, the copyright holder must "maintain an active relationship between the song and the listening public").

[116] While the Internet offers to level the playing field between market incumbents and newcomers, observers note "marketing expertise will remain as important, if not more important, than distribution" because "getting above the noise level will become more difficult over time, not less." KOHN & KOHN, *supra* note 11, at 69; *see also* RAPAPORT, *supra* note 107, at 207 ("A [web] site can easily get lost in cyberspace. The incredible competition for audience share on the Internet and the increasing presence and dominance of large sites by major entertainment conglomerates does not make getting visitors an easy task for independent artists."). As music industry experts explain, getting above the noise is critical because "[a]n excellent song or record is worthless without public exposure." KRASILOVSKY & SHEMEL, *supra* note 12, at 366.

[117] Rachel McLean, et al., *The Myths of Empowerment Through Information Communication Technologies: An Exploration of The Music Industries and Fan Bases*, 48 MGMT DECISION 1365, 1365–77 (2010) (arguing that current media manipulation and corporate interests restrict and alienate independent musicians, and the hegemonic state remains unchallenged where music continues to be commodified and fans are increasingly constructed as "consumers" such that the ultimate power remains in mass media and broadcasting rather than independent "narrowcast" and DIY [do it yourself] artistry); Roger Wallis, *The Changing Structure of the Music Industry: Threats to and Opportunities for Creativity*, *in* MUSIC AND MANIPULATION: ON THE SOCIAL USES AND SOCIAL CONTROL OF MUSIC 287 (Steven Brown & Ulrik Volgsten eds., 2006) ("Digital production and distribution technology, in theory, provide powerful opportunities for creators and performers of musical works to reach a potential global audience without dependence on the series of intermediaries that is so typical of the established music industry. However, this does not appear to have occurred in practice via players in the traditional industry.").

[118] William F. Patry, *Copyright and The Legislative Process: A Personal Perspective*, 14 CARDOZO ARTS & ENT. L.J. 139 (1996) (describing industry involvement in drafting copyright legislation); KOHN & KOHN, *supra* note 11, at 1468–1504 (describing industry influence in the evolution of the digital audio transmission right).

ulations to maintain market dominance are discussed in Part V *infra*. The next section explores the scope of First Amendment protections for music.

III. First Amendment Protections for Music

Art is protected by the First Amendment. The Supreme Court has observed that artistic expression, including a "painting of Jackson Pollock, music of Arnold Schöenberg, or [the] Jabberwocky verse of Lewis Carroll," is "unquestionably shielded" by the First Amendment.[119] Courts are not in the business of judging the quality of works as a prerequisite for determining if they receive First Amendment protection; indeed, art need not rise to the level of good, or even popular, to receive First Amendment protection.[120] Courts are also not in the business of distinguishing between speech that merely entertains and speech that informs because the line between the two is "too elusive."[121] The Supreme Court has broadly conceived the notion of "speech" and has not limited it to the spoken word: "[T]he Constitution looks beyond written or spoken words as mediums of expression."[122] As such, there is little debate that "[m]usic, as a form of expression and communication, is protected under the First Amendment."[123]

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[119] Hurley v. Irish-Am. Gay, Lesbian & Bisexual Group of Boston, Inc., 515 U.S. 557, 569 (1995). *See also* Nat'l Endowment for the Arts v. Finley, 524 U.S. 569, 602 (1998) ("It goes without saying that artistic expression lies within this First Amendment protection."). While "works of art are 'unquestionably shielded' by the First Amendment," law professor Jed Rubenfeld has observed that traditional First Amendment theories based on democratic governance or individual autonomy do not adequately explain art's protected status. Jed Rubenfeld, *The Freedom of Imagination: Copyright's Constitutionality*, 112 YALE L.J. 1, 31, 37–48 (2002) (proposing a theory of the First Amendment based on protection of the freedom of imagination). *See also* Edward J. Eberle, *Art as Speech*, 11 U. PA. J. L. & SOC. CHANGE 1 (2008) (concluding that art understood as speech should constitute the presumptively protected core expression); Marci A. Hamilton, *Art Speech*, 49 VAND. L. REV. 73 (1996) (suggesting that a representative democracy demands a means of challenging government and that art performs this function in a singular way and thus deserves the most stringent First Amendment protection).

[120] Cohen v. California, 403 U.S. 15, 25 (1971) ("Wholly neutral futilities . . . come under the protection of free speech as fully as do Keats' poems or Donne's sermons' . . . .") (quoting Winters v. New York, 333 U.S. 507, 528 (1948) (Frankfurter, J., dissenting)). *See also* Organization for a Better Austin v. Keefe, 402 U.S. 415, 419 (1971) ("[S]o long as the means are peaceful, the communication need not meet standards of acceptability.").

[121] "Speech that entertains, like speech that informs, is protected by the First Amendment because '[t]he line between the informing and the entertaining is too elusive for the protection of that basic right.'" Cardtoons, L.C. v. Major League Baseball Players Ass'n, 95 F.3d 959, 969 (10th Cir. 1996) (quoting *Winters*, 333 U.S. at 510).

[122] Hurley v. Irish-Am. Gay, Lesbian & Bisexual Group of Boston, Inc., 515 U.S. 557, 569 (1995).

[123] Ward v. Rock Against Racism, 491 U.S. 781, 790 (1989) ("From Plato's discourse in the Republic to the totalitarian state in our own times, rulers have known [music's] capacity to appeal to the intellect and to the emotions, and have censored musical compositions to serve the needs of the state . . . . The Constitution prohibits any like attempts in our own legal order."); *see also* Schad v. Borough of Mount Ephraim, 452 U.S. 61, 65–66 (1981) ("Entertainment, as well as political and ideological speech, is protected; motion pictures, programs broadcast by radio and television, and live entertainment, such as musical and dramatic works fall within the First Amendment guarantee.").

A. The Listener's Right to Hear Music

Diversity of music promotes the marketplace of ideas.[124] Music can often carry powerful social and political messages. Listeners have a First Amendment right to hear these messages. Access to the free flow of ideas is key to informed and reliable decision making in a democracy.[125] The public has a broad right to receive information, from matters of public concern[126] to matters of economic interest.[127] As Justice Brennan observed, "[i]t would be a barren marketplace of ideas that had only sellers and no buyers."[128] Listeners thus have a recognized right to receive information.

While the Supreme Court has not had occasion to decide a First Amendment case asserting the specific right to receive music, the Court has confirmed that the right to receive ideas and information is "vital to the preservation of a free society."[129] In *Martin v. City of Struthers*, the Court struck down a municipal ordinance that prohibited door-to-door distributors of literature from knocking on the front door or ringing the doorbell.[130] Justice Black, speaking for the Court, declared that "[t]he right of freedom of speech and press has broad scope. . . . This freedom embraces the right to distribute literature, and necessarily protects the right to receive it."[131] The Court has also protected an addressee's right to receive Communist propaganda through the mails.[132] In *Lamont v. Postmaster General*, the Court invalidated a statute directing the Postmaster General not to deliver a publication

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[124] The Supreme Court has often employed the marketplace of ideas metaphor in First Amendment cases. The metaphor first appeared in American jurisprudence in Justice Oliver Wendell Holmes's dissent in Abrams v. United States, 250 U.S. 616 (1919). Justice Holmes stated: "[T]he ultimate good desired is better reached by free trade in ideas–that the best test of truth is the power of the thought to get itself accepted in the competition of the market, and that truth is the only ground upon which their wishes safely can be carried out." *Id.* at 630 (Holmes, J., dissenting).

[125] *See* Virginia State Bd. of Pharmacy v. Virginia Citizens Consumer Council, Inc., 425 U.S. 748 (1976) ("And if [the free flow of information] is indispensable to the proper allocation of resources in a free enterprise system, it is also indispensable to the formation of intelligent opinions as to how that system ought to be regulated or altered. Therefore, even if the First Amendment were thought to be primarily an instrument to enlighten public decisionmaking in a democracy, we could not say that the free flow of information does not serve that goal."); Bates v. State Bar, 433 U.S. 350, 364 (1977) ("The listener's interest is substantial . . . . Such speech serves individual and societal interests in assuring informed and reliable decisionmaking."). *See also* Thomas I. Emerson, *The First Amendment and the Right to Know: Legal Foundations of the Right to Know*, 1976 WASH. U. L.Q. 1, 2 (arguing that the right to receive information is essential for seeking the truth and decision making in a democratic society).

[126] *See, e.g.*, Red Lion Broad. Co. v. FCC, 395 U.S. 367 (1969).

[127] *See, e.g.*, *Virginia State Bd. of Pharmacy*, 425 U.S. at 748.

[128] Lamont v. Postmaster Gen., 381 U.S. 301, 308 (1965) (Brennan, J., concurring).

[129] Martin v. City of Struthers, 319 U.S. 141, 146–147 (1943); *see also* Kleindienst v. Mandel, 408 U.S. 753, 762–63 (1972) (recognizing a listener's right to receive information and ideas).

[130] 319 U.S. 141 (1943).

[131] *Id.* at 143 (citation omitted).

[132] *Lamont*, 381 U.S. at 301.

deemed "communist political propaganda" without a written request from the addressee because such a requirement imposed an unconstitutional burden on the addressee's First Amendment right to receive protected speech.[133]

Control of access to information and ideas is tantamount to controlling what people think. In *Stanley v. Georgia*, the Court struck down a state law outlawing the private possession of obscene material because the statute impinged upon a viewer's right to receive information in the privacy of his home: "[i]f the First Amendment means anything, it means that a State has no business telling a man, sitting alone in his house, what books he may read or what films he may watch."[134]

In 1969, a unanimous Court highlighted the listeners' right to receive information: "[i]t is the right of the viewers and listeners, not the right of the broadcasters, which is paramount."[135] The *Red Lion* decision upheld the FCC's "fairness doctrine," which required broadcast stations that discussed issues of public concern to give fair coverage to each side of the issue.[136] The Court explained,

> [i]t is the purpose of the First Amendment to preserve an uninhibited marketplace of ideas in which truth will ultimately prevail . . . the right of the public to receive suitable access to social, political, esthetic, moral, and other ideas and experiences is crucial here [and] [t]hat [right] may not constitutionally be abridged . . . .[137]

Listeners not only have an interest in matters of public concern, but, as the Court has recognized, listeners have an interest in knowing that a vendor will sell X commodity at Y price.[138] In extending First Amendment protections to commercial speech, the Court emphasized the value of such speech to listeners.[139] In *Virginia*

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[133] *Id.* at 305.

[134] Stanley v. Georgia, 394 U.S. 557, 565 (1969); *see also id.* ("Our whole constitutional heritage rebels at the thought of giving government the power to control men's minds."). *But see* Osborne v. Ohio, 495 U.S. 103 (1990) (refusing to extend *Stanley v. Georgia* to the possession of child pornography).

[135] Red Lion Broad. Co. v. FCC, 395 U.S. 367, 390 (1969).

[136] *Id.* at 369.

[137] *Id.* at 390.

[138] Virginia State Bd. of Pharmacy v. Virginia Citizens Consumer Council, Inc., 425 U.S. 748, 761 (1976) ("The 'idea' [the pharmacist] wishes to communicate is simply this: 'I will sell you the X prescription drug at the Y price.'").

[139] *See, e.g.*, Zauderer v. Office of Disciplinary Counsel, 471 U.S. 626, 651 (1985) (acknowledging that the extension of the First Amendment protections to commercial speech is "justified principally by the value to consumers"); Central Hudson Gas & Elec. Corp. v. Public Serv. Comm'n, 447 U.S. 557, 561–62 (1980) ("Commercial expression not only serves the economic interest of the speaker, but also assists consumers and furthers the societal interest in the fullest possible dissemination of information."); First Nat'l Bank v. Bellotti, 435 U.S. 765, 783 (1978) ("The First Amendment goes beyond protection of the press and the self-expression of individuals to prohibit government from limiting the stock of information from which members of the public may draw.").

State Board of Pharmacy v. Virginia Citizens Consumer Council, Inc., the Court observed that the free flow of commercial information is "indispensable to the proper allocation of resources in a free enterprise system" because it informs the numerous private decisions that animate the system.[140] The Court also noted that a "particular consumer's interest in the free flow of commercial information . . . may be as keen, if not keener by far, than his interest in the day's most urgent political debate."[141] If promoting the free flow of information is "primarily an instrument to enlighten public decision making in a democracy, [the Court] could not say that the free flow of information does not serve that goal."[142]

Listeners have a right to receive not only political and social messages, but also esthetic ideas and experiences.[143] This is a protected corollary of a speaker's First Amendment rights.[144] As First Amendment scholar Rodney Smolla has noted, "without both a listener and a speaker, freedom of expression is as empty as the sound of one hand clapping."[145] The Supreme Court has made it clear that a listener's right to receive information is a key component of an "uninhibited marketplace of ideas"[146] and is "fundamental to our free society."[147] This right to listen is not preconditioned on whether the speaker is making "other people's speeches"[148] or making her own original speech; rather, it focuses on the right of the listener to hear the speaker's message, irrespective of the original source.

B. The Speaker's Right to Play Music

The First Amendment protects Webcasters' playlists because the selection process of which music to play – and correspondingly, which music not to play – reflects the expressive and communicative choices of the speaker.[149] The selection

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[140] *Virginia State Bd. of Pharmacy*, 425 U.S. at 765.

[141] *Id.* at 764.

[142] *Id.* at 765.

[143] Red Lion Broad. Co. v. FCC, 395 U.S. 367, 390 (1969).

[144] *See, e.g.*, *Virginia State Bd. of Pharmacy*, 425 U.S. at 756–57; Kleindienst v. Mandel, 408 U.S. 753, 762–63 (1972); Stanley v. Georgia, 394 U.S. 557, 564 (1969); *Red Lion Broad.*, 395 U.S. at 390; Martin v. Struthers, 319 U.S. 141, 143 (1943).

[145] Rodney A. Smolla, *Freedom of Speech for Libraries and Librarians*, 85 LAW LIBR. J. 71, 77 (1993).

[146] *Red Lion Broad.*, 395 U.S. at 390.

[147] *Stanley*, 394 U.S. at 564. *See also* Caroline Mala Corbin, *The First Amendment Right Against Compelled Listening*, 89 B.U. L. REV. 939, 977 (2009) (explaining "the right to hear and receive information is essential to the health of the marketplace of ideas and democratic deliberation, and it is also essential to individual flourishing and decision-making").

[148] Eldred v. Ashcroft, 537 U.S. 186, 221 (2003).

[149] Arkansas Educ. Television Comm'n v. Forbes, 523 U.S. 666, 674 (1998) ("When a public broadcaster exercises editorial discretion in the selection and presentation of its programming, it engages in speech activity."); City of Los Angeles v. Preferred Commc'ns, Inc., 476 U.S. 488, 494 (1986) ("Thus, through original programming or by exercising editorial discretion over which stations or pro-

process reflects what music the speaker believes is valuable and worth distributing to others. The Supreme Court has explained, the "[l]iberty of circulating is as essential . . . as liberty of publishing; indeed, without the circulation, the publication would be of little value."[150]

The First Amendment protects not only the original speaker, but also a non-original speaker's edited compilation of speech.[151] The dissemination of compilations of non-original speech is within the core of First Amendment protections when such compilations reflect the expressive voice of the compiler in deciding which speech by others to transmit. The Supreme Court, in reviewing legislation that required cable operators to carry and transmit broadcast stations through their proprietary cable systems, explained that such "must-carry" provisions implicated "the heart of the First Amendment," namely, "the principle that each person should decide for himself or herself the ideas and beliefs deserving of expression, consideration, and adherence."[152] The Court has a history of providing broad protection for speakers to decide which messages deserve expression because such decisions reach the heart of the First Amendment.[153]

IV. **Progression of Copyright Protection for Music**

The Constitution expressly authorizes copyright protection,[154] and copyright laws have existed since 1790.[155] The first Act limited its protection to maps, charts,

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grams to include in its repertoire, [a cable operator] seeks to communicate messages on a wide variety of topics and in a wide variety of formats.").

[150] Lovell v. City of Griffin, 303 U.S. 444, 452 (1938). *See also* Martin v. Struthers, 319 U.S. 141, 146-47 (1943) ("Freedom to distribute information to every citizen wherever he desires to receive it is so clearly vital to the preservation of a free society that, putting aside reasonable police and health regulations of time and manner of distribution, it must be fully preserved."); Int'l Soc. for Krishna Consciousness v. Lee, 505 U.S. 672, 702–03 (1992) (Kennedy, J., concurring) ("We have long recognized that the right to distribute flyers and literature lies at the heart of the liberties guaranteed by the Speech and Press Clauses of the First Amendment.").

[151] Hurley v. Irish-Am. Gay, Lesbian & Bisexual Group of Boston, Inc., 515 U.S. 557, 570 (1995) (noting in dicta that "the presentation of an edited compilation of speech generated by other persons is a staple of most newspapers' opinion pages, which, of course, fall squarely within the core of First Amendment security").

[152] Turner Broad. Sys., Inc. v. FCC, 512 U.S. 622, 641 (1994).

[153] *Hurley*, 515 U.S. at 572–73 (holding state law that required St. Patrick's Day parade organizers to include a group of gay, lesbian, and bisexual descendants of Irish immigrants ("GLIB") in the parade, which promoted a message that the organizers did not wish to endorse, would violate "the fundamental rule of protection under the First Amendment, that a speaker has the autonomy to choose the content of his own message"); *Turner Broad. Sys., Inc.*, 512 U.S. at 636 ("Through 'original programming or by exercising editorial discretion over which stations or programs to include in its repertoire,' cable programmers and operators 'see[k] to communicate messages on a wide variety of topics and in a wide variety of formats.'" (quoting Los Angeles v. Preferred Communications, Inc., 476 U.S. 488, 494 (1986)). *See generally* Miami Herald Publishing Co. v. Tornillo, 418 U.S. 241 (1977) (holding government-imposed right-of-reply, requiring newspapers to give political candidates space in which to reply to critical speech appearing in the newspaper, violated the First Amendment).

[154] U.S. CONST. art. I, § 8, cl. 8.

and books, which were the main means by which information was recorded and disseminated in the late eighteenth century.[156] The first incarnation of domestic copyright law offered no protection for musical compositions.

A. Protections for Music Were First Extended to Printed Musical Compositions

Printed musical compositions first became federally protected copyrightable subject matter in 1831.[157] At that time, the sale of sheet music and piano rolls resulted in a copyright royalty payment for composers and was a main revenue source for songwriters and music publishers.[158] The Dramatic Composition Act of 1856 provided that music accompanying stage plays enjoyed a right of public performance.[159] Nearly forty years later, in 1897, the public performance right was extended to all types of musical compositions, not just songs written to accompany dramatic plays.[160] To publicly perform a song, the performer now needed the permission of the song composer; composers granted this permission in the form of a performance license and received a royalty fee in exchange. In 1909, Congress again amended the Copyright Act to introduce the "right of mechanical reproduction" and compulsory license fees.[161] Now the holder of the musical composition work received both a royalty for the sale of sheet music as well as for public performances of the work.[162]

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[155] An Act for the Encouragement of Learning, by Securing the Copies of Maps, Charts, and Books, to the Authors and Proprietors of Such Copies, During the Times Therein Mentioned, ch. 15, 1 Stat. 124, § 1 (May 31, 1790). The term of protection was 14 years, renewable in the 14th year for a second 14-year period. *Id.*

[156] Patterson & Joyce, *supra* note 31, at 940 ("The key to understanding the 1790 Act is Section 1, which created copyright protection for printing, reprinting, publishing, and vending books, maps, and charts, the principal means of recording and disseminating information in the late eighteenth century.").

[157] Copyright Act of Feb. 3, 1831, An Act to Amend the Several Acts Respecting Copyrights, ch. 16, §1, 4 Stat. 436, 436 (Feb. 3, 1831).

[158] KOHN & KOHN, *supra* note 11, at 4–5 (noting that when the modern music business started "the sale of sheet music constituted by far the most important source of a music publisher's revenue").

[159] Dramatic Compositions Copyright Act of August 18, 1856.

[160] An Act to Amend Title Sixty, Chapter Three of the Revised Statutes, Relating to Copyrights, ch. 4, §1, 29 Stat. 481-82 (Jan. 6, 1897).

[161] An Act to Amend and Consolidate the Acts Respecting Copyright, Pub. L. No. 60-349, ch. 320, 35 Stat. 1075 (Mar. 4, 1909) (effective July 1, 1909).

[162] The Harry Fox Agency grew up to manage the mechanical license distribution and royalty collection. Performing rights organizations (PROs), like ASCAP, emerged to manage and collect public performance royalties. Music publishers initially received the bulk of their income from the sale of sheet music, rather than royalties from the public performance of music. Publishers generally viewed the public performances as advertising that spurred sales of the sheet music. Today, the opposite is true and the royalties from public performance licenses are the largest source of income for music publishers, accounting for roughly 40% of all music publishing income. KOHN & KOHN, *supra* note 11, at 84, 669 (noting "during the twentieth century the music industry saw its revenues shift from the sale of printed music to the licensing of public performances and mechanical reproductions"). PROs

Sound recordings did not receive any federal copyright protection until the 1970s.[163] Prior to 1972, Professor Lionel Sobel explained "sound recordings were not protected by federal copyright law at all—not even against piracy."[164] Congress's amendment gave the sound recording copyright holder (recording artists and record labels) control over the reproduction and distribution of the recordings, but not over their public performances. This limited protection meant musical compositions were eligible for performance royalties, but sounds recordings were not. Radio and broadcast stations were required to pay a performance royalty to songwriters each time a song was played, but were not required to pay the recording artists.

B. Expanded Protections of Sound Recordings Were Introduced in the Second Half of the Twentieth Century

In light of the technological advancements of the mid-twentieth century, Congress made a comprehensive overhaul of copyright law in the 1976 Act.[165] Accordingly, sound recordings gained fuller copyright protection under that Act.[166] In the mid-1990s, Congress expanded the scope of protection by creating a new exclusive right to publicly perform sound recordings by means of "digital audio transmission."[167] Prior to the Digital Performance Right in Sound Recordings Act

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administer these licenses and collect and distribute the royalties. Royalties from mechanical reproduction licenses are the second largest source of income, accounting for about 25% of the income. KOHN & KOHN, *supra* note 11, at 84. Other sources of income include synchronization licenses, printed music, commercial advertising, music boxes, karaoke, and digital samples. KOHN & KOHN, *supra* note 11, at 83–86.

[163] Sounds Recording Act of Oct. 15, 1971, Pub. L. No. 92-140, 85 Stat. 391 (effective Feb. 15, 1972). The Sound Recording Amendment defined "sound recordings" as "works that result from the fixation of a series of musical, spoken, or other sounds, but not including the sounds accompanying a motion picture." 85 Stat. at 391. Prior to 1972, there was "patchwork of state laws conferring common law protection for sound recordings . . . ." LEAFFER, *supra* note 11, at 140.

[164] Sobel, *supra* note 20, at 6. This sound recording protection was challenged in a lawsuit to enjoin the Attorney General and the Librarian of Congress from implementing and enforcing the 1971 Act. Shaab v. Kleindienst, 345 F. Supp. 589, 590 (D.D.C. 1972). The court found that a limited copyright in sound recordings was justified because it was designed to protect against piracy. *Id. See also* Goldstein v. California, 412 U.S. 546, 559 (1973) ("At any time Congress determines that a particular category of 'writing' is worthy of national protection and the incidental expenses of federal administration, federal copyright protection may be authorized.").

[165] As Judge Posner observed, "[t]he comprehensive overhaul of copyright law by the Copyright Act of 1976 was impelled by recent technological advances, such as xerography and cable television, which the courts interpreting the prior act, the Copyright Act of 1909, had not dealt with to Congress's satisfaction." WGN Contl. Broad. Co. v. United Video, Inc., 693 F.2d 622, 627 (7th Cir. 1982). *See also* KOHN & KOHN, *supra* note 11, at 399 (referring to the 1976 Act as a "complete overhaul").

[166] Copyright Act of 1976, Pub. L. No. 94-553, 90 Stat. 2554 (codifying sound recordings with the other permissible subject matters for copyrights at 17 U.S.C. § 102). Copyright protection for sound recordings was still thin because sound recordings were not protected under 17 U.S.C. § 106, thus—until the Digital Performance Right in Sound Recordings Act of 1995— there was no exclusive right of a musician to publicly perform a sound recording.

[167] Digital Performance Right in Sound Recordings Act of 1995, 17 U.S.C. §§ 106(6), 114 (effective Feb. 1, 1996).

("DPRSRA"), sound recordings were the only copyrighted works not accorded a federal public performance right.[168] However, the DPRSRA applied only to "digital" audio transmission, so radio and broadcast stations that transmitted analog signals were still not required to pay a royalty to recording artists for playing their songs.

1. *Digital Performance Right in Sound Recordings Act of 1995*

The DPRSRA created a complex[169] "three-tiered system,"[170] categorizing license requirements for digital audio transmissions of sound recordings into separate rates for (1) interactive services, (2) non-interactive subscription transmissions, and (3) non-interactive non-subscription transmissions.[171] An interactive service is one that enables individuals "to receive a transmission of a program specially created for the recipient, or on request, a transmission of a particular sound recording . . . which is selected by or on behalf of the recipient."[172] Such interactive services are not eligible for compulsory licenses and thus must negotiate royalty rates privately with the copyright holders. Interactive services are subject to the copyright holder's full copyright authority because these services were seen as the main competition to CD sales.[173] On the other hand, non-interactive transmission services could either be "subscription" or "non-subscription" transmission services. Subscription transmissions are controlled and limited to particular recipients, who have paid for

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[168] Marks, *supra* note 24, at 310.

[169] The DPRSRA is generally acknowledged to be complex and convoluted. As law professor Lionel Sobel observed: "Indeed, on the day the Senate passed its version of the bill that became the new Act, the bill's co-sponsor, Senator Orrin Hatch, told his colleagues that 'the legislation is complex,' and even that was an understatement. The Internal Revenue Code is 'complex'; the Digital Performance Right in Sound Recordings Act of 1995 is something else. 'Incomprehensible' perhaps, though 'You had to be there to appreciate it' may be fairer, because the convoluted language of the new Act appears to have been required by a number of very specific problems which the Act attempts to address with precision." Sobel, *supra* note 20, at 4.

[170] Bonneville Int'l Corp. v. Peters, 153 F. Supp. 2d 763, 767 (E.D. Pa. 2001).

[171] 17 U.S.C. § 114 (2006 & Supp. IV 2010).

[172] 17 U.S.C. §114(j)(7) (2006). *See also* Arista Records, LLC v. Launch Media, Inc., 578 F.3d 148 (2d Cir. 2009), *cert. denied*, 130 S. Ct. 1290, No. 09-619 (Jan. 25, 2010) (clarifying, after eight years of litigation, that an online music service that allows listeners' feedback to the music to influence future playlists for the listener is not "interactive," and thus is eligible for a compulsory license for the sound recording).

[173] H.R. Rep. 104-274, at 14 (1995) ("Of all the new forms of digital transmission services, interactive services are most likely to have a significant impact on traditional record sales, and therefore pose the greatest threat to the livelihoods of those whose income depends upon revenues derived from traditional record sales. The Committee believes that sound recording copyright owners should have the exclusive right to control the performance of their works as part of an interactive service, and so has excluded interactive services from these limitations on the performance right."); *see also* Craft, *supra* note 18, at 23 ("Publishers argued against what they called a 'music giveaway,' where if consumers were allowed to customize their online broadcasts, then they would have little or no incentive to purchase the music.").

the transmission.[174] A non-subscription transmission is defined as "any transmission that is not a subscription transmission."[175]

2. *Digital Millennium Copyright Act of 1998*

In 1998, the Digital Millennium Copyright Act ("DMCA") expanded the scope of the statutory license system and imposed a statutory royalty obligation on non-interactive subscription and non-subscription digital music providers.[176] While the DPRSRA created a three-tier system, the DMCA in effect merged non-interactive subscription and non-interactive non-subscription together leaving interactive transmissions on the one hand and non-interactive transmissions (subscription and non-subscription) on the other. As a direct result of the 1998 amendments, nearly all non-interactive Internet radio stations are obligated to pay the statutory royalty fee for sound recording and musical work copyrights. In other words, Internet radio is obligated to pay a royalty for both the sound recording and musical work copyrights; however, terrestrial radio is still exempt from paying a royalty for the sound recording.

3. *Sound Recording Performance Complement*

Under current copyright law, to enjoy the benefits of a compulsory license, Webcasters must comply with specific restrictions on how often music from the same artist, or from the same album, may be played. These restrictions, called the "Sound Recording Performance Complement," have two components:

(1) No more than three selections from any one album may be broadcast within any three-hour period, and no more than two such selections may be played consecutively;[177] and
(2) No more than four different selections by the same featured artist, or from any set or compilation, may be broadcast within any three-hour period, and no more than three such selections may be played consecutively.[178]

In addition to complying with the Sound Recording Performance Complement, Webcasters have additional statutory conditions that must be satisfied to en-

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[174] 17 U.S.C. § 114(j)(14) (2006).

[175] 17 U.S.C. §114(j)(9) (2006).

[176] Digital Millennium Copyright Act, Pub. L. No. 105-304, 112 Stat. 2860 (1998). The DMCA was signed into law on October 28, 1998. As law professor Kimberly Craft explained, "Congress' primary goal in drafting this revision of the Copyright Act was to allow the United States to participate in two new WIPO treaties: the Copyright Treaty and the Performances and Phonograms Treaty, which updated international copyright standards on Internet technology security and anti-piracy measures. Congress' secondary goal of pleasing the recording industry by permitting last-minute language on webcasting would soon become a thorn in its side." Craft, *supra* note 18, at 15.

[177] 17 U.S.C. § 114(j)(13)(A) (2006).

[178] 17 U.S.C. § 114(j)(13)(B) (2006).

joy the benefits of the compulsory license. These additional conditions include the following:

- A Webcaster may not make prior announcements of the playlist that disclose the title of the songs, names of the albums, or the names of the recording artists (with exception);[179]
- A Webcaster's archived program must be at least five-hours long and cannot be made available for more than two weeks;[180]
- A Webcaster's continuously looped program must be at least three-hours long;[181]
- A Webcaster is prohibited from suggesting a false affiliation between the recording artist and the Webcaster or a particular product or service;[182]
- A Webcaster must cooperated with the sound recording copyright owners on technological protection from user scanning, which is technology employed by listeners to select a particular song to be transmitted (with exception);[183]
- A Webcaster may not affirmatively cause or encourage the duplication of songs, and if technologically feasible the Webcaster must limit the ability of listeners to duplicate songs directly in a digital format;[184]
- A Webcaster may not transmit bootleg copies and must use sound recordings that are legally sold to the public or authorized for performance by the copyright owner of the sound recording (with exception);[185]
- A Webcaster must accommodate and cannot interfere with the transmission of technical protection measures that are used by the sound recording copyright owners to identify or protect copyrighted works (with exception);[186] and
- A Webcaster must display the title of the song, name of the album, and the recording artist's name to the listener as the song is being played (with exception).[187]

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[179] 17 U.S.C. § 114(d)(2)(C)(ii). *See also* Paul Musser, *The Internet Radio Equality Act: A Needed Substantive Cure For Webcasting Royalty Standards and Congressional Bargaining Chip*, 8 LOY. L. & TECH. ANN. 1, 9 (2009); Joseph E. Magri, *New Media-New Rules: The Digital Performance Right and Streaming Media Over the Internet*, 6 VAND. J. ENT. L. & PRAC. 55, 59 (2003); Craft, *supra* note 18, at 17.

[180] 17 U.S.C. § 114(d)(2)(C)(iii)(I)-(II).

[181] 17 U.S.C. § 114(d)(2)(C)(iii)(III).

[182] 17 U.S.C. § 114(d)(2)(C)(iv).

[183] 17 U.S.C. § 114(d)(2)(C)(v).

[184] 17 U.S.C. § 114(d)(2)(C)(vi).

[185] 17 U.S.C. § 114(d)(2)(C)(vii).

[186] 17 U.S.C. § 114(d)(2)(C)(viii).

[187] 17 U.S.C. § 114(d)(2)(C)(ix).

The Sound Recording Performance Complement and these additional statutory conditions have been called "one of the DMCA's most cumbersome provisions, entailing an inordinate compliance burden for webcasters, small and large alike."[188] Music transmissions that fail to satisfy all of these conditions are ineligible for a statutory license and must be licensed through voluntary negotiations with the owner of the sound recording copyright. In other words, sound recording copyright owners may grant (or withhold) voluntary licenses for digital audio transmissions that do not satisfy all of the conditions for statutory licenses. As law professor Kimberly Craft explained, "[r]eceiving this compulsory license [i]s critical for webcasters; the alternative would require a webcaster to seek out all of the copyright holders of each piece of music played in order to make individualized royalty payments."[189]

Without predictable and affordable statutory royalty rates, Webcasters are at the mercy of copyright holder's exclusionary powers as well as the power to charge supra-competitive royalty rates.[190] If the copyright holder does not offer an affordable license fee, speakers who wish to communicate through particular songs have no alternate vehicles to express themselves.[191]

Even complying with the statutory conditions, Webcasters expressive rights are limited. For example, a Webcaster who wants to pay tribute to a recently deceased artist by playing more than two of the artist's songs consecutively, or more than four songs in a three-hour period, would be prevented from doing so under the terms of the Sound Recording Performance Complement.[192] Terrestrial radio operator's creative choices in assembling a playlist have never been similarly ham-

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[188] Marcy Rauer Wagman & Rachel Ellen Kopp, *The Digital Revolution is Being Downloaded: Why and How the Copyright Act Must Change to Accommodate an Ever-Evolving Music Industry*, 13 VILL. SPORTS & ENT. L.J. 271, 314 (2006).

[189] Craft, *supra* note 18, at 14.

[190] NETANEL, *supra* note 52, at 128–30; *see also* KOHN & KOHN, *supra* note 11, at 1490 (noting "record companies may charge what they want, demand advances against royalties, or refuse to license altogether").

[191] *See* NETANEL, *supra* note 52, at 135, 131 (works of original expression "that audiences and speakers most value lack colorable substitutes"). *See also* Robert Kasunic, *Preserving the Traditional Contours of Copyright*, 30 COLUM. J.L. & ARTS 397, 404 (2007) ("While it is true that the First Amendment does not guarantee a person the right to make another's speech, there are times when the purpose of the speech requires, or perhaps simply benefits from, the inclusion of another's expression in order to more appropriately make a point or where the purpose is referential to the expression of another.").

[192] Not only is a Webcaster's voice circumscribed by the numerical limitations, but in some instances the artistic integrity of an album may be affected by these limitations, especially when an album has a message when heard holistically. A Webcaster may play no more than three songs in a three-hour period, even if the album that has a unifying theme or message, which can only be fully conveyed by playing all, or most of it.

pered.[193] Webcasters were largely marginalized at the legislative drafting table and thus their interests were not fully considered.[194]

C. The Decade-Long Struggle to Set Sound Recording Royalty Rate

While Congress set the complex parameters for qualifying for a sound recording statutory license, it did not set the terms or rates of the license itself.[195] The Copyright Act authorized voluntary negotiations between the sound recording copyright holders and Webcasters. In the event the parties could not agree on royalty rates, the Librarian of Congress was empowered to establish an arbitration panel to recommend the rate.[196] A decade-long saga ensued and many would-be Webcasters shut down their operations due to the crushing royalty rates that were established. The highlights of the saga are detailed next.

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[193] *See* Bonneville Intern. Corp. v. Peters, 347 F.3d 485, 493 (3d Cir. 2003) (noting "the 'sound recording performance complement,' which limits statutory licensees' ability to transmit performances of multiple recorded songs from the same artist or from the same 'phonorecord' within a short time of each other, would not apply to any transmission by an FCC-licensed broadcaster.").

[194] The statements of the original cosponsors of the House bill (H.R. 1506) that would become the DPRSRA are illuminating. Congressman Carlos J. Moorhead (R-CA), chairman of the House Judiciary's Subcommittee on Intellectual Property and Judicial Administration, acknowledged that the legislation was a product of intra-industry negotiation, save Webcasters, and that all parties to the negotiation supported its passage: "I would like to congratulate the parties of interest for working together and coming up with what I believe is a good, solid piece of legislation, that's both good for the industry and good for the American consumer. . . . I am not aware of any opposition to this legislation. It has the support of the American Federation of Musicians, the American Federation of Television and Radio Artists, the record industries, the songwriters, the radio and TV broadcast industry, and the administration." Digital Performance Right in Sound Recordings Act of 1995, 141 Cong. Rec. H10098, H10102 (daily ed. Oct. 17, 1995) (statement of Rep. Carlos J. Moorhead).

Congressman John Conyers, Jr. (D-MI), lead cosponsor of the bill, also acknowledged the intra-industry negotiations, which did not include Webcasters: "The sounds of harmony that I hear today on H.R. 1506 are, well, music to my ears. I am truly delighted that our friends in the recording industry, the performing rights societies, the broadcasters and the background music services have, under the auspices of this subcommittee, done the tough job of hammering out a compromise agreement that is acceptable to all." Digital Performance Right in Sound Recordings Act of 1995, 141 Cong. Rec. H10098, H10103 (daily ed. Oct. 17, 1995) (statement of Rep. John Conyers, Jr.). *See also* Vanessa Van Cleaf, Note, *A Broken Record: The Digital Millennium Copyright Act's Statutory Royalty Rate-Setting Process Does Not Work For Internet Radio*, 40 STETSON L. REV. 341, 380 (2010) (observing the DPRSRA "was enacted without any notable input from the webcasting industry," and "the legislation that currently governs that industry only favors those who meaningfully participated in its enactment – namely, musicians, recording companies, and terrestrial broadcasters"); Craft, *supra* note 18, at 16 (noting "the coming explosion of webcasting had not been anticipated").

[195] Sobel, *supra* note 20, at 8. *See also* Van Cleaf, *supra* note 194, at 362–78 (outlining the decade-long struggle to set statutory licensing rates); Erich Carey, Comment, *We Interrupt This Broadcast: Will The Copyright Royalty Board's March 2007 Rate Determination Proceedings Pull The Plug On Internet Radio?*, 19 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 257 (2008) (same).

[196] Summary of the Determination of the Librarian of Congress on Rates and Terms for Webcasting and Ephemeral Recordings, *available at* http://www.copyright.gov/carp/webcasting_rates_final.html.

In 1998, negotiations began between Webcasters[197] and the Recording Industry Association of America, Inc. ("RIAA"), the recording industry's trade association. When the parties were unable to negotiate an industry-wide agreement, a Copyright Arbitration Royalty Panel ("CARP") was convened in 1999.[198] In 2002, the Librarian of Congress set the Webcaster royalty rates for commercial transmissions at $0.0007 per performance and non-commercial transmission at $0.0002 per performance ("Webcaster I").[199]

The 2002 Webcaster I rates provoked an outcry from Webcasters who argued the per-performance rate was ruinous.[200] As law professor William W. Fisher explained, a fraction of a penny per performance may seem like a very small number "until one recognizes that each transmission of a song *to each listener* is counted as a 'performance.'"[201] Facing bankrupting royalty rates, a large number of small Webcasters shut down their operations.[202] Some of the remaining ones turned to Congress for relief, and others turned to the judiciary.

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[197] The Digital Media Association (DiMA) was formed by RealNetworks and Broadcast.com to act on behalf of Internet audio companies. KOHN & KOHN, *supra* note 11, at 1472.

[198] Determination of Reasonable Rates and Terms for the Digital Performance of Sound Recordings and Ephemeral Recordings, 67 Fed. Reg. 45240, 45241 (July 8, 2002); Digital Performance Right in Sound Recordings and Ephemeral Recordings, 64 Fed. Reg. 52107 (Sept. 27, 1999) (scheduling the CARP proceeding by Copyright Office).

[199] Determination of Reasonable Rates and Terms for the Digital Performance of Sound Recordings and Ephemeral Recordings, 67 Fed. Reg. 45,240, 45,241 (July 8, 2002) ("0.07[cent] per performance per listener" and "0.02[cent] per performance per listener") [hereinafter Webcaster I]; Summary of the Determination of the Librarian of Congress on Rates and Terms for Webcasting and Ephemeral Recordings available at http://www.copyright.gov/carp/webcasting_rates_final.html. The Librarian of Congress largely accepted CARP's recommendations but with some modifications. *See* Matt Jackson, *From Broadcast to Webcast: Copyright Law and Streaming Media*, 11 TEX. INTELL. PROP. L.J. 447, 467 (2003) ("The Librarian did indeed modify the rates, most importantly by reducing the standard Internet-only (IO) rate from 0.14¢ to 0.07¢; the same rate used for radio retransmissions (simulcasts of over-the-air radio stations).").

[200] *See, e.g.*, Andrew Noyes, *Not Music to Their Ears*, NATIONAL JOURNAL, July 7, 2007, at 50 ("Protests ensued, legislation was introduced, and appeals were filed. The webcasters and the music industry eventually cut a deal."); Benny Evangelista, *Royalties Silence KPIG Webcasts*, SAN FRANCISCO CHRONICLE, July 20, 2002, at B1 (similar); Clea Simon, *Ruling Dooms Boston Webcaster*, BOSTON GLOBE, July 18, 2002, at C20 (similar).

[201] FISHER, *supra* note 12, at 107.

[202] In describing the effect of the 2002 Rates, attorney Robert Delchin explained as follows: "The result was that smaller webcasters began shutting down in droves. Immediately after the Librarian's order, hundreds of Internet radio stations shut down in anticipation of the royalty fee which was expected to go into effect in September of 2002. Indeed, most of the estimated 10,000 webcasters were expected to follow suit. For example, one station which existed on listener donations and received approximately $3000 per month in revenues was expected to pay royalties in excess of $10,000 per month. Moreover, because the rate was retroactive to 1998, the station was looking at an upfront payment of $60,000 to $80,000—all for running a small Internet radio site out of one's garage. Said an unsympathetic RIAA spokesperson: 'If you don't have a business model that sustains your costs, it sounds harsh, but that's real life.'" Delchin, *supra* note 106, at 377 (internal citations omitted). *See also* Carey, *supra* note 195, at 278 (noting "small commercial webcasters began shutting down in droves after the Librarian of Congress' [2002 Rate] determination").

In *Beethoven.com LLC v. Librarian of Congress*,[203] a group of Webcasters and the RIAA squared off again. The Webcasters argued that the Webcaster I rates were arbitrarily high, and the RIAA argued they were arbitrarily low.[204] During the pendency of the case, Congress stepped in to aid small Webcasters who could not afford the rates. The Small Webcaster Settlement Act of 2002 (SWSA)[205] gave small Webcasters additional time to negotiate "alternative," or reduced, royalty rates with SoundExchange, the performance rights organization that manages royalties on behalf of recording artists.[206]

The additional time to negotiate the new royalty rates with SoundExchange was critical to the continued existence of these Webcasters.[207] At the end of 2002, small commercial Webcasters and SoundExchange reached an agreement and the rates were calibrated to a percentage of a Webcaster's gross revenue, rather than a per-performance basis.[208] In mid-2003, noncommercial Webcasters also reached an agreement with SoundExhange for a flat, annual fee ranging from $200 to $500 per channel.[209] These privately negotiated rates were effective through the end of 2004.

In 2004, Congress, in the face of blistering criticism of the CARP,[210] revised the administrative rate-setting process and replaced the CARP with a three-judge Copyright Royalty Board ("CRB").[211] In January 2005, the Court of Appeals for

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[203] 394 F.3d 939 (D.C. Cir. 2005).

[204] *Id.* at 942.

[205] Small Webcaster Settlement Act of 2002, Pub. L. No. 107-321, 116 Stat. 2780 (2002).

[206] *Notification of Agreement Under the Small Webcaster Settlement Act of 2002*, 68 Fed. Reg. 35,008, 35,008 (June 11, 2003) ("Specifically, the SWSA authorizes SoundExchange, an unincorporated division of the Recording Industry Association of America, Inc. and the Receiving Agent designated by the Librarian of Congress in the initial rate setting proceeding, to enter into agreements on behalf of all copyright owners and performers for the purpose of establishing an *alternative* payment structure for small commercial webcasters and noncommercial webcasters operating under the section 112 and section 114 statutory licenses." (emphasis added) (footnotes omitted)).

[207] Delchin, *supra* note 106, at 377–82; Carey, *supra* note 195, at 282.

[208] Notification of Agreement Under the Small Webcaster Settlement Act of 2002, 67 Fed. Reg. 78,510 (Dec. 24, 2002). Until the end of 2004, the agreed royalty rate was the greater of 10 percent of the Webcaster's first $250,000 in gross revenues and 12 percent of any gross revenues in excess of $250,000, or 7 percent of the Webcaster's expenses. *Id.* at 78,511.

[209] *Notification of Agreement Under the Small Webcaster Settlement Act of 2002*, 68 Fed. Reg. 35,008, 35,010–11 (June 11, 2003). A "noncommercial webcaster" is defined as a webcaster that: (1) is exempt from taxation under section 501 of the Internal Revenue Code of 1986, 26 U.S.C. 501; (2) has applied in good faith to the Internal Revenue Service for exemption from taxation under section 501 of the Internal Revenue Code and has a commercially reasonable expectation that such exemption shall be granted; or (3) is operated by a State or possession or any governmental entity or subordinate thereof, or by the United States or District of Columbia, for exclusively public purposes. 17 U.S.C. 114(f)(5)(E)(i) (2006).

[210] Carey, *supra* note 195, at 283 (discussing criticism of the CARP arbitration system, including unpredictable and inconsistent decisions, arbiters lack of appropriate expertise, and an unnecessarily expensive process).

[211] Copyright Royalty and Distribution Reform Act of 2004, Pub. L. No. 108-419, 118 Stat. 2341 (codified as amended at 17 U.S.C. §§ 801–805).

the D.C. Circuit upheld the 2002 Webcaster I rates, in *Beethoven.com LLC v. Librarian of Congress*.[212] Applying the "exceptionally deferential" standard of review it was bound to apply, the court upheld the Webcaster I royalty rate because the Librarian of Congress offered a facially plausible explanation of the rate.[213] In February 2005, the Librarian, with the assistance of the CRB, began the process for setting industry-wide rates again.[214]

The CRB issued the new industry-wide rates in May 2007 ("Webcaster II").[215] These rates, effective from 2006 through the end of 2010, were on a per-performance basis, rather than a percentage of Webcaster revenue. For commercial Webcasters (small and otherwise) the CRB set the following rates: a per-performance rate of $0.0008 for 2006, a per-performance rate of $0.0011 for 2007, a per-performance rate of $0.0014 for 2008, a per-performance rate of $0.0018 for 2009, and a per-performance rate of $0.0019 for 2010.[216] The CRB also set a $500 minimum annual fee per channel.[217] For Webcasters, like Pandora Radio, which offer hundreds of custom channels, this minimum fee would likely be more expensive than the royalty rates.[218] Noncommercial webcasters were subject to a minimum annual fee of $500 per channel or station so long as they transmitted no more than 159,140 aggregate tuning hours ("ATH") per month.[219]

Dire predictions swiftly followed the CRB's 2007 Webcaster II rates.[220] Again, the crushing royalty rates forced Webcasters, small and large, to cry out for

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[212] Beethoven.com v. Librarian of Cong., 394 F.3d 939, 945–46 (D.C. Cir. 2005). The court also determined that Webcasters who had not participated in the CARP lacked standing to challenge the rates because they were not parties in the original rate-setting. *Id.*

[213] *Id.* at 946.

[214] Digital Performance Right in Sound Recordings and Ephemeral Recordings, 70 Fed. Reg. 7970 (Feb. 16, 2005).

[215] Digital Performance Right in Sound Recordings and Ephemeral Recordings, 72 Fed. Reg. 24,084 (May 1, 2007) [hereinafter Webcaster II].

[216] Digital Performance Right in Sound Recordings and Ephemeral Recordings, 72 Fed. Reg. 24,084, 24,096 (May 1, 2007).

[217] *Id.*

[218] Pandora, one of the most established and vibrant webcasters, was on the verge of shutting down, with royalty fees constituting seventy percent of its projected revenue of twenty-five million dollars for 2008. Peter Whoriskey, *Giant of Internet Radio Nears Its 'Last Stand:' Pandora, Other Webcasters Struggle Under High Song Fees*, WASH. POST, Aug. 16, 2008, at D1. *See also* Eliot Van Buskirk, *Royalty Hike Panics Webcasters*, WIRED (Mar. 6, 2007), http://www.wired.com/entertainment/music/news/2007/03/72879; Tim Bajarin, *Saving Internet Radio*, PC MAG. (Oct. 3, 2008), http:// www.pcmag.com/article2/0,2817,2331594,00.asp.

[219] Digital Performance Right in Sound Recordings and Ephemeral Recordings, 72 Fed. Reg. 24,084, 24,099–100 (May 1, 2007). Transmission beyond 159,140 ATH per month are subject to the royalty rates of commercial Webcasters. *Id.* at 24,100. Critics of the 2007 CRB rate argue that applying commercial rates to non-commercial Webcasters that exceed the allotted ATH is unsound and threatens the viability of public radio online. Carey, *supra* note 195, at 296–300.

[220] *See, e.g.*, Brian Day, Note, *The Super Brawl: The History And Future Of The Sound Recording Performance Right*, 16 MICH. TELECOMM. & TECH. L. REV. 179, 190 (2009) ("Small and large

help.[221] Some Webcasters turned to the D.C. Circuit Court for assistance, and others turned to Congress. While the D.C. Circuit Court ultimately upheld the CRB's Webcaster II rates,[222] Congress proved more facilitative to Webcasters.

In October 2008, Congress stepped in and passed the Webcaster Settlement Act,[223] which gave SoundExchange and Webcasters the opportunity to negotiate royalty rates for online music, in lieu of the compulsory license rates set by the CRB.[224] When it appeared that SoundExchange and the Webcasters were not going to meet their February 2009 deadline for negotiating new royalty rates, Congress again mobilized and passed the Webcaster Settlement Act of 2009,[225] which gave the parties an additional thirty days to reach an agreement. An agreement was finally struck with SoundExchange and it will be effective through 2015, when the rate-setting process will start anew.[226] Until that time, commercial Webcasters that elected the negotiated rate, rather than the statutory rate, face a graduated per-performance rate of $0.0015 in 2009, escalating each year to $0.0025 in 2015.[227]

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webcasters alike predicted the CRB rates would result in the 'end of Internet radio.'"); Van Cleaf, *supra* note 194, at 369 ("proverbial death knell for Internet radio").

[221] Amy Duvall, Note, *Royalty Rate-Setting for Webcasters: A Royal(ty) Mess*, 15 MICH. TELECOMM. TECH. L. REV. 267, 281 (2008) ("There was a widespread belief that most webcasters would be unable to continue at a sustainable rate, since these royalties represented at ten-fold increase in payments. Smaller webcasters, like Bill Goldsmith from Radio Paradise, were facing bills of up to 125 percent of their yearly income, an unsustainable cost. Hypothetically, larger webcasters like Pandora, a webcaster which offers thousands of channels without subscription fees, could have a royalty bill of $2 billion just for one year."); Van Cleaf, *supra* note 194, at 369 ("Webcasters' monthly royalty payments skyrocketed from approximately $120 to $6,500."). *See also* Shaun Assael, *Online and on the Edge*, N.Y. TIMES, Sept. 23, 2007, at Arts 32.

[222] Intercollegiate Broad. Sys., Inc. v. Copyright Royalty Bd., 574 F.3d 748 (D.C. Cir. 2009).

[223] Webcaster Settlement Act of 2008, Pub. L. No. 110-435, 122 Stat. 4974 (2008). The original Webcaster Settlement Act amended the Small Webcaster Settlement Act of 2002, which allowed a settlement to bypass a CARP proceeding to set royalty rates between private parties.

[224] KOHN & KOHN, *supra* note 11, at 1517 ("The rate structures for the various forms of webcasting have become increasingly complex. Agreeing that the CRB may have set webcasting rates too high, SoundExchange and various forms of webcasters have entered into a series of settlement agreements modifying the fees and fee structures for the respective forms of webcasts.").

[225] Webcaster Settlement Act of 2009, Pub. L. No. 111-36, 123 Stat. 1926 (2009).

[226] Notification of Agreements Under the Webcaster Settlement Act of 2009, 74 Fed. Reg. 34,796 (July 19, 2009).

[227] *Id.* at 34,799. SoundExchange negotiated the following rates for commercial Webcasters: a per-performance rate of $0.0008 in 2006; a per-performance rate of $0.0011 in 2007; a per-performance rate of $0.0014 in 2008; a per-performance rate of $0.0015 in 2009; a per-performance rate of $0.0016 in 2010; a per-performance rate of $0.0017 in 2011; a per-performance rate of $0.0020 in 2012; a per-performance rate of $0.0022 in 2013; a per-performance rate of $0.0023 in 2014; and a per-performance rate of $0.0025 in 2015.

Small pureplay Webcasters negotiated a percentage of revenue basis, which is the greater of 7% of annual expenses, or 12% of the first $250,000 gross revenues and 14% of any gross revenues in excess of $250,000. *Id.* Pureplay Webcasters, like Pandora, generate most of their revenue from streaming music. *See* Van Cleaf, *supra* note 194, at 372 n.204.

To elect the SoundExchange's reduced royalty rates, Webcasters were required to opt out of participating in rate-setting proceedings with the CRB for 2011 through 2015.[228] In March 2011, the CRB issued its latest, graduated statutory royalty rates for commercial Webcasters ("Webcaster III"): a per-performance rate of $0.0019 for 2011; a per-performance rate of $0.0021 for 2012, a per-performance rate of $0.0021 for 2013, a per-performance rate of $0.0023 for 2014, and a per-performance rate of $0.0023 for 2015.[229] The CRB maintained the $500 annual flat fee for noncommercial Webcasters who transmit fewer than 159,140 ATH.[230]

The public response to the Librarian of Congress's rate setting was more muted this time.[231] Perhaps the third time was the charm. Or perhaps Webcasters who could not afford the previous per-performance rates were already pushed out of the marketplace. Compliance with the Sound Recording Performance Complement is a precondition to eligibility for the statutory royalty rate. The statutory royalty rate has been extensively criticized in the popular press and the legal scholarship for being ruinously high,[232] administratively burdensome,[233] and dizzyingly complex.[234] However, the alternative to the statutory rate is the potential for the copyright holder to deny permission altogether. Webcasters that are not eligible for the statutory royalty rate must engage in private negotiations with copyright holders over the

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[228] Kaitlin M. Pals, Note, *Facing The Music: Webcasting, Interactivity, and a Sensible Statutory Royalty Scheme For Sound Recording Transmissions*, 36 J. CORP. L. 677, 689 n.105 (2011) ("It is especially noteworthy that as a condition of accepting SoundExchange's lower rates, webcasters must opt out of participating in rate-setting proceedings with the CRB for 2011 through 2015. Only one commercial broadcaster, Live365, participated in the 2010 hearings.").

[229] Digital Performance Right in Sound Recordings and Ephemeral Recordings, 76 Fed. Reg. 13,026, 13,036, 13,047–48 (Mar. 9, 2011) [hereinafter Webcaster III].

[230] *Id.* at 13,042 ("The annual minimum fee of $500 per station or channel functions as the royalty payable for usage of sound recordings up to 159,140 ATH per month. This flat fee is the same that we adopted in Webcaster II and . . . is demonstrably affordable to noncommercial webcasters.").

[231] *See, e.g.*, David Oxenford, *Final Webcasting Royalty Rates Published - A Comparison of How Much Various Services Pay*, BROADCAST LAW BLOG, Mar. 14, 2011, http://www.broadcastlawblog.com/2011/03/articles/internet-radio/final-webcasting-royalty-rates-published-a-comparison-of-how-much-various-services-pay/ (discussing Webcaster III and not reflecting any criticism of the rate).

[232] *See, e.g.*, Carey, *supra* note 195, at 291; Hiawatha Bray, *Royalty Hike Could Mute Internet Radio: Smaller Stations Say Rise Will Be Too Much*, BOSTON GLOBE, Mar. 14, 2007, at F1; *Beethoven.com LLC v. Librarian of Congress*, 394 F.3d 939, 942 (D.C. Cir. 2005); Allison Kidd, *Mending the Tear in the Internet Radio Community: A Call for a Legislative Band-Aid*, 4 N.C. J. L. & TECH. 339, 341 (2003); Kevin Featherly, *Critics Carp About CARP Webcast Royalty Plan*, NEWSBYTES, April 9, 2002; Amy Harmon, *Royalties Proposal Casts Shadow Over Thousands of Webcasters*, N.Y. TIMES, April 1, 2002, at C1.

[233] *See, e.g.*, Wagman & Kopp, *supra* note 188, at 291 (observing that the Sound Recording Performance Complement rules "have become archaic because they are burdensome to enforce, difficult for small webcasters and podcasters to comply with, and can be expensive for fledgling webcasters").

[234] *See, e.g.*, LEAFFER, *supra* note 11, at 368 (observing the digital performance right in sound recordings is a "complex regulatory scheme" which is "subject to a dazzling series of limitations" resulting from "a number of political tradeoffs").

royalty rate. In these private negotiations copyright holders may charge any royalty fee they want, or may withhold permission altogether. Therefore, there is no practical alternative for Webcasters but to comply with the Sound Recording Performance Complement.

V. The Expansion of Copyright Protection Is Used to Maintain Market Hegemony

The current copyright law is the product of a minority's special interests,[235] which now places burdensome regulations on would-be Webcasters and limits our access to Internet radio.[236] Copyright regulation of online music, largely the result of intra-industry negotiations, reflects the efforts of market incumbents to maintain their dominance and squelch competitors.[237] Professor of law Robert Denicola has characterized copyright legislation as a "series of contract negotiations" between interest groups without any "independent congressional evaluation of the substance of the negotiated agreements."[238]

The music industry has a history of resisting newcomers via copyright law.[239] Professor Neil Netanel has observed that "the incumbent industries have repeatedly deployed their formidable copyright arsenal as a tool to stifle competition from

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[235] *See* Jessica D. Litman, *Copyright, Compromise, and Legislative History*, 72 CORNELL L. REV. 857, 862–79 (1987) (tracing the negotiations and compromises of interest groups during the legislative process leading to the 1976 Copyright Act and the broad copyrights that resulted from these negotiations); Neil Weinstock Netanel, *Locating Copyright Within the First Amendment Skein*, 54 STAN. L. REV. 1, 68 (2001) (discussing intra-industry negotiations that resulted in an "ever-expanding set of copyright holder rights, riddled with narrow exceptions for various sectors present at the bargaining table"); Jessica D. Litman, *Copyright Legislation and Technological Change*, 68 OR. L. REV. 275, 278–82 (1989) (exploring how the process of drafting copyright statutes through negotiations among industry representatives became entrenched).

[236] Christina Bohannan, *Reclaiming Copyright*, 23 CARDOZO ARTS & ENT. L.J. 567, 581–92 (2005) ("[T]he [1976] Copyright Act reflects all of the hallmark characteristics of a special-interest statute [namely]: (1) concentrated benefits and diffuse costs; (2) uncertainty in the optimal regulatory framework or level of regulation; (3) a statutory structure that is very specific or detailed (which indicates interest-group compromise) rather than general (which would allow more judicial discretion); (4) legislative history materials revealing extensive interest-group influence; and (5) statutory results that are indefensible on economic or other grounds."); NETANEL, *supra* note 52, at 132 (observing music industry incumbents have pressed their power to maintain dominance in the digital world).

[237] Jessica Litman, *Copyright Legislation and Technological Change*, 68 OR. L. REV. 275, 359 (1989) ("Each time we rely on current stakeholders to agree on a statutory scheme, they produce a scheme designed to protect themselves against the rest of us."); Netanel, *supra* note 235, at 62 ("When the legislature distributes speech entitlements that enable certain speakers to maintain their market position and restrain competition, we thus have particular reason to suspect that the broad public interest in free speech has been inadequately protected.").

[238] Robert C. Denicola, *Freedom to Copy*, 108 YALE L.J. 1661, 1684–86 (1999); *see also* Stewart Sterk, *Rhetoric and Reality in Copyright Law*, 94 MICH. L. REV. 1197, 1244–46 (1996) ("In the period leading to the 1976 Copyright Act, Congress made it clear that industry representatives would have to hammer out a bill acceptable to all interest groups.").

[239] NETANEL, *supra* note 52, at 149–50 (noting incumbent industry has pattern and practice of using copyright to maintain control and market position in the face of new technology).

emerging new media and thus to maintain their dominant market position in the production and distribution of music, television programs, movies, journals, and books."[240]

An example of this behavior can be seen in the treatment of small Webcasters by the RIAA, the recording industry's trade group. Before the 2002 Webcaster I rates were set, there were allegations that "the RIAA refused to deal with small webcasters," "that it was not treating everyone equally," and that some "webcasters were jockeying to curry unfair favor with the RIAA."[241] Legislators who were key players in advocating for the DMCA began to question the RIAA and its conduct: "We passed the DMCA. We gave you a lot of what you wanted. You told us without it you wouldn't put your content out. What's going on? Are you leveraging your copyrights to impede distribution rather than enhance distribution?"[242]

Ever-expanding copyright protections have been leveraged to maintain market dominance.[243] The mind-numbing complexity of the music royalty system, along with the cost-prohibitive royalty rate, has produced a chilling effect on would-be Webcasters. As Professor Fisher noted, after Webcaster I was promulgated about one third of Webcasters shut down.[244] The administrative burden of tracking listenership and playlists, along with the cost-prohibitive royalty rate has also had an effect on the gross number of Webcasters as well as the diversity in the marketplace. These regulations encumber niche music more than popular music, because of the number and variety of songs needed to comply with the Sound Recording Performance Complement.[245] Commentators have observed that "[t]he

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[240] NETANEL, *supra* note 52, at 111.

[241] Craft, *supra* note 18, at 24–25.

[242] Craft, *supra* note 18, at 25 (quoting Senator Orrin Hatch (R-Utah)).

[243] *See* Denicola, *supra* note 238, at 1683 ("The Copyright Act, enacted in 1976 and enlarged in almost every subsequent year, has swelled to well over six times the length of its succinct 1909 predecessor.").

[244] FISHER, *supra* note 12, at 108 ("By September of 2002, the total number of Webcasters was more than 31 percent smaller than it had been in 2001."). *See also* Karen Fessler, *Webcasting Royalty Rates*, 18 BERKELEY TECH. L.J. 399, 412 (2003) ("The threat of large royalty payments and the uncertainty over copyright liability has already left its mark on the webcasting industry: the number of radio stations transmitting signals online has declined 31 percent to 3,940 as of September 2002, as compared to a high of 5,710 in 2001.").

[245] *See* Richard Elen, *Queuing Theory & Radio Playlists*, June 12, 2010, http://brideswell.com/content/sci-tech/queuing-theory-and-radio-playlists/ (discussing mathematical algorithm for programming Internet radio playlists to comply with restrictions of Sound Recording Performance Complement); Ira Hoffman, Note, *Pseudo-Interactivity: An Appropriate Rate Scheme For Customizable Internet Radio Services*, 32 CARDOZO L. REV. 1515, 1524 (2011) ("With many songs averaging between three and four minutes in length, an Internet radio station can perform approximately sixteen songs per hour."); *DMCA: Restricting College Radio Without Benefit*, THE TUFTS DAILY, Oct. 27, 2010, *available at* http://www.tuftsdaily.com/op-ed/editorial-dmca-restricting-college-radio-without-benefit-1.2383916 ("While these legal measures [Sound Recording Performance Complement] were designed to ensure that artists get royalties and to prevent piracy, they are a net detriment. Placing these restrictions on college radio stations will hardly prevent music fans from

rules set forth in the 'sound recording complement' are at best unwieldy, and at worst, thwart the intent and nature of copyright law."[246]

VI. Copyright Regulation of Webcasters Fails First Amendment Scrutiny

The First Amendment embraces the expressive power of music.[247] The First Amendment "unquestionably" protects music – listeners', speakers', and society's interests in music.[248] The natural extension of the Court's reasoning in *Eldred v. Ashcroft* is that First Amendment scrutiny of copyright regulation of online music may be warranted when either (1) one's own speech-making abilities are impaired, or (2) the traditional free-speech safeguards are unavailing.[249] Both defects exist in the Sound Recording Performance Complement.

A. The Sound Recording Performance Complement Impairs Webcasters' Own Speech-Making Abilities

The Sound Recording Performance Complement impairs the speech-making abilities of Webcasters. As discussed previously, Webcasters have a cognizable First Amendment interest in the creative arrangement and content of their playlists. And this expressive activity is infringed by the limitation that a Webcaster may play, in any three-hour period, no more than three different songs from an album, so long as no more than two songs are played in a row, or four different songs from the same artist, or from any boxed set, so long as no more than three songs are played in a row.[250] Webcasters pay a royalty to both the songwriter and the recording artist when a song is played online, but the content of the Webcaster's message is restricted in exchange for the benefit to enjoy the statutory license.

The proposition that a Webcaster can simply decline to comply with the Sound Recording Performance Complement ignores the practical reality. The prospect of negotiating privately with the rights holders for each song is unthinkable. The practical reality is that Webcasters must be eligible to receive the statutory rate because otherwise their operation is unworkable. But to receive this statutory rate, Webcasters' expressive rights are infringed. While *Eldred* could be read as only delaying access to copyrighted works whose term was extended for a limited addi-

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illegally downloading music, yet they make it more difficult for small–budget, understaffed university stations to operate.").

[246] Wagman & Kopp, *supra* note 188, at 291.

[247] *See* Ward v. Rock Against Racism, 491 U.S. 781, 790 (1989) ("Music, as a form of expression and communication, is protected under the First Amendment.").

[248] *See* First National Bank of Boston v. Bellotti, 435 U.S. 765, 783 (1978) (explaining that Supreme Court precedent has focused "not only on the role of the First Amendment in fostering individual self-expression but also on its role in affording the public access to discussion, debate, and the dissemination of information and ideas").

[249] *See* Christina Bohannan, *Reclaiming Copyright*, 23 CARDOZO ARTS & ENT. L.J. 567, 624 (2005).

[250] 17 U.S.C. § 114(j)(13) (2006).

tional time, the Sound Recording Performance Complement is a perpetual burden on a Webcaster's freedom of expression.

B. The Sound Recording Performance Complement is Outside the Traditional Contours of Copyright Protection and Affords No Free Speech Safeguards

In *Eldred*, the Court shied away from scrutinizing the CTEA under a standard that would render constitutionally suspect previous copyright term extensions.[251] Congress on at least three prior occasions – principally in 1831, 1909, and 1976 – enlarged the term of protection for existing and future copyrights.[252] The *Eldred* Court determined that the CTEA's most recent extension was a rational enactment within Congress's legislative authority conferred by the Copyright Clause.[253] Unlike the CTEA, where it was the term of protection that was again extended, the DPRSRA and the DMCA expanded the scope of protection for digital sound recording. While there may be precedent for incremental enlargements of the scope of protection for music, the restrictions on the arrangement and content of a broadcaster's playlist is unprecedented. The Sound Recording Performance Complement is an entirely new phenomenon in copyright law and is outside the "traditional contours" of copyright protection. Our copyright laws have never before set numerical limits on the amount and arrangement of works that an authorized user could exploit. Therefore, this recent Congressional expansion of the scope of copyright protection for digital sound recordings is not within the traditional contours and is not due the same deference as the CTEA expansion of the term of protection.

Not only are Webcasters' expressive freedoms infringed, but there are no "built-in First Amendment accommodations"[254] to shield the Sound Recording Performance Complement from scrutiny. As outlined previously, music is a powerful vehicle to convey ideas and ideas are not protected by copyright law. However, an artist's expression through music is protected by copyright law. Still, the distinction between an idea conveyed in a piece of music and the particular expression of that idea through the medium of music is far from clear. In instances where the message and the medium are inextricably intertwined, the idea/expression dichotomy provides poor protection for others who want to access the idea contained in the copyrighted music.

Additionally, the fair use doctrine is not designed to combat the threat to free expression posed by the Sound Recording Performance Complement. A "fair use" of a copyrighted work means the user need not seek permission or license from the

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[251] *See* Eldred v. Ashcroft, 537 U.S. 186, 221 (2003).

[252] *Id.* at 193.

[253] *Id.* at 207–08.

[254] *Id.* at 219.

copyright holder.[255] In essence, a fair use allows another to use a copyrighted work for free. But Webcasters do not use copyrighted music for free. Webcasters who digitally transmit music pay a royalty to both the songwriter and the recording artist. Yet, the content and organization of their playlists are unduly constrained and there is no mechanism to protect the expressive interests of Webcasters. While the fair use doctrine, as the Supreme Court explained, provides a "guarantee of breathing space within the confines of copyright,"[256] this breathing space is of little assistance to a Webcaster who wants to play three songs in a row from a particular album, or play five songs by the same artist within a three-hour period – and pay the statutory royalty rate.

C. The Sound Recording Performance Complement Burdens More Speech Than Necessary and Is Not Narrowly Tailored

First Amendment review often begins with an assessment of the government's purpose in adopting the regulation.[257] The Sound Recording Performance Complement was nominally adopted to prevent or reduce piracy.[258] Determining if a regulation is content-neutral or content-based, the Supreme Court has explained, turns largely on "whether the government has adopted a regulation of speech because of disagreement with the message it conveys."[259] A court would likely categorize the Sound Recording Performance Complement as a content-neutral regulation of speech, which would receive intermediate scrutiny.[260]

Content-neutral regulation of speech survives First Amendment scrutiny if the regulation "advances important governmental interests unrelated to the suppression of free speech and does not burden substantially more speech than necessary to further those interests."[261] The Sound Recording Performance Complement is a suffi-

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[255] KOHN & KOHN, *supra* note 11, at 1628 (explaining "a fair use does not require permission of the copyright owner, which is to say that one making a fair use of a copyrighted work does not require a license to do so").

[256] Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 579 (1994).

[257] Ward v. Rock Against Racism, 491 U.S. 781, 791 (1989) ("The government's purpose is the controlling consideration. A regulation that serves purposes unrelated to the content of expression is deemed neutral, even if it has an incidental effect on some speakers or messages . . . .").

[258] House Committee on the Judiciary, Section-by-Section Analysis of H.R. 2281, 105th Cong., 2d sess., 1998, Committee Print No. 6, 55 (acknowledging and addressing concerns of recording artists and record companies that certain types of programming were "permitting listeners to hear the same songs on demand any time the visitor wishes"); Wagman & Kopp, *supra* note 188, at 291 ("Congress's likely intent in creating the 'sound recording complement' was to discourage illegal downloading of music from Internet radio stations."); FISHER, *supra* note 12, at 104–05, n.49 (explaining Congress's intent was to "reduce the ability of listeners to make copies of their broadcasts").

[259] *Ward*, 491 U.S. at 791.

[260] *See* Golan v. Holder, 609 F.3d 1076, 1083 (10th Cir. 2010) (determining that a copyright amendment, which extended protection to various foreign works that were previously in the public domain, was a content-neutral regulation of speech subject to intermediate scrutiny); *see also* Netanel, *supra* note 52, at 47–54 (arguing copyright law should be classified as content-neutral regulation of speech).

[261] Turner Broad. Sys., Inc. v. FCC, 520 U.S. 180, 189 (1997) [hereinafter *Turner II*].

ciently novel construct within the copyright schema – meaning it is not within the traditional contours of copyright law – such that the government must show that it burdens no more speech than necessary. Thus, the Sound Recording Performance Complement is not due the deference the Court gave the CTEA.[262] Unlike the must-carry regulations that promoted dissemination of local broadcasting through cable networks, which fed the marketplace of ideas, the copyright regulations – in effect, must-not-carry regulations – for Internet radio diminish the marketplace.[263] The marketplace has lost not only a large number of speakers, but the remaining speakers have lost creative control over their messages.

The government must do more than simply identify an important interest to survive intermediate scrutiny. The government must establish that "the recited harms are real, not merely conjectural, and that the regulation will in fact alleviate these harms in a direct and material way."[264] Moreover, such regulation must be "narrowly tailored to serve a significant governmental interest" and must "leave open ample alternative channels for communication of the information."[265]

The harm the government sought to alleviate by creating the Sound Recording Performance Complement was on-demand access to music that would replace CD sales and the likelihood of home copying. However, the numerical limits on the content and arrangement of Internet radio transmissions are a poor solution to that problem. This mechanism not only burdens more speech than necessary to prevent unrestricted exploitation of digital music, but there is no evidence that the Sound Recording Performance Complement in fact remedies the problem. At this time, there are a number of Internet applications that allow users to capture a potentially unlimited amount of music disseminated on Internet radio and download it to their music storage devices.[266] Therefore, restricting Webcasters' playlist content and arrangement is an ineffective means to limit listeners from downloading music from Internet radio transmissions. As commenters have observed, the Sound Recording Performance Complement "impedes small webcasters from legally entering the marketplace, and as a result, prevents new works from reaching the public."[267]

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[262] Eldred v. Ashcroft, 537 U.S. 186, 208 (2003); *see also* Peters, *supra* note 35, at 18 ("Although the [C]ourt didn't quite put it this way, in essence its [*Eldred*] ruling was that the Copyright Clause gives Congress the power to enact bad copyright legislation. The [C]ourt didn't actually express the view that term extension was a bad idea, but reading between the lines, it is difficult to avoid the conclusion that the [C]ourt had some distaste for the decision to add another twenty years to an already-long copyright term.").

[263] *See Turner II*, 520 U.S. at 180.

[264] Turner Broad. Sys., Inc. v. FCC, 512 U.S. 622, 664 (1994) [hereinafter *Turner I*].

[265] Ward v. Rock Against Racism, 491 U.S. 781, 791 (1989); Clark v. Community for Creative Non-Violence, 468 U.S. 288, 293 (1984).

[266] Wagman & Kopp, *supra* note 188, at 277–78 (describing two such applications, iFill and iRadio, which "blatantly encourage infringement, thus completely disregarding current copyright laws").

[267] *See id.* at 315.

These regulations not only fail to prevent piracy, but they have the effect of reducing the vibrant potential of this burgeoning medium. Thus such regulations burden more speech than necessary to alleviate the harms of on-demand access to music for free.

Current copyright law adds an unacceptably high burden on the First Amendment speech interests at issue in the digital transmission of music. It is no longer simply a catalyst for new expression. It is now a sword to strike down rivals and new media.

Conclusion

Music is a uniquely expressive mode of communication. It can often crystallize thoughts and emotions where language alone fails us. As any star-crossed lover who made a mixed tape for a girlfriend or boyfriend can attest, music can say what our own words fail to express. Playing music can be cathartic and expressive for the speaker. It can also communicate across generations and across cultures.

Researchers are now documenting what many anecdotally believed: music can have powerful effects on us. Medical researchers have been tracking the wellness, regenerative, and pain management benefits of music therapy. And political scientists and ethnomusicologist have been exploring the cross-cultural communicative and healing powers of music as well as the power of music to help educate and inspire political change.

Music is a powerful tool. There needs to be adequate "breathing space"[268] around the creative choices of Webcasters that transmit music online. The built-in accommodations, which generally shield copyright law from First Amendment scrutiny, afford no protection for a Webcaster's expressive voice.

The First Amendment provides broad protection for speakers to decide which messages deserve expression; however, Webcasters are effectively denied the ability to make such decisions in their messages. The limitation on the number and arrangement of Webcasters' playlists restricts their creative choices. Webcasters need the predictability of a statutory royalty rate; thus, they have no choice but to comply with the Sound Recording Performance Complement.

Powerful lobbying efforts of market incumbents have urged the expansion of copyright beyond its "traditional contours."[269] These incumbents have a history of disfavoring small and marginal voices. Congress seems to have ratified this discrimination by promulgating incumbent-friendly copyright regulations. Copyright has expanded beyond the safe-zone within the First Amendment. Copyright regulation of Internet radio – of which the Sound Recording Performance Complement is

[268] Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 579 (1994).

[269] Eldred v. Ashcroft, 537 U.S. 186, 219 (2003).

one example – threatens to strangle this nascent medium as well as the expressive voice of those interested in using it. For these reasons, the Sound Recording Performance Complement cannot withstand First Amendment scrutiny.

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Serious Flaw of Employee Invention Ownership Under the Bayh-Dole Act in *Stanford v. Roche*: Finding the Missing Piece of the Puzzle in the German Employee Invention Act

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Introduction

In *Stanford v. Roche*, the Supreme Court took a very textualist approach and refused to read the text of the Bayh-Dole Act as guaranteeing ownership of federally funded inventions for contractors of the federal government through an automatic transfer from the contractors' employees.[1] This interpretation effectively eliminated the federal government's rights under the Act in federally funded inventions if its contractors failed to secure ownership of invention from their employees because these rights are provided through the contractors' ownership of such inventions.[2] The Bayh-Dole Act aims to implement a uniform policy in the ownership of federally funded inventions and sets out important objectives reflecting specific public interests unique to such inventions.[3] These objectives are achieved through the government's rights in federally funded inventions to promote commercialization and collaboration between industries and academia.[4] Accordingly, the *Stanford* dissent argued that the majority's interpretation was inconsistent with the Act's basic purpose.[5]

Due to lack of resources at technology transfer offices and the complexity of ownership issues involved in academic-industry collaboration at universities, it is not easy for universities to secure the ownership of all inventions made by their

[1] Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc. 563 U.S. ___, 131 S. Ct. 2188, 2197 (2011).

[2] *Id.* at 2201 (Breyer, J., dissenting).

[3] *Id.* at 2200–01.

[4] *Id.* at 2201.

[5] *Id.*

employees.[6] This is even more true with respect to inventions made by visiting researchers and student interns who are working under informal relationships with universities that do not fall into the traditional notion of employment.[7] *Stanford* highlights the complexity of ownership issues in inventions resulting from a high-tech environment where researchers and innovations inter-flow beyond the boundaries of firms.[8]

Many legal and economic scholars cite Silicon Valley's information sharing environment as the key to its success.[9] Interaction of researchers from multiple-firms and the high mobility of such researchers enhance information diffusion and inter-firm relations among firms in a region.[10] Researcher interaction improves industrial outputs, as well as economic growth in the high-tech district.[11] Despite the numerous benefits praised by economists, such an information sharing culture presents a serious challenge for university technology transfer offices managing intellectual property, particularly controlling the ownership of inventions and procuring patents based on the ownership.[12] The *Stanford* majority's interpretation of the Bayh-Dole Act substantially increases administration costs at universities associated with promoting practices to secure pre-invention assignments from anyone involved in federally funded research activities. Moreover, universities face due diligence challenges because they cannot prevent their researchers from executing inconsistent assignment contracts when different aspects of research projects are conducted in different institutions in the private and academic sectors.[13]

Contrary to steady changes in the working environment, the U.S. Patent Act remains relatively unchanged with respect to provisions controlling ownership and inventorship (which is the starting point for determining ownership).[14] The statute has a chapter dedicated to the ownership and assignment; however, that chapter in-

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[6] *See* Margo E.D. Reder, Board of Trustees v. Roche Molecular Systems, Inc.*: Negotiating the Web of Competing Ownership Claims to Inventions Arising from Government-Funded Academic-Industry Collaboration*, 44 BUSINESS LAW REVIEW 1, 10–13 (2011), *available at* http://ssrn.com/abstract=1701706e (detailing complications faced by parties involved with government funded research).

[7] *Id.* at 17.

[8] *Id.*

[9] *See, e.g.*, Yuval Feldman, *Experimental Approach to the Study of Normative Failures: Divulging of Trade Secrets by Silicon Valley Employees,* 2003 U. ILL. J.L. TECH. & POL'Y 105, 105 (2003).

[10] WALTER W. POWELL, TRUST-BASED FORMS OF GOVERNANCE, IN TRUST ORGANIZATION: FRONTIERS OF THEORY AND RESEARCH 51 (Roderick M. Kramer & Tom R. Tyler eds., 1996).

[11] *See* Edmund W. Kitch, *The Law and Economics of Rights in Valuable Information,* 9 J. LEGAL STUD. 683, 718 (1980) (explaining how a social loss occurs when firms refuse to share information).

[12] Reder, *supra* note 6, at 1–2.

[13] *Id.* at 16.

[14] Univ. Patents Inc. v. Kligman, 762 F. Supp. 1212, 1218 (E.D. Pa. 1991).

cludes only two sections.[15] Although the overwhelming majority of inventions are made by employee-inventors through their pre-invention assignment duty under an employment contract,[16] the U.S. Patent Act is silent on the ownership of inventions resulting from employment, except for invention ownership resulting from federally funded research under the Bayh-Dole Act.[17]

In contrast, patent statutes in major foreign patent jurisdictions include provisions for controlling the ownership of employee inventions.[18] In Germany, a separate law, the Employee Invention Act (EIA), was enacted to provide detailed rules for balancing interests of employee-inventors and their employers; in other words, to balance competing policies under the patent law and labor and employment law.[19] The EIA incorporates a mechanism for employers to secure the ownership of inventions made by their employees; that mechanism protects employers' interests by giving employers the priority right for claiming to secure the ownership of inventions made by their employee-inventors[20] while protecting employee-inventors' interests through rights of reasonable compensation when the inventors transfer the ownership to their employers.[21] Many other jurisdictions have adopted a similar mechanism from the EIA.[22] The U.S. Congress also once made an attempt to adopt a similar mechanism by introducing a series of bills based on the German EIA.

This article argues that the current Bayh-Dole Act is incomplete because the Act fails to provide a mechanism for contractors to secure the ownership of federally funded inventions from their employees. Part I of this Article discusses this flaw in the current Bayh-Dole Act, highlighted by *Stanford v. Roche,* and argues that a historical accident resulted in this flaw due to Congress's failure to pass a series of bills based on the German EIA. Passages in the Bayh-Dole Act suggest that the

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[15] U.S. Patent Act, 35 U.S.C. §§ 261–262 (2006).

[16] *See* Scott Shane, *Patents Granted to Small Entities in Decline*, SMALL BUSINESS TRENDS (July 19, 2010, 11:39 AM) http://smallbiztrends.com/2010/07/how-smart-is-the-average-entrepreneur.htm (referring to USPTO statistics, patents issued to small entities recently declined to less than 20%, with "small" entities including both independent inventors and small firms).

[17] Bayh-Dole Act, Pub. L. No. 96-517, 94 Stat. 3015 (1980) (codified at 35 U.S.C. §§ 202–12 (2006 & Supp. IV 2010)).

[18] *See, e.g.*, Tokkyohō [Patent Act], Law No. 121 of 1959, art. 35 [Japan]; CODE DE LA PROPRIÉTÉ INTELLECTUELLES [C.P.I.] art. L611-7(Fr) (providing statutory guidance for employee invention in Japan and France).

[19] Arbeitnehmererfindungesetz, [ArbEG] [Employees' Inventions Act] [hereinafter German EIA]. English translation *available at* www.wipo.int/clea/docs_new/pdf/en/de/de039en.pdf; *See* MICHAEL TRIMBORN, EMPLOYEES' INVENTIONS IN GERMANY: A HANDBOOK FOR INTERNATIONAL BUSINESSES (2009); HELMUT REITZLE, ET AL, ACT ON EMPLOYEES' INVENTIONS (3d ed., 2007) (providing insight to the German EIA in English).

[20] German EIA, *supra* note 19, § 6.

[21] *Id.* § 9.

[22] See CODE DE LA PROPRIÉTÉ INTELLECTUELLES [C.P.I.] art. L611-7(Fr) (providing language similar to the German EIA).

Act assumes a transfer by operation of law to secure the ownership of federally funded inventions through a mechanism provided by the German EIA based bills. Without such a mechanism, many federal funded inventions will fall outside of the Bayh-Dole Act if contractors fail to execute written assignments with inventors. Common law ownership rules do not provide any help to contractors because they can guarantee only non-transferable, royalty-free, nonexclusive licenses for the contractors. Many of the contractors, particularly universities, do not practice patents by themselves. Differing state laws and state legislative actions prevent assignment contracts between the contractors and their employee-inventors from securing the ownership of all federally funded inventions, thereby preventing the fed-federal government from implementing a uniform policy.

In order to propose a mechanism for contractors to secure the ownership of federally funded inventions, Part II of this article examines a statutory model based on federal laws for handling inventions closely related to national security. These Acts provide an effective mechanism for securing rights in the ownership of inventions by operation of law. However, the increased administrative costs on both the United States Patent and Trademark Office ("USPTO") and applicants would not justify adopting a similar mechanism for the Bayh-Dole Act.

Part III of this article examines the German EIA and compares it with the Bayh-Dole Act. Congress's interest in the EIA resulted in the overall structure of Bayh-Dole Act sharing key features with the EIA and thus it should be easy for the Bayh-Dole Act to adopt an ownership transfer mechanism developed under the EIA. The comparison also reveals the lack of a mechanism in the current Bayh-Dole Act for protecting inventors' rights to compensation when ownership is transferred to employers, although the Bayh-Dole Act does provide inventors a similar right to compensation.

Part IV of this article discusses which aspects of the German EIA should be adopted in the Bayh-Dole Act and how that adoption should take place. It will also propose adopting, from the EIA, a mechanism to protect inventors' rights to compensation. Moreover, today's university research environment makes it necessary for the federal government to apply the Bayh-Dole restrictions and conditions to federally funded inventions created by students and visiting researchers, regardless of employment status with the contractors. With just compensation through royalty sharing, the Bayh-Dole Act should be revised to allow contractors to secure the ownership of inventions from these nontraditional employees as long as their inventions resulted from federally funded research activities.

I. Lack of Ownership Transfer Mechanism: Significant Flaw in the Bayh-Dole Act

1. *Stanford v. Roche*

The invention at issue in *Stanford* was a technology based on the polymerase chain reaction (PRC) technique for detecting and quantifying HIV—the virus that causes AIDS—in human blood samples (HIV measurement technology).[23] A Stanford researcher, Dr. Holodniy, completed this invention with other Stanford researchers.[24] In June 1988, Dr. Holodniy executed a pre-invention assignment contract which included the term "I *agree to assign or confirm in writing* to Stanford and/or Sponsors" with respect to his future inventions.[25] Because he had no prior experience with the PRC technique, he was instructed by his boss to visit a private biotech firm, Cetus, and learn the technique.[26] In February 1989, Dr. Holodniy executed another pre-invention assignment agreement with Cetus when he began his regular visits to Cetus.[27] The contract with Cetus included the term "I *will assign* and *do hereby assign* to Cetus" with respect to his future inventions.[28]

After receiving enough training at Cetus, Dr. Holodniy returned to Stanford and completed the HIV measurement technology.[29] Stanford received government funding for its HIV research through the National Institute of Health.[30] On May 14, 1992, Stanford filed a patent application which resulted in three separate patents covering different aspects of the HIV measurement technology.[31] However, Dr. Holodniy did not execute an assignment of the ownership of his invention in the 1992 patent application until May 4, 1995.[32] All three patents included a notation that the invention was made with the aid of federal funding.[33]

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[23] Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 563 U.S. ___, 131 S. Ct. 2188, 2192 (2011); Nicholas Wade, *Scientist at Work/Kary Mullis; After the 'Eureka,' a Nobelist Drops Out*, N.Y. TIMES, Sept. 15, 1998, *available at* http://www.nytimes.com/1998/09/15/science/scientist-at-work-kary-mullis-after-the-eureka-a-nobelist-drops-out.html?scp=1&sq=kary%20mullis&st=cse (stating that the polymerase chain reaction (PCR) was developed by a researcher, Dr. Kary Mullis).

[24] Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 583 F.3d 832, 837 (Fed. Cir. 2009), *aff'd*, 563 U.S. ___, 131 S. Ct. 2188 (2011).

[25] *Id.* at 841 (emphasis in original).

[26] *Id.* at 837.

[27] *Id.* at 842.

[28] *Id.* (emphasis in original).

[29] *Id.* at 837.

[30] Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 583 F.3d 832, 838 (Fed. Cir. 2009), *aff'd*, 563 U.S. ___, 131 S. Ct. 2188 (2011).

[31] *Id.* at 838, 842.

[32] *Id.* at 842.

[33] *Id.* at 838.

Meanwhile, Roche purchased all PRC related assets from Cetus in December 1991.[34] Roche began to sell HIV detection kits, which are widely used in hospitals and clinics.[35] In April 2000, Stanford and Roche began contesting Roche's ownership through the 1989 Holodniy assignment and negotiating possible licensing conditions; the negotiation led to no agreement.[36] On October 14, 2005, Stanford filed suit against Roche, asserting infringement of the three patents by Roche's HIV detection kits.[37] Roche answered and counterclaimed against Stanford, alleging that Stanford lacked standing to maintain the suit because Roche possessed ownership of the invention with respect to all three patents.[38]

The U.S. Court of Appeals for the Federal Circuit (Federal Circuit) agreed with Roche that it secured the ownership of Holodniy's invention when it acquired Cetus's PRC assets.[39] The Federal Circuit applied its own case law to the question of whether contractual language affects a present assignment of patent rights or an agreement to assign rights in the future inventions, and found the Cetus assignment contract to constitute the former and the Stanford assignment contract to constitute the latter.[40] Under its precedents, the terms "I . . . hereby assign" in the Cetus assignment contract triggered an automatic transfer of the ownership upon the completion of invention in contrast to the terms "I agree to assign" in the Stanford assignment which needs an additional step to consummate the promise and trigger transfer of the ownership.[41] Once the invention was completed, the Cetus contract trumped the Stanford contract, although the Stanford contract originated prior to the execution of the Cetus contract.[42] In denying Stanford's ownership, the Federal Circuit effectively eliminated the federal government's rights in the invention expressly provided in the Patent Act.[43]

In a seven-to-two vote, the Federal Circuit's conclusion was upheld by the U.S. Supreme Court, rejecting the view that the ownership provisions for federally funded inventions in the Bayh-Dole Act override state contract laws and common

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[34] *Id.* at 837–38.

[35] *Id.* at 838.

[36] Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 583 F.3d 832, 838 (Fed. Cir. 2009), *aff'd*, 563 U.S. ___, 131 S. Ct. 2188 (2011).

[37] *Id.*

[38] *Id.*

[39] *Id.* at 841–42.

[40] *Id.*

[41] *Id.*

[42] Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 563 U.S. ___, 131 S. Ct. 2188, 2202 (2011) (Breyer, J., dissenting).

[43] The Government has a nonexclusive, nontransferable, irrevocable, paid up license to use the invention. *See* 35 U.S.C. § 202(c)(4) (2006). It also has a right to require the patentee to grant a license to a third party and may have direct control of the invention under certain circumstances. 35 U.S.C. §§ 203, 202(c)(1), 202(c)(2)-(3) (2006 & Supp. IV 2010).

law rules controlling invention ownership.[44] Authored by Chief Justice Roberts, *Stanford* reemphasized the common law ownership rule under precedent by holding that the ownership of an invention belongs to the inventor and rejected Stanford's position that the ownership of federally funded inventions vested in the inventor's employer—the federal contractor.[45] The Supreme Court compared federal laws, which vest the ownership of inventions to the federal government contrary to the common law rule, and found no texts in the Bayh-Dole Act supporting the contractor's ownership.[46]

The majority also examined the text defining "subject invention" and rejected Stanford's interpretation that would include all inventions made by the contractor's employee with the aid of federal funding, contrary to the rule to avoid redundancy in statutory terms.[47] Instead, the majority adopted an interpretation including only inventions owned by the contractor through a valid and enforceable assignment contract because this interpretation makes every word in the definition meaningful and consistent with a dictionary definition of the word.[48] This interpretation is further supported by the text of other provisions in the Bayh-Dole Act.[49] The majority found that the scope of subject inventions under Stanford's interpretation was overbroad because it included any invention resulting from federally funded research activities, regardless of the inventor's employment relationship with the contractor or the amount of federal funds used to support the activities.[50]

The majority's statutory interpretation followed a traditional, formalistic approach in trying to ascertain the ordinary meaning of the words and phrases that the parties disputed in context of the structure of the statute and use of the words and phrases in other provisions. Even though basic policies and objectives were expressly set out in the Bayh-Dole Act, they played no role in its interpretation. Such an interpretation based on textualism often leads to results that Congress did not intend.[51] For these reasons, the *Stanford* dissent, authored by the strongly purposivist Justice Breyer, criticized the majority's interpretation as being inconsistent with the Bayh-Dole Act's basic purposes and undercutting the Act's ability to implement its objectives.[52]

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[44] *Stanford*, 563 U.S. ___, 131 S. Ct. at 2197.

[45] *Id.* at 2198.

[46] *Id.* at 2195–96.

[47] *Id.*

[48] *Id.* at 2196.

[49] *Id.* at 2197–98.

[50] Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 563 U.S. ___, 131 S. Ct. 2188, 2198–99 (2011).

[51] *See id.* at 2201 (Breyer, J., dissenting) (stating that the majority's conclusion undermines the purpose of the Bayh-Dole Act).

[52] *Id.*

2. Losing an Essential Piece of the Puzzle of the Bayh-Dole Act: Historical Accident

Although the *Stanford* majority's statutory interpretation was technically correct in restraining its role to confirming plain meaning or resolving ambiguity, Justice Breyer was correct that it led to a result that Congress did not intend or expect, by letting inventors lawfully assign federally funded inventions and taking them out of the scope of the Bayh-Dole Act controls. The majority's interpretation also leads to a conclusion that the common law rule controls the ownership of federally funded inventions if the federal contractors fail to secure the ownership through an assignment contract.[53] Moreover, it suggests that state contract laws and special legislation control the ownership of such inventions even if the contractors diligently try to secure the ownership through an assignment contract.[54] Such a conclusion subjects the ownership of federally funded inventions to a risk of a technical drafting trap.[55] Also, it allows many federally funded inventions out of the Bayh-Dole Act's restrictions, conditions, and allocation rules and makes it impossible for the federal government to implement a uniform ownership rule.[56]

Congress did not intend to bring such results. Justice Breyer offered two solutions for avoiding the results: (1) interpreting the contractors' assignment contract to be consistent to the Bayh-Dole Act's purpose;[57] and (2) interpreting the Bayh-Dole Act as applying the ownership rule under Executive Order 10096,[58] which requires transfer of the ownership of invention by the federally funded employees to the federally funded employers.[59] The first solution cannot avoid the result brought by contractors' failure to execute an assignment contract.[60] The second solution can avoid all unintended results, but the executive order provides no basis to apply its rule to inventors who are not employees of the federal government.[61] Further, the Bayh-Dole Act does not provide a procedure to protect inventors and third-parties.

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[53] *Id.* at 2203.

[54] *See infra* Part I.4.

[55] Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 563 U.S. ___, 131 S. Ct. 2188, 2203 (2011) (Breyer, J., dissenting).

[56] *Id.* at 2201–02 (Breyer, J., dissenting).

[57] *Id.* at 2202–03 (Breyer, J., dissenting).

[58] *Stanford*, 563 U.S. ___, 131 S. Ct. at 2203–04 (Breyer, J., dissenting). *See* Exec. Order No. 10096 15 Fed. Reg. 389 (Jan. 25, 1950), *reprinted as amended in* 37 C.F.R. § 501 (2011) (carrying the title "Providing for a uniform patent policy for the Government with respect to inventions made by Government employees and for the administration of such policy").

[59] *Id.* at 2203 (Breyer, J., dissenting).

[60] *See infra,* Part I.3.B.

[61] Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 563 U.S. ___, 131 S. Ct. 2188, 2197 n.4 (2011).

However, a mechanism for contractors to secure the ownership of all federally funded inventions from their employee-inventors is an essential part of the Bayh-Dole Act for implementing a uniform policy. Without the mechanism, many federally funded inventions would fall out of the Act's governing scope. As the *Stanford* majority admitted, reading the definition of "subject invention" to mean all inventions made by the contractor's employees, requiring transfer of the invention ownership to the contractor is plausible enough in the abstract.[62] If Congress intended contractors to secure ownership by operation of law, why did it fail to include an ownership transfer mechanism for their contractors? One can find a possible answer in the Act's legislative history: Congress lost a chance to adopt an ownership transfer mechanism from the German EIA when it failed to pass bills for controlling the ownership of inventions under the employment relationship in the private sector.

Chapter 18 of the U.S. Patent Act was introduced through the enactment of the Bayh-Dole Act to implement multiple goals through a uniform patent policy for ownership allocation and licenses with respect to federally funded inventions.[63] Among the goals, promoting commercialization of federally funded inventions has been the most successful; it is achieved by giving ownership of the inventions to universities and encouraging academic-industry collaboration through ownership.[64]

Interestingly, a review of legislative history reveals that U.S. and German legislators began their efforts leading to the current Bayh-Dole Act and German EIA at the same historical point: the pre-WWII era.[65] The need for spurring scientific and technological development for warfare increased government sponsored research and development in both academic and private sectors and led legislators to adopt

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[62] Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 563 U.S. ___, 131 S. Ct. 2188, 2196 (2011).

[63] There are numerous publications on the Bayh-Dole Act. *See* SEAN O'CONNOR, ET AL., LEGAL CONTEXT OF UNIVERSITY INTELLECTUAL PROPERTY AND TECHNOLOGY (2010), *available at* http://sites.nationalacademies.org/PGA/step/PGA_058712 (last visited Aug. 21, 2011) [hereinafter O'CONNOR, ET AL.]; Rebecca S. Eisenberg, *Public Research and Private Development: Patents and Technology Transfer in Government-Sponsored Research*, 82 VA. L. REV. 1663, 1669 (1996); Mark A. Lemley, *Are Universities Patent Trolls?*, 18 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 611, 614 (2008).

[64] *Stanford*, 563 U.S. ___, 131 S. Ct. at 2201 (Breyer, J., dissenting). Howard Bremer, et al., *The Bayh-Dole Act and Revisionism Redux*, 78 PAT. TRADEMARK & COPYRIGHT J. 483 (2009). Congress recently celebrated the Act's positive impact on the U.S. economy at its 30th anniversary, citing numerous companies, products, and technologies developed on the basis of federally funded inventions. H. R. Con. Res. 328, 111th Cong. (2010); *House Resolution Honors 30th Anniversary of the BayhDole Act*, NEWSWISE (Nov. 16, 2010, 11:00 AM) http://www.newswise.com/articles/view/570842/.

[65] O'CONNOR, ET AL., *supra* note 63, at 6.

new patent policies for the ownership of patents resulting from the research and development by the end of WWII.[66]

However, the two Acts developed very differently because of different focuses and social backgrounds. Acts and regulations, which were the roots of Bayh-Dole, aimed to balance rights of the federal government against rights of their employees and contractors; in contrast, regulations leading to the German EIA aimed at balancing rights of employers against rights of their employees regardless of their employment in the private or government sector. At the beginning of efforts to develop a uniform invention ownership allocation policy, the main concern of Congress was to give the federal government access to federally funded inventions, because the U.S. Supreme Court had previously developed a common law rule that employers do not have any rights in the ownership of inventions even if the inventions resulted from the performance of duty under a contract with their employees and contractors.[67] To remedy the ownership problem, U.S. employers in the private sector developed the practice of having their employees execute pre-invention assignment contracts.[68] Following the trend of acknowledging freedom of contract, U.S. Courts upheld and enforced such contracts.[69] U.S. employees were unable to develop a collective power sufficient to enact a law reversing this trend.[70] Acknowledging the industry practice, Congress enacted a series of laws to secure the ownership of national security related inventions.[71] To modify the common law ownership rule, these Acts adopted clear language taking the ownership of federally funded inventions away from federal employees and contractors and giving it to the federal government.[72] The President also issued an Executive Order for the federal government to secure ownership of inventions made by federal employees.[73]

In contrast, German law had already addressed the need to provide government access to inventions owned by its employees or private persons through the operation of a compulsory license provision in the German Patent Act.[74] A more serious need was the removal of a conflict between labor and employment law and

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[66] *Id.* at 7.

[67] For further discussions see *infra* Part I.3.B.

[68] Jay Dratler Jr., *Incentives for People: The Forgotten Purpose of the Patent System,* 16 HARV. J. ON LEGIS. 129, 141–42 (1979).

[69] *Id.*

[70] *Id.* at 157.

[71] *Id.* at 150–51.

[72] Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 563 U.S. ___, 131 S. Ct. 2188, 2195 (2011).

[73] Dratler, *supra* note 68, at 151–52; Exec. Order No. 10096 15 Fed. Reg. 389 (Jan. 25, 1950), *reprinted as amended in* 37 C.F.R. § 501 (2011).

[74] German Patent Law § 13.

the patent law.[75] German employee-inventors were able to develop a significant collective bargaining power well before the pre-WWII era and pressed German legislators to enact a law confirming their rights.[76] The German EIA was enacted to address this need as well as the need to enhance the Nazi policy of advancing technology to develop high-tech weapons, including atomic bombs.[77]

Despite these different focuses, the Bayh-Dole Act and the German EIA share key features for transferring the ownership of invention.[78] Since preceding acts and regulations developed in similar time frames, it is very likely that the German EIA strongly influenced the ownership allocation rules and transfer mechanism between contractors and the federal government under the Bayh-Dole Act.[79] Moreover, this influence is evidenced by Congress's attempts to pass a series of bills based on the German EIA.[80] In the 1970s, Congress introduced a series of bills to implement a federal policy for controlling the employee invention ownership in the private sector.[81] These German EIA based employee invention bills could have introduced a mechanism for contractor-employers to secure the ownership of inventions from their employees as an operation of law.[82] Accordingly, it is likely that the Bayh-Dole Act intentionally left the ownership rules under the contractor-employee relationship to the German EIA based bills. Congress lost an important piece of the puzzle for developing a system for implementing a uniform federal policy in federally funded inventions when it failed to pass the bills. As will be discussed below, some texts in the Bayh-Dole Act support Congress's assumption of incorporating the missing piece with the German EIA based bills. This historical accident brought unintended results, as highlighted in *Stanford.*

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[75] DIETMAR HARHOFF & KARIN HOISL, UNIV. OF MUNICH, INSTITUTIONALIZED INCENTIVES FOR INGENUITY—PATENT VALUE AND THE GERMAN EMPLOYEES' INVENTIONS ACT 8 (2006), *available at* epub.ub.uni-muenchen.de/1262.

[76] *Id.* at 7.

[77] THE BAYH-DOLE ACT AT 25, 8 n.11 (2006), *available at* http://bayhdolecentral.com/BayhDole25_WhitePaper.pdf.

[78] *See infra*, Part III.1 (discussing similarities between German EIA and the Bayh-Dole Act).

[79] *See id.* (postulating that German EIA influenced the Bayh-Dole Act).

[80] Robert L. Gullette, *State Legislation Governing Ownership Rights in Inventions Under Employee Invention Agreements*, 62 J. PAT. OFF. SOC'Y 732, 739 (1980); H.R. 15512, 91st Cong. (1969), *reintroduced as* H.R. 1483, 92d Cong. (1971) ("Moss Bills"). A similar bill was introduced again in 1982. H.R. 6635, 97th Cong. (1982).

[81] *H.R. 1483*, *supra* note 80.

[82] *Id.* § 412; William P. Hovell, *Patent Ownership: An Employer's Rights to His Employee's Invention,* 58 NOTRE DAME L.REV. 863, 883–86 (1983); O'CONNOR, ET AL., *supra* note 63, at 29.

3. Unintended Results: Common Law Ownership Rules

The *Stanford* majority confirmed that the common law governs the ownership of federally funded inventions.[83] Under this rule, the ownership of an invention belongs to the inventor.[84] An employer does not have ownership of the invention made by his employee unless there is an express agreement to transfer the ownership to the employer.[85] Without a mechanism to secure the ownership as an operation of law, the Bayh-Dole Act pre-supposes an expressive contract between the contractor and its employees to assign all rights of inventions once the inventions are complete.[86]

However, limited resources at university technology transfer offices may prevent execution of pre-invention contracts with every employee and researcher who engages in federally funded research activities because different teams of researchers, including visiting researchers and student-interns, engage in different aspects of research projects in today's academic-industry collaboration.[87] If contractors failed to execute an express assignment contract, federally funded inventions remain with inventors unless the exception of "specially hired to invent" applies to the employment relationship between the inventor and employer-contractor.[88] It is unlikely that the employment relationship between contractors and their employee-inventors fall into the exception.[89] The "shop rights" common law rules provide equity for employers but have no value to university-contractors because universities do not practice patents by themselves.[90]

A) *Fundamental Rule: Inventors as Original Owners*

In the United States, only a natural person or natural persons can be the sole inventor or joint inventors; non-human legal entities, such as corporations, are excluded from inventorship.[91] It is a fundamental rule that ownership of invention is

[83] Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 563 U.S. ___, 131 S. Ct. 2188, 2195 (2011).

[84] Gayler v. Wilder, 51 U.S. 477, 493 (1850).

[85] United States. v. Dubilier Condenser Corp., 289 U.S. 178, 187 (1933).

[86] Regulations issued by the Administrator of the General Services Administration assumed pre-invention assignment agreements between the contractors and their employees. Bayh-Dole implementation Regulations provides a model patent contract. A clause of the contract requires the contractor to agree to secure the ownership of federally funded inventions that the contractor elects to retain title for the Federal agency. 37 CFR § 401.14(a), clause (f)(1); Mary LaFrance, *LaFrance on Employee Ownership of Federally-Funded Inventions*, 2010 Emerging Issues 4809 at 6 (2010).

[87] Reder, *supra* note 6, at 16.

[88] See *infra* Part I.3.B.

[89] *See infra* Part I.3.B.

[90] *See infra* Part I.3.B.

[91] *See* 1 DONALD S. CHISUM, CHISUM ON PATENTS § 2.02 (2011) (providing a general discussion of inventorship under U.S. patent law).

originally vested in the inventor.[92] Thus, the examination of ownership always starts from the determination of inventorship.[93] Although the ownership issue is often intertwined with the inventorship issue, it is important to note that the inventorship issue—who is a true and original inventor—is a separate question from the ownership issue of who owns property rights in the invention made by the inventor.[94]

Texts in the Bayh-Dole Act are unclear on whether it follows this fundamental rule and thus made it necessary for the *Stanford* Court to clarify the meaning of these phrases in terms of the fundamental rule of invention ownership.[95] The Act defines subject invention as "any invention of the contractor conceived or first actually reduced to practice."[96] Nothing in the definition touches upon contractor-employees who conceived or reduced the invention.[97] It is unclear whether any "invention of the contractor" includes all inventions by such employees.[98] In the provision for allocating the ownership of subject invention, the Act adopts the phrase "elect to retain title" to describe the contractor's right.[99] This suggests the ownership as being vested in contractors because contractors cannot retain the ownership of invention unless they already received it.[100] In another provision, the term "retention of rights" is used for an employee-inventor to file an application on its own.[101] This suggests that the Act follows the initial ownership rule exclusive to the inventor.[102] These phrases seem inconsistent because they suggest entitlement of the ownership for both parties in operation of law.

The rule that the ownership of invention is assignable is another important rule.[103] Although the Patent Act applies to determine inventorship, federal law

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[92] *E.g.*, Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 563 U.S. ___, 131 S. Ct. 2188, 2195 (2011).

[93] 8 DONALD S. CHISUM, CHISUM ON PATENTS § 22.02 (2011).

[94] *Id.*

[95] *Stanford,* 563 U.S. ___, 131 S. Ct. at 2196.

[96] Bayh-Dole Act, 35 U.S.C. § 201(e) (2006).

[97] *See Stanford*, 563 U.S. ___, 131 S. Ct. at 2200 (2011) (Breyer, J., dissenting) ("[S]ince the 'contractor' (*e.g.*, a university or small business) is unlikely to 'conceiv[e]' of an idea or 'reduc[e]' it 'to practice' *other than* through its employees, the term 'invention of the contractor' must refer to the work and ideas of those employees.").

[98] *Id.*

[99] 35 U.S.C. § 202(a) (2006).

[100] *Stanford,* 563 U.S. ___, 131 S. Ct. at 2190.

[101] 35 U.S.C. § 202(d) (2006).

[102] *Stanford,* 563 U.S. ___, 131 S. Ct. at 2198 n.6 (2011) (distinguishing "title" to be retained by contractors from "rights" to be retained by inventors. "That argument has some force. But there may be situations where an inventor, by the terms of an assignment, has subsidiary rights in an invention to which a contractor has title, as §202(d) suggests.").

[103] *Id.* at 2196.

plays a very small role in the determination of ownership before filing a patent application with the USPTO when rights in the ownership of invention are transferred from the original inventor.[104] An inventor may contract to transfer rights in future inventions before completion of the inventions; nevertheless, rights and obligations for the transfer under such a contract is controlled by state law.[105] Unlike the German EIA, Bayh-Dole has no express provision to limit inventors' abilities to transfer their rights in the ownership of federally funded inventions to a party other than their employers.[106] Such transfer may occur before or after patent filing.[107]

Texts in the Bayh-Dole Act may read to conflict with another fundamental rule: in principle, a patent should be issued only to an applying inventor although it may be issued to an inventor's assignee because interests in invention are assignable in law by an instrument in writing.[108] This rule that applications can be assignable by an instrument in writing is codified in the Patent Act.[109] The statute makes clear that a patent application must be filed by the inventor, even if rights in the invention are transferred to a third-party.[110] In contrast, the Bayh-Dole Act requires contractor-employers, instead of their employee-inventors, to file domestic and foreign patent applications.[111] This conflict with the fundamental rule also makes unclear who is the original owner, because the right of the contractor is defined as one to "elect to *retain* title to a subject invention" throughout the Act.[112]

These texts, inconsistent with the fundamental rules, would make sense if Congress enacted Bayh-Dole with an assumption that contractors would secure ownership of inventions through the mechanism found in the German EIA based bills.[113] The phrase "any invention of the contractor" should be read to mean those for which the employer-contractor secures ownership by exercising the right to claim the invention while preventing any disposition of federally funded inventions

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[104] Mary LaFrance, *Nevada's Employee Inventions Statute: Novel, Nonobvious, and Patently Wrong,* 3 NEV L.J. 88, 90–91 (2002).

[105] 8 CHISUM, *supra* note 93, § 22.03.

[106] *See Stanford,* 563 U.S. ___, 131 S. Ct. at 2201 (2011) (Breyer, J., dissenting) (expressing his opinion that there should be a limitation to prevent inventors from unilaterally terminating their assignment agreements their employer-contractors through a separate assignment to transfer the ownership of federally funded invention to a third party).

[107] *See id.* at 2202–03 (Breyer, J., dissenting) (explaining how an assignee receives an equitable title when interests in invention is assigned from the inventor before filing a patent application: the assigner secures title of the invention when an application is filed by the inventor).

[108] *Id.* at 2194–95.

[109] 35 U.S.C. §261 (2006).

[110] *See, e.g.*, 35 U.S.C. § 111 (2006).

[111] 35 U.S.C. § 202(c)(3) (2006).

[112] 35 U.S.C. § 202(d) (2006) (emphasis added).

[113] H.R. 1483, 92d Cong. (1971) (also known as the "Moss Bills").

to a party prior to the contractor's exercise of the right.[114] When the contractor fails to exercise the right, the ownership remains with the employee-inventor. Thus, the term "retain" is used for both contractor and inventor.[115]

Further, the contractor's duty of filing a patent application is parallel to the employer's duty of patent application in the bills.[116] However, the bills made clear that the application must be filed in the name of the inventor, and thus the text in the Bayh-Dole Act should also read the same way.[117] In short, these texts tend to support Congress's intent to introduce a mechanism for employer-contractors to secure the ownership made by their employees though the German EIA bills.

B) *Employers' Rights in Employee Inventions Under U.S. Common Law*

U.S. common law gives employers very limited rights in inventions made by their employees even if they are hired to invent.[118] This is particularly true with respect to university researchers because many of them are hired to teach and conduct basic research. Without any written assignment contract, the majority of inventions fall out of the scope of the Bayh-Dole Act, even if they resulted from federally funded research activities.

As the *Stanford* majority noted, it is often true that property rights in fruits of labor belong to his employer.[119] This rule does not apply to patents because mere employment is not sufficient to transfer the ownership of employee inventions to the employer.[120] In general, the ownership of inventions belongs to inventors and does not transfer to their employers unless the inventors expressly agree to assign the inventions.[121] As early as 1843, the Supreme Court had assumed that ownership of employee inventions went to the inventor.[122] However, the Supreme Court tried to account for the interests of employers by giving royalty free, non-exclusive licenses known as "shop rights."[123]

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[114] *Id.* § 412.

[115] *Id.* § 413.

[116] *Id.* § 421.

[117] *Id.*

[118] See 8 CHISUM, *supra* note 93, § 22.03 (providing a general discussion of employer's rights in employee inventions under U.S. patent law).

[119] Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 563 U.S. ___, 131 S. Ct. 2188, 2196 (2011).

[120] *Id.*

[121] *Id.* at 2195.

[122] 8 CHISUM, supra note 93, § 22.03.

[123] *Id.*

Beginning from the first Patent Act in 1790, the U.S. patent system has granted patents only to applications filed by the first and true inventors.[124] The same first Patent Act presupposes an invention made by multiple joint-inventors.[125] The employer of an inventor, however, cannot be qualified as a co-inventor. Regardless of financial contributions or instructions given by a natural person-employer, such employer cannot obtain any rights in the ownership of an invention unless she is a joint inventor of a technology that resulted from joint labors with her employee-inventor.[126] To qualify as a joint-inventor, she must make a contribution to the conception of the invention.[127] This is in stark contrast to the ownership of authorship under U.S. Copyright Law, which gives the ownership directly to employers under the work-for-hire doctrine.[128]

Therefore, universities cannot be co-inventors, and thus, can secure the ownership of invention only when they receive the ownership from inventors through an express assignment agreement. To protect interests of employers who fail to execute an express agreement, U.S. courts developed common law rules to give some rights to such employers: (1) if an employee is specially hired to make the particular invention or (2) if an employee is hired to make inventions in general.[129] As employers, universities should also obtain these rights when their employment with inventors meets these conditions; however, as will be discussed below, it is unlikely that the employment relationship between universities and their inventors meets the second condition. Thus, the common law rule does not help universities secure ownership of federally funded inventions.

Interestingly, the foundation of the current common law rule of ownership allocation was developed through the federal government's struggles over the ownership of its employees' inventions. One of the earliest cases disputing the ownership of an employee invention was *United States v. Burns*.[130] In this case, the inventor was a Major in the United States Army, and his duty had nothing to do with making inventions.[131] He invented a tent during his employment and obtained a patent on the invention.[132] Although the Army initially agreed to pay a royalty for a license

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[124] Patent Act of 1790, §6. Since patent applications were not examined under 1790 Act, a patentee needed to produce evidence that he was the first and true inventor to enforce his patent in court.

[125] *Id.* § 1; *see also* 1 CHISUM, *supra* note 91 (providing a general discussion on multi-inventor patents).

[126] 1 CHISUM, *supra* note 91 (citing Steams v. Barret, 22 F.Cas. 1175, 1181 (C.C.D. Mass. 1816)).

[127] Stern v. Trs. of Columbia Univ., 434 F.3d 1375, 1378 (Fed. Cir. 2006); *see also* 1 CHISUM, *supra* note 91, § 2.02[2][a].

[128] 17 U.S.C. § 101 (2006 & Supp. IV 2010); *see also* LaFrance, *supra* note 104, at 100 (comparing the ownership rules between copyright and patents).

[129] 1 CHISUM, *supra* note 91, § 2.03.

[130] 79 U.S. 246, 251 (1870).

[131] *Id.* at 252.

[132] *Id.*

to use his patented tent, it later attempted to avoid payment.[133] While affirming the Court of Claims's judgment to order the payment, the Supreme Court commented in dictum as to the government's rights in the ownership of invention: "[i]f an officer in the military service, not specially employed to make experiments with a view to suggest improvements, devises a new and valuable improvement in arms, tents, or any other kind of war materials, he is entitled to the benefit of it, . . . the government cannot, after the patent is issued, make use of the improvement any more than a private individual, without license of the inventor or making compensation to him."[134]

In dicta, the Court likewise commented on the applicability of the ownership rule to private employee-inventors.[135] This ownership rule, exclusive to inventors, was further reinforced in *Solomons v. United States*,[136] another case involving a federal government employee in which the Court held that the mere presence of an employment contract with an inventor does not give rise to any rights in the invention for his employer. As a result, the ownership rule, exclusive to inventors, took a firm root as a common law rule in U.S. case law.

Although U.S. courts have consistently denied any rights in the ownership to non-inventors, based solely on the invention resulting from the performance of an employment contract, they have been concerned about fairness and equity with respect to interests to employers who provided physical facilities and financial support for making the invention.[137] Such concerns led to the development of two exceptions to the ownership exclusive to the inventor rule: (1) non-exclusive, personal, non-transferable licenses called shop rights and (2) a duty of assignment based on the contract to hire inventors for inventing particular subject matter.[138] The *McClurg* case, decided in 1843, involved an invention made by an employee of a private firm.[139] In that case, the Supreme Court affirmed a circuit court's finding that presumed a license with respect to an improvement made by the inventor in the course of his employment.[140]

Relying on *McClurg*, the Court endorsed the presence of an implied license in another case involving an employee-inventor of a private firm, *Hapgood v. Hewitt*.[141] However, the Court clearly distinguished the nature of employment giv-

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[133] *Id. at* 253.

[134] *Id.* at 252.

[135] *Id.*

[136] 137 U.S. 342 (1890).

[137] 8 CHISUM, *supra* note 93, § 22.03[1][d].

[138] *Id.* § 22.03.

[139] McClurg v. Kingsland, 42 U.S. 202, 205 (1843).

[140] *Id.* at 204.

[141] 119 U.S. 226, 233 (1886).

ing rise to a license from that of employment giving rise to a duty to assign rights in the ownership of invention.[142] Although the inventor was hired to invent in general, such employment gave rise only to a personal and non-transferable license.[143] The Court denied the plaintiff's claim to transfer the ownership of invention.[144]

The concept of an implied license was further elaborated in the context of the employment law rule in the government employer case discussed above, *Solomons*.[145] The Court made it clear that if an employee was hired to invent something, he had thereby given his employer an irrevocable license to use his invention.[146] The Court justified the implied license by relying on the fact that the inventor "recognized [his] obligations of service flowing from his employment and the benefits resulting from his use of property, and the assistance of the co-employees, of his employer."[147] In short, the Supreme Court acknowledged the fundamental employment rule.

Nevertheless, the Court decided to maintain the supremacy of the ownership-exclusive-to-the-inventor rule while granting a license to compensate employers for their loss of rights in the ownership of inventions, a type of property resulting from their employees' labor.[148] The Court later called this royalty free non-exclusive license a shop right stating that "where a servant, during his hours of employment, working with his master's materials and appliances, conceives and perfects an invention for which he obtains a patent, he must accord his master a nonexclusive right to practice the invention."[149] Since employee-inventors receive federal funds from universities, as well as assistance of co-workers and access to facilities, universities are clearly entitled to a "shop right" for federally funded inventions made by their employees; however, such right has no value to universities because universities do not practice inventions by themselves and a shop right is non-transferable.[150]

In addition to being subject to shop rights, U.S. employees are under a duty to transfer rights in the ownership of their inventions if the nature of employment indicates that the employees are specially hired to invent a specific machine or pro-

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[142] *Id.*

[143] *Id.*

[144] *Id.*

[145] Solomons v. United States, 137 U.S. 342 (1890).

[146] *Id.*

[147] *Id.*

[148] Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 563 U.S. ___, 131 S. Ct. 2188, 2195 (2011).

[149] United States v. Dubilier Condenser Corp., 289 U.S.178, 188 (1933).

[150] Hapgood v. Hewitt, 119 U.S. 226, 233 (1886); 8 CHISUM, *supra* note 93, § 22.03[1][c].

cess.[151] It is unlikely that the employment relationships between universities and their employees fall into this category. In *Standard Parts Co. v. Peck*, the employment contract between a private employer and its employee expressly indicated that the inventor was hired to develop a process and the associated machinery for the production of a part used in a particular product of the employer.[152] Although the contract was silent with respect to patents resulting from the development, the Court affirmed the district court's decree ordering the employee to transfer the ownership of patents to his employer.[153] Even if a researcher is hired to conduct a particular research project identified in a funding agreement, it is unlikely that the employment contract with the university satisfied the degree of subject matter specification, with respect to a particular invention, that would give rise to an ownership assignment duty.

U.S. common law requires employers to give full notice during employment contract negotiations to their employee-inventors regarding the transfer of invention ownership subject to the employment contract, because the "specially hired to invent" doctrine is an exception to the ownership rule exclusive to inventors. U.S. courts have repeatedly held that an employment contract to hire an employee for inventing something in general does not give rise to a duty of assignment.[154] In another case involving a government employee, *United States v. Dubilier Condenser Corp.*, the Supreme Court emphasized the distinction between the contract of hiring an inventor for conducting research and making inventions in general, and that of hiring an inventor for making a particular invention.[155] According to the majority in *Dubilier,* hiring an employee to create an invention gives rise to an ownership assignment duty with respect to that employee's inventions only if such inventions are the precise subject of the employment contract.[156] Accordingly, the terms of an employment contract must be clear enough to define which invention the employer paid for so that the ownership of that invention can be transferred to the employer. The Court highlighted the distinction between rights in the ownership of inventions and other types of properties resulting from regular labor; only the former was said to result from inventive activities showing an exercise of unique creativity beyond ordinary skill.[157]

Due to this special nature of inventions, rights in the ownership of the invention do not transfer to employers unless employees specially bargained for and

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[151] 8 CHISUM, *supra* note 93, § 22.03[2].

[152] 264 U.S. 52, 59 (1924).

[153] *Id.* at 59–60.

[154] 8 CHISUM, *supra* note 93, § 22.03[2]; Aetna-Standard Eng'g Co. v. Rowland, 493 A.2d 1375, 1377 (Pa. Super. Ct. 1985).

[155] 289 U.S. 178, 187 (1933).

[156] *Id.*

[157] *Id.* at 189–190.

agreed to the compensation for the inventions when they entered into the employment contract. It is rare for universities to have an employment contract detailing tasks for university researchers. Further, university researchers engage in basic research, which usually results in inventions that need further investment prior to commercialization.[158] University inventors do not have opportunities to bargain for such inventions when they are first employed by universities because their inventions are unforeseeable at the initial time of employment.[159]

The Court also used this special nature of invention to define the scope of shop rights.[160] Employers are entitled to a license to use the invention, but have no right to demand a transfer of the ownership of invention because the invention is the original conception of the employee; thus, it should remain the property of the employee.[161] In *Dubilier Condenser Corp.*, the employment contract only stipulated that the inventor was hired to conduct research in general.[162] This finding led to the Court's refusal to transfer patents held by the employee-inventor to the federal employer.[163] Thus, *Dubilier* also implies that universities can only obtain a shop right.

This reluctance to infer a contract to assign rights in the ownership of an invention is supported by the patent policy of promoting innovations through inventions. To preserve incentives to invent, U.S. case law prevents employers from taking away property rights in the invention and secures opportunities for employee-inventors to bargain with their employers for the fair value of their inventions.[164] In other words, the patent policy of promoting innovation through rewards to inventors is supported through the bargaining between inventors and their employers over a transfer of property rights in inventions.

The Bayh-Dole Act touches upon neither shop rights nor the "specially-hired doctrine." Under the common law ownership rule, in addition to the contractors, the government may have a shop right with respect to inventions made by its contractors' employees, depending on the nature of the contract. Some may view the provision to require an agreement in the contract with respect to the government's right to use the invention as simply confirming the common law shop rights.

The Bayh-Dole Act's legislative history rejects such a view and instead supports a view that the right is created only through an express license with the con-

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[158] *See* Ariad Pharm., Inc. v. Eli Lilly & Co., 598 F.3d 1336, 1358 (Fed. Cir. 2010) (discussing the difficulties facing universities arising from their focus on basic research).

[159] United States. v. Dubilier Condenser Corp., 289 U.S. 178, 188 (1933).

[160] *Id.*

[161] *Id.* at 188–89.

[162] *Id.* at 193.

[163] *Id.* at 189–90.

[164] LaFrance, *supra* note 104, at 93; 8 CHISUM, *supra* note 93, § 22.03[2].

tractor. In an early effort to develop a uniform patent policy concerning federal employees, the government issued an executive order defining the types of employment that give rise to the duty to transfer the ownership of invention and to a "shop right."[165] An Attorney General report leading to the executive order also included a recommendation for the ownership of federally funded inventions developed by government contractors.[166] It did not recommend using the definitions for deciding the ownership of contractor inventions; instead, it adopted a general rule to retain government ownership of such inventions with some exceptions.[167] The recommendation required inclusion of a clause granting the government a right to use the invention and "March-in Rights" in a contract between a federal agency and its contractor when an exception applies and the government allows the contractor to retain ownership of federally funded inventions.[168] This recommendation was implemented by the Kennedy Administration in 1963.[169] Since the Bayh-Dole Act codified the government's rights, the rights to use the invention under the Act should be viewed separately from a shop right under the common law ownership rule. Thus, these rights should be available only through an express license from the contractors who hold the ownership of inventions and patents.

Throughout the legislative history of the Bayh-Dole Act, Congress paid very little attention to contractor-employee relationships during the development of the best practice of ownership allocation because this exercise focused on the allocation between the government and its contractors.[170] This relationship was only discussed with respect to the German EIA based bills.[171] In other words, implementation of the best ownership allocation relied on the assumption that contractors are able to secure ownership of all inventions that fall into the definition of "subject invention" through pre-invention assignment contract practice until the bills introduce an ownership transfer mechanism in operation of law. Unfortunately, this assumption has not always proven true, as illustrated in *Stanford.* Moreover, Congress has never been able to pass the contemplated bills. The common law rule is not helpful for contractors, particularly universities, in securing the ownership of invention if they fail to execute an assignment contract. If a contractor fails to secure ownership of a federally funded invention, the federal government loses rights in that in-

[165] Exec. Order No. 10096, 15 Fed. Reg. 389 (Jan. 25, 1950), *reprinted as amended in* 37 C.F.R. § 501.6 (2011).

[166] 1 DEPT OF JUSTICE, FINAL REP. OF THE ATT'Y GEN. TO THE PRESIDENT ON GOV'T PATENT PRACTICES & POLICIES, SUMMARY OF FINDINGS, CONCLUSIONS & RECOMMENDATIONS OF THE ATT'Y GEN. 4 (1947).

[167] *Id.* at 5; O'CONNOR, ET AL., *supra* note 63, at 8.

[168] O'CONNOR, ET AL., *supra* note 63, at 8.

[169] Memorandum for the Heads of Exec. Dep't and Agencies, 28 Fed. Reg. 10943, 10943 (Oct. 12, 1963); O'CONNOR, ET AL., *supra* note 63, at 10.

[170] O'CONNOR, ET AL., *supra* note 63, at 15.

[171] H.R. 1483, 92d Cong. (1971) (known as "Moss Bills").

vention because government rights in inventions can only be secured through agreements with its contractors.

4. Unintended Results: Non-Uniform Assignment under State Contract Law and Special Legislations

Even if contractors execute an express assignment contract with their employees, it is unclear whether the assignment duty is enforceable if the duty includes assignments of all inventions which fall into the definition of subject inventions: "conceived or first actually reduced to practice in the performance of work under a funding agreement."[172] The *Stanford* majority suggested that such an assignment duty is overbroad.[173] Moreover, the enforceable scope of such assignment agreements may differ from one state to another. This non-uniformity in securing the ownership of federally funded inventions through pre-invention assignment contracts hinders the goals of the Bayh-Dole Act.

Despite the important role played by pre-invention assignment contracts in implementing federal policy, U.S. courts leave interpretation and enforceability of contract terms to the governance of state policies through the application of state contract law.[174] The Supreme Court empowered state courts to develop their own laws governing state questions regarding such invention issues as ownership and transfer of patents.[175] However, state courts in general acknowledge the significance of federal case law and follow the precedent of the Supreme Court.[176] This has led to a development of fairly uniform common law rules in ownership and assignment enforceability throughout state and federal courts in the United States.

Although the uniform common law requires an express agreement to transfer ownership, state law generally governs such an agreement, with some exceptions.[177] One such exception arises when there is a question as to whether a patent assignment clause created an automatic assignment.[178] This issue is governed by federal law because it closely relates to the question of standing in patent cases governed by federal laws.[179] Under Federal Circuit case law, the contract language "agree to assign" indicates a mere promise to assign; thus, the assignment of future inventions does not occur unless a subsequent written instrument executes the assign-

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[172] Bayh-Dole Act, 35 U.S.C. § 201(e) (2006).

[173] Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 563 U.S. ___, 131 S. Ct. 2188, 2198 (2011).

[174] 8 CHISUM, *supra* note 93, § 22.03[4].

[175] Erie R. Co. v. Tompkins, 304 U.S. 64, 78 (1938).

[176] *See, e.g.*, Farmland Irrigation Co., v. Dopplmaier, 308 P.2d 732, 740 (Cal. 1957).

[177] *See, e.g.*, Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 583 F.3d 832, 837 (Fed. Cir. 2009), *aff'd*, 563 U.S. ___, 131 S. Ct. 2188 (2011).

[178] DDB Techs., L.L.C. v. MLB Advanced Media, L.P., 517 F.3d 1284, 1290 (Fed. Cir. 2008).

[179] *Roche*, 583 F.3d at 841.

ment.[180] In contrast, the language "do hereby assign" or "will assign" indicates a present assignment and rights in the inventions are automatically transferred to the employer as soon as the inventions are completed.[181] Accordingly, whether a contractor secures a transfer of ownership of a federally funded invention depends on the terms used in the pre-invention assignment contract that the contractor and its employees agreed upon, leaving contractors to easily fall into a technical drafting trap.[182] Although it is likely that state courts also follow Federal Circuit case law, they may apply their own law, which may lead to a different conclusion with respect to the ownership of a federally funded invention.

Furthermore, differing state public policies regarding the ownership of an assignment agreement in employment contracts lead to non-uniformity in the scope of inventions for which contractors can secure ownership of federally funded inventions from their employees. In general, employers are not required to pay any additional compensation as a consideration for a transfer of rights in an invention.[183] This is because U.S. courts view the payment of salary, assistance of co-employees, and right to use an employer's facility as constituting sufficient consideration.[184] Legal scholars have criticized the case law endorsing U.S. industry pre-invention assignment practice without any compensation and some argue that lack of additional compensation dampens incentive to invent and contradicts the federal patent system policy under the Copyright and Patent Clause.[185] These academic views are not persuasive to U.S. courts, which refuse to find any right that the constitutional clause gives to inventors.[186] Since the common law ownership rules require pre-invention assignment agreements to be not only expressive, but also clear (in order to give a notice to inventors with respect to what they give up in exchange for their

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[180] *Id.*

[181] *Id.* at 842; *see also* Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 563 U.S. ___, 131 S. Ct. 2188, 2198 (2011) (Breyer, J., dissenting) (criticizing this interpretation distinguishing two equitable claims based on the terms in pre-assignment contracts and urging the application of the previous rule that treated two claims equally and gave the ownership of invention to Stanford because the Stanford contract came first and then subsequently obtained a post-invention assignment).

[182] *Stanford*, 563 U.S. ___, 131 S. Ct. at 2203 (Breyer, J., dissenting).

[183] Henrik D. Parker, *Reform for Rights of Employed Inventors*, 57 S. CAL. L. REV. 603, 608 (1984); Ann Bartow, *Inventors of the World, Unite! A Call for Collective Action by Employee-Inventors*, 37 SANTA CLARA L. REV. 673, 673 (1997).

[184] *E.g.*, Goodyear Tire & Rubber Co. v. Miller, 22 F.2d 353, 355 (9th Cir. 1927).

[185] *See, e.g.*, Parker, *supra* note 183, at 604–05; Bartow, supra note 183, at 683–84; Mark B. Baker & Andre J. Brunel, *Restructuring the Judicial Evaluation of Employed Inventors' Rights*, 35 ST. LOUIS U. L.J. 399 (1991); Steven Cherensky, *A Penny for Their Thoughts: Employee-Inventors, Pre-Invention Assignment Agreements, Property, and Personhood*, 81 CAL. L. REV. 597 (1993).

[186] Teleflex Info. Sys. Inc. v. Arnold, 513 S.E.2d 85, 87 (N.C. Ct. App. 1999).

salary) courts consider the inventor's salary as sufficient consideration to enforce the agreement.[187]

Although U.S. courts favor enforcing an express assignment contract, if an employee's duties of assignment are overbroad, they may decline to enforce an agreement literally.[188] Courts may reinterpret the overbroad agreement to limit the duties within a reasonable scope.[189] In some states, an employment contract including an overbroad assignment agreement is void and unenforceable.[190] In general, legislation enacted in these states prevents employers from enforcing a contract obligating a transfer of rights in the ownership of the invention that is developed entirely on the employee's own time unless (1) the invention relates to employer's business or to the employer's actual or "demonstrably anticipated" research and development or (2) the invention results from work performed by the employee for the employer.[191] In contrast, only one state, Nevada, has enacted legislation which allows transfer of rights in the ownership of invention automatically without any express agreement if the invention is made during the term of employment and falls within the scope of the employee's job description.[192] In some states, a contract to transfer rights in the ownership of any invention made during the term of employment may be valid and enforceable regardless of the invention's relation to the inventor's duties or the employer's business, as long as the invention resulted from work the employee conducted for his employer.[193]

In short, the ownership of an invention may or may not transfer to contractors depending on the state law which governs the employment relationship. There is no uniform federal law to govern the enforceable scope of an employee invention assignment agreement. When Congress failed to pass the German EIA based bills, it also lost a chance to develop a uniform policy to govern assignment contracts for employee inventions, including federally funded inventions.[194] Furthermore, the *Stanford* majority's comment on the scope of subject invention suggests its interest in overriding state contract laws and special legislations while preventing the enforcement of overbroad assignment duties.[195] This leads to another uncertainty:

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[187] Aetna-Standard Eng'g Corp. v. Rowland, 493 A.2d 1375, 1379 (Pa. 1985).

[188] Dratler, *supra* note 68, at 142.

[189] *Id.* at 142–44 (dicussing Guth v. Minn. Mining & Mfg. Co., 72 F.2d 385, 387–88 (7th Cir. 1934)); *see also* Universal Winding Co. v. Clarke, 108 F. Supp. 329 (D. Conn. 1952).

[190] These states currently include California, Minnesota, North Carolina, Washington and Nevada. O'CONNOR, ET AL., *supra* note 63, at 85.

[191] LaFrance, *supra* note 104, at 96.

[192] *Id.* at 88

[193] Cubic Corp. v. Marty, 229 Cal Rptr. 828, 836 (Cal. Ct. App. 1986).

[194] H.R. 1483, 92d Cong. (1971).

whether the ownership of a federally funded invention may or may not transfer to contractors.

Finally, the *Stanford* majority's interpretation of the Bayh-Dole Act does not prevent employee-inventors from transferring the ownership of federally funded inventions to a party other than their employer-contractors.[196] Stanford could not have avoided its loss of ownership even if it had executed an automatic assignment with the inventor because the inventor already executed an assignment contract with a third-party prior to the Stanford assignment. In academic-industry collaborations, researchers move back and forth between universities and industry partners and conduct different aspects of research projects in various locations with different research teams.[197] Researchers contract for multiple assignments with a variety of terms throughout projects, which often leads to inconsistent duties, as highlighted in *Stanford.* With limited resources, it is impossible for contractors to conduct due diligence on all researchers with respect to their prior assignments.

II. Ownership Transfer Mechanism Under Federal Laws for Handling National Security Related Inventions

Since a uniform policy could be implemented through contractors' ownership of federally funded inventions, the Bayh-Dole Act should adopt a mechanism for transferring such ownership to contractors. Congress has already incorporated such a mechanism in federal laws for handling inventions closely related to national security.[198] Statutes and regulations dealing with such inventions provide mechanisms for securing the government's ownership through an automatic transfer by operation of law.[199] They also provide procedures for inventors and their assignees to challenge the federal government's ownership and protect their interests.[200] Stanford urged the Supreme Court to read the Bayh-Dole Act to implicitly adopt a similar mechanism.[201] The Court rejected Stanford's interpretation because the Act does not include language that clearly negates the common law ownership rules and lacks procedures to protect inventors and third-parties who did not receive federal funds.[202] This suggests that the Bayh-Dole Act could be revised to adopt the

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[195] *See* Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 563 U.S. ___, 131 S. Ct. 2188, 2198 (2011) ("Stanford's reading suggests that the school would obtain title to one of its employee's inventions even if only one dollar of federal funding was applied toward the invention's conception or reduction to practice.").

[196] *Id.* at 2201.

[197] Reder, *supra* note 6, at 16.

[198] *See infra* Part II.1-2.

[199] *See infra* Part II.1-2.

[200] Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 563 U.S. ___, 131 S. Ct. 2188, 2191 (2011).

[201] *Id.* at 2195–96.

[202] *Id.* at 2196–98.

mechanism from these federal laws by including language that vests the ownership in contractors and adopts a procedure to protect third-parties; however, such a revision may not be feasible because it would substantially increase the administration costs of both the USPTO and contractors.

1. Atomic Energy Act

The Atomic Energy Act of 1954 (AEA) was enacted by Congress to secure the government's ownership of subject inventions by operation of law.[203] A "subject invention" under the AEA is an invention that relates to the utilization of special nuclear material or atomic energy in atomic weapons ("NMAE invention"), and thus, is closely related to national security.[204] The AEA includes a declaration of the strong federal policy for using the invention to improve the general welfare and avoid its use in an atomic weapon.[205] Reflecting this policy, the AEA prevents the USPTO from issuing a patent to a NMAE invention as long as it is used in an atomic weapon.[206] It makes it clear that the federal government's ownership of the invention falls into the definition of an NMAE invention by operation of law. The AEA defines the government's ownership of a subject invention using language that is very different from that in the Bayh-Dole Act defining ownership. Under the AEA, any NMAE invention is "vested in and . . . the property of the [Atomic Energy] Commission if the invention is made or conceived in the course of or under any contract . . . or arrangement entered into with or for the benefit of the Commission."[207]

In order to secure the federal government's ownership of an NMAE invention by operation of law, the AEA provides a mechanism for discovering any NMAE inventions included in a patent application filed by an inventor, regardless of whether the inventions resulted from federal funds.[208] Like the Bayh-Dole Act with respect to contractors, the AEA imposes an obligation on all applicants to file statements explaining the full facts surrounding the making and conceiving of the inventions when they file patent applications for NMAE inventions.[209] The AEA requires the USPTO to forward copies of the application and the statement to the Atomic Energy Commission (AEC) as soon as the USPTO concludes that the invention is in the condition of allowance.[210] The USPTO must then issue a patent

[203] Atomic Energy Act of 1954, Pub. L. No. 83-703, 68 Stat. 919 (codified as amended at 42 U.S.C. § 2011 et seq. (2006)).

[204] 42 U.S.C. § 2181(a) (2006).

[205] 42 U.S.C. § 2201 (2006 & Supp. IV 2010).

[206] *Id.* § 2181.

[207] *Id.* § 2182.

[208] *Id.*

[209] *Id.*

[210] *Id.*

directly to the AEC, if the Commission so directs.[211] The AEA also provides applicants with the right to challenge the Commission's ownership of invention if applicants believe that the invention was not made or conceived in the course of any contract or arrangement with the AEC.[212]

The AEA imposes a duty on inventors to file either a report of an invention with the AEC or a patent application with the USPTO if they have made an NMAE invention.[213] Ownership disputes are resolved through interference procedures at the USPTO.[214] The AEA reinforces the government's ownership by negating any potential waiver and by giving authority to the AEC to request that the USPTO transfer ownership of the patent in the NMAE invention to the AEC if an applicant is found to have submitted a statement containing materially false statements.[215]

It should be noted that NMAE inventions are different from other inventions because the federal government is able to prevent the USPTO from issuing a patent even if the government does not have any rights in the ownership of the inventions.[216] Both the AEA and the Invention Secrecy Act give the government the authority to dispose of an inventor's rights in any patent deriving from a particular invention.[217] Under the Invention Secrecy Act, the USPTO screens patent applications to find those associated with NMAE inventions and may issue an order to keep the invention secret, regardless of government ownership, if disclosure of such invention might be detrimental to national security regardless of government ownership.[218] If such an order is issued, the grant of the patent is withheld as long as the disclosure is deemed to be detrimental to national security.[219] The only remedy for an applicant's loss of patent rights is monetary compensation.[220] Further, whenever a patent is issued on an NMAE invention, the AEA provides the AEC with the right to use the invention, as well as the right to issue a compulsory license for a third party to use the invention.[221]

2. National Aeronautics and Space Act

Inventions relating to aeronautical and space activities are another type of invention closely related to national security. Congress felt it necessary to promote

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[211] *Id.*

[212] *Id.*

[213] *Id.* § 2181.

[214] *Id.* § 2182.

[215] *Id.*

[216] 1 CHISUM, *supra* note 91, § 1.06[4].

[217] Invention Secrecy Act of 1951, 35 U.S.C. § 181 (2006).

[218] *Id.*

[219] *Id.*

[220] *Id.* § 183.

[221] 42 U.S.C. § 2183 (2006).

such activities in order to improve general welfare and national security; thus, it enacted the National Aeronautics and Space Act (NAS Act).[222] Under the NAS Act, aeronautical and space activities include (1) research into and the solution of problems related to flight within and outside the earth's atmosphere; (2) the development, construction, testing, and operation of aeronautical and space vehicles for research purposes; and (3) such other activities as may be required for the exploration of space.[223] Due to a strong federal policy in favor of promoting national security, the NAS Act, like the AEA, clearly transfers the ownership of federally funded inventions to the government by operation of law via the following provision: "such invention shall be the exclusive property of the United States . . . ."[224]

The NAS Act provides a mechanism, similar to the mechanism found in the German EIA, for securing government ownership of subject inventions. The NAS Act requires all applicants to file a statement surrounding the circumstances under which the invention was made so that the National Aeronautics and Space Administration ("NASA") can determine whether the invention resulted from the performance of any contract work with NASA.[225] The NAS Act also gives NASA the authority to request that the USPTO issue a patent directly to NASA on behalf of the federal government.[226] Finally, the NAS Act also provides an applicant with the ability to challenge NASA's decision regarding ownership through interference procedures at the USPTO.[227]

It is likely that many aeronautical and space activity related inventions fall into the category of those inventions that would, if disclosed, be detrimental to national security. Thus, through the Invention Secrecy Act, the government has a right of disposition with respect to such inventions, so long as it provides fair compensation to applicants.

3. Applicability of the Ownership Transfer Mechanism to the Bayh-Dole Act

Unfortunately, the mechanisms included in the AEA and NAS Acts that secure the government's ownership of federally funded inventions are an ill fit to the Bayh-Dole Act. Both the AEA and the NAS Acts impose heavy burdens on the USPTO to screen inventions and to inform the government if any invention falls within the scope of the Acts so that the related federal agencies can determine if the

[222] National Aeronautics and Space Act (NAS Act) of 1958, 85 Pub. L. No. 85-568 § 102, 72 Stat. 426 (codified as amended in scattered sections of 42 U.S.C.).

[223] 42 U.S.C. § 103(a) (2006).

[224] 42 U.S.C. § 305(a) (2006).

[225] 42 U.S.C. § 305(c) (2006).

[226] 42 U.S.C. § 305(d) (2006).

[227] *Id.*

government has any right in the ownership of an invention.[228] The Acts also require applicants to submit a statement regarding the circumstances under which the invention was made.[229] This screening process is feasible at the USPTO only because the categories of inventions to which the Acts apply are narrowly tailored and the number of applications relating to inventions falling within the categories is relatively small. Expanding the categories of inventions to cover all types of inventions that contractors could create during research and development is impossible. Imposing on contractor-applicants a duty to file a statement reporting inventive activities unnecessarily increases administrative burden on both the USPTO and applicants. In short, the increased administrative burden makes it impractical for the Bayh-Dole Act to adopt the ownership transfer mechanism from the AEA or NAS Acts.

III. Ownership Transfer Mechanism Under the German EIA

As Congress has done in the past, it can reasonably look for an ownership transfer mechanism in foreign employee invention systems, such as the German EIA, which is already a model for many Asian and European countries. This is particularly true with the Bayh-Dole Act because texts in the Act suggest that the Act assumed that the ownership rules for employee inventions in the failed bills, which were based on the German EIA, would be enacted.[230] Overall, the German EIA's mechanism for securing rights in the ownership of invention is very similar to the one in the Bayh-Dole Act, sharing the following five key features: (1) inventor's duty to report;[231] (2) employer's rights to claim the ownership of an invention resulting from the performance of an employment or research contract;[232] (3) duty to file domestic and foreign patent applications;[233] (4) retention of the ownership of an invention by its inventor if no one exercises a superior right to claim;[234] and (5) right of reasonable compensation for transfers of rights in the ownership of inventions.[235] Moreover, the fundamental ownership rules under German Patent Law are the same as the rules under U.S. Patent Law.[236] Legislative histories of these Acts reveal a cornerstone event in one country followed by a similar event in the other, which suggests that U.S. and German governments were aware that they

[228] Atomic Energy Act of 1954, Pub. L. No. 83-703, 68 Stat. 919 § 152 (1954) (codified as amended at 42 U.S.C. § 2011 et seq. (2006)); National Aeronautics and Space Act (NAS Act) of 1958, 85 Pub. L. No. 85-568 § 305(c), 72 Stat. 426 (1958).

[229] *Id.*

[230] *See supra* Part I.2.

[231] German EIA *supra* note 19, § 5.

[232] *Id.* § 6.

[233] *Id.* §§ 13–14.

[234] *Id.* § 8.

[235] *Id.*

[236] *See infra* Part III.2.A.

were engaging in similar exercises. Reflecting the risk adverse German culture that prefers written rules and detailed codes of conduct, the German EIA contains more detailed procedures for transferring ownership and more specific mechanisms to protect employee interests than the Bayh-Dole Act.[237]

1. Origin of Common Key Features: Possible Legislative Interaction

The German EIA provides a comprehensive mechanism for employers to secure all property rights in the ownership of inventions made by employees.[238] Due to Germany's unique practice of compromising between public interests based on employment and patent law, the German legislature enacted a law independent from German Patent Law that included both details for rights and obligations between employees and their employers and procedures to transfer rights in the ownership of inventions from employee-inventors to their employers.[239]

In Germany, the effort to clarify ownership and compensation started at the beginning of the 20th Century as the number of employee-inventors increased.[240] This was also the time when Congress began to examine the government's rights to use inventions made by private persons, as well as those made by federal employees, eventually leading to the Bayh-Dole Act.[241] During WWI, German employee-inventors were able to develop a collective bargaining power that led to the first collective labor agreement in the chemical industry in 1920, which dealt with ownership and compensation for employee inventions.[242] Other industry sectors followed this example.[243] In 1942, during WWII and after several failed attempts to replace the collective labor agreements with a generally applicable law, the Minister of Armament, motivated by the necessity of promoting technological advancement, issued a regulation to handle employee inventions.[244] The 1942 regulation already included a number of the key features of the ownership transfer mechanism that would later be contained in the modern German EIA.[245] The regulation was revised in 1943 to add guidelines for calculating the amount of remuneration based on a list of factors.[246]

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[237] *See infra* Part III.2.B.

[238] *See infra* Part III.2.B.

[239] HARHOFF & HOISL, *supra* note 75, at 8.

[240] *Id.* at 7.

[241] O'CONNOR, ET AL., *supra* note 63, at 4.

[242] HARHOFF & HOISL, *supra* note 75, at 7 n.6 (stating the name of the landmark agreement of April 27, 1920: *Reichstarifvertragfür die akademischgebildetenAngestellten der chemischenIndustrieas*).

[243] *Id.* at 7.

[244] *Id.* (stating the name of the regulation: *Verordnungüber die Behandlung von Erfindungen von Gefolgschaftsmitgliedern* ("Provisions on the Handling of Inventions of Subordinates")).

[245] *Id.*

[246] *Id.* (stating the name of the revised regulation: *Richtslinien für die Vergütung von Gefolgschftserfindungen* ("Guidelines for Subordinate Inventions")).

That same year, President Roosevelt requested that the United States Attorney General develop a uniform patent policy for federal employees and contractors.[247] A report was published by the Attorney General a few years later in response to the President's request.[248] The report recommended a mechanism that decided the ownership by classifying inventions developed by federal employees into three categories, which are somewhat similar to the categories of inventions under the German EIA.[249]

As soon as it recovered from the aftermath of WWII, the German government resumed its effort to enact a law that would allocate ownership rights in employee inventions and provide for inventor compensation.[250] Although introduced in 1952, the first bill failed to be enacted into law due to overly lengthy discussions.[251] The current German Employee Inventions Act became effective in 1957, including all five key features.[252] The Act was revised in 1959 to incorporate official guidelines for calculating the amount of inventor remuneration.[253]

It is also interesting to note that in 1963, only a few years after the enactment of the German EIA, the U.S. government published the Kennedy Patent Policy, which was most influential with respect to the Bayh-Dole Act as it recommended all of the key features in that Act's current provisions.[254] Although the Kennedy Patent Policy was never implemented as a government-wide patent policy, many federal agencies adopted their own policies incorporating a few or all of its key features.[255] The key features of the Kennedy Patent Policy survived modification by the Nixon Administration[256] and were finally codified when the Bayh-Dole Act was enacted in 1980.[257]

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[247] O'CONNOR, ET AL., *supra* note 63, at 6.

[248] *Id.* at 6–7 (referring to the Dep't of Justice, Investigation of Government Patents and Practices and Policies, Reports and Recommendations of the Attorney General to President of 1947).

[249] *Id.*

[250] Germany was divided into West Germany (Federal Republic of Germany) and East Germany (German Democratic Republic) over the period between 1949 and 1990. East Germany had its own employee invention system during the period.

[251] HARHOFF & HOISL, *supra* note 75, at 7–9.

[252] *Id.* at 8.

[253] *Id.* at 9.

[254] *See* Memorandum for the Heads of Exec. Dep'ts and Agencies, 28 Fed. Reg. 10943, 10943–46 (Oct. 12, 1963) (listing the provisions proposed for U.S. patent policy).

[255] O'CONNOR, ET AL, *supra* note 63, at 11.

[256] Memorandum for the Heads of Exec. Dep't and Agencies on Gov't Patent Policy, 36 Fed. Reg. 16,887, Aug. 23, 1971.

[257] O'CONNOR, ET AL, *supra* note 63, at 11.

Likewise, all five key features in the German EIA have remained the same since its enactment in 1957.[258] The EIA was recently revised in 2002 and 2009, but these revisions did not significantly affect the key features.[259]

In parallel to the above exercise leading to the Bayh-Dole Act, the U.S Congress also examined a series of bills starting the 1970s[260] followed by the last bill in 1982.[261] Many provisions of these bills are effectively translations of the German EIA. These bills confirm Congress's strong interests in the German EIA, which would have resulted in a clear influence on the overall structure of the Bayh-Dole Act.

2. Ownership Rules Under the German EIA

A) *Fundamental Rule: Inventors as Original Owners*

Under German patent law, a right to patent is initially vested only in the sole inventor or co-inventors who have made creative contributions to the invention.[262] An employer cannot be an inventor or co-inventor unless he or she makes such a contribution. Additionally, only a natural person can make such a contribution; thus, a legal entity cannot be an inventor.[263] This fundamental rule is universal to all branches of intellectual property, including copyright, in the German legal system. There is no "work for hire" exception to the rule as there is in U.S. copyright law.

Because ownership in both German and U.S. patent law always originates from the inventor, an examination of inventorship is a sensible starting point for determining ownership. While patent law applies to determine who is the inventor, unlike U.S. patent law, German patent law plays a very limited role in determining the ownership of an invention before the patent application is filed.[264] In general, the property and contract principles found in the German Civil Codes govern the assignment of property rights, including those in the ownership of an invention.[265] Regarding the ownership of property rights resulting from the performance of duty under an employment contract, German labor and employment law may provide a

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[258] TRIMBORN, *supra* note 19, at 2.

[259] *Id.*; Anja Petersen-Padberg & Markus Georg Müller, *Reform of the German Act on Employees' Inventions as of 1 October 2009: Companies' Rights to Inventions Have Been Expanded*, NEWSLETTER (Hoffman Elite) Feb 17, 2010, at 2, *available at* http://195.30.228.55/media/he_downloads/datei/0/141/HE_Newsletter_05-2009.pdf.

[260] H.R. 1483, 92d Cong. (1971).

[261] Kastenmeier Bill, H.R. 6635, 97th Cong. (1982).

[262] Patentgesetz [PatG] [Patent Act], Dec. 16, 1980, Bundesgesetzblatt [BHBl] at 501, § 6 (Ger.) [hereinafter German Patent Act].

[263] *Id.*

[264] *Id.*; Patent Act, 35 U.S.C. § 102(g) (2006).

[265] KRAßER, PATENTRECHT, § 40(III) (6th ed. 2009).

special rule governing contracts between employers and their employees that reflects public policy regarding the ownership of property rights resulting from the performance of duty under an employment contract.[266] German labor and employment law makes it clear that the fruits of employees' labor belong to their employers.[267] This ownership rule conflicts with the patent law rule, which vests original ownership in inventors. To remove this conflict while achieving the public policies of both patent law and labor and employment law, German legislators enacted the EIA, which governs the assignment of invention ownership rights between employers and employees.[268]

B) *Employers' Rights in Employee Inventions Under the German EIA*

Under the German EIA, the patent law rule that inventors are original owners prevails over the employer-friendly rule of employment law.[269] Thus, the German EIA's rule is perfectly in-line with U.S. law in vesting original ownership rights in employee-inventors.[270] However, the German EIA differs from the U.S. rule by guaranteeing employers a right to claim either the transfer of ownership of employees' inventions or an exclusive license to use those inventions.[271] In other words, the German EIA limits the parties' freedom of contract and makes any contract conflicting with a provision of EIA void.[272]

Due to the mandatory nature of the German EIA, and the strong public policies it reflects, the German EIA clearly defines the scope of inventions that it governs. The Act covers any technical subject matter, regardless of its patentability, as long as it is made by an employee-inventor.[273] Under German employment law, an employee is a person who is bound by instructions on the grounds of an employment relationship and obliged in personal dependence on another, the employer.[274] The technical subject matter that the German EIA governs is classified into inventions and technical improvement proposals.[275] Inventions are distinguished from technical improvement proposals in that inventions qualify for protection under ei-

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[266] *Id.* § 21(I)(a).

[267] BAG [Federal Labour Court] 1961 NJW 1509; BÜRGERLICHES GESETZBACH [BGB] [CIVIL CODE], Jan. 2, 2002, BUNDSGESETZBLATT, TEILI [BGBL.I] 42, §§ 611, 613 (Ger.) [hereinafter German Civil Code].

[268] TRIMBORN, *supra* note 19, at 2.

[269] *See generally* German EIA, *supra* note 19.

[270] German Patent Act, *supra* note 262, § 6; TRIMBORN, *supra* note 19, at 1.

[271] German EIA, *supra* note 19, § 6.

[272] *Id.* § 22.

[273] *Id.* § 1; HARHOFF & HOISL, *supra* note 75, at 9.

[274] TRIMBORN, *supra* note 19, at 12.

[275] German EIA, *supra* note 19, §§ 2–3.

ther German patent law or utility model registration.[276] Subject matter that maybe not the subject of a patent falls into the category of technical improvement proposals and is not subject to various duties relating to patent applications.[277]

Patentable inventions are further classified into two types: service inventions (also known as "tied" inventions) and free inventions.[278] An invention made during a term of employment is a service invention if (1) it resulted from the employee's tasks in the employer's business or public administration, or (2) it is essentially based upon the experience or activities of the employer's business or public administration.[279] Any inventions that do not fall into the definition of service invention are free inventions.[280]

The German EIA guarantees employers the right to claim ownership of all property rights in service inventions.[281] Before the 2009 revision, an employer had to submit a document that met certain formality requirements under the Civil Code.[282] The revision eliminated the formality requirement and made it possible for employers to make a declaration by an e-mail or facsimile.[283] Accordingly, ownership transfer under the German EIA was not automatic; thus, the German EIA was different from the U.S. AEA and NAS Acts, in which assignment of invention ownership rights was automatic as an operation of law. Like an assignment based on the "agree to assign" term in *Stanford,* an assignment under the German EIA is executed only when the inventor's employer exercises its right to claim ownership.[284] This pre-2009 requirement of a written instrument to execute an assignment is also similar to the practice widely adopted by U.S. employers of using "agree to assign" terms in pre-invention assignment contracts.[285]

Failing to exercise the claiming right may forfeit the employer's right in the ownership of service inventions under the German EIA.[286] The EIA lets employee-inventors retain ownership rights and gives freedom to assign ownership to a third-party, including the employer's competitor, if their employers do not exercise their

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[276] *Id.* § 2.

[277] *Id.* § 3.

[278] *Id.* § 4(1).

[279] *Id.* § 4(2).

[280] German EIA, *supra* note 19, § 4(3).

[281] *Id.* § 6(1).

[282] German Civil Code, *supra* note 267, § 126b.

[283] Petersen-Padberg & Müller, *supra* note 259, at 3.

[284] IpVenture, Inc. v. Prostar Computer, Inc., 503 F.3d 1324, 1327 (Fed. Cir. 2007).

[285] *See* Arachnid, Inc. v. Merit Industries, Inc., 939 F.2d 1574, 1576 (Fed. Cir. 1991) (providing an example of an "agree to assign" clause).

[286] German EIA, *supra* note 19, § 8.

claiming rights within the "four months from the receipt of proper report."[287] The 2009 revision remedied this problem by introducing a presumption of employers' proper exercise of their claiming right unless they send out a declaration negating their claim and releasing their rights to the invention within four months of receiving an invention report from the employee.[288] This assumption made the EIA's ownership transfer mechanism complete in terms of protecting employers from loss of their rights in service inventions because of their negligence or ignorance of EIA provisions.

The German EIA further protects employers' rights by voiding any transactions that transferred ownership of a service invention prior to the employer's exercise of its claim if those transactions affect the employer's right.[289] As of the 2009 revision, any prior transactions become void when the four month period for declaring the release of a service invention expires.[290] After an employee submits a report, the employer has two months to request supplemental information for the report.[291] Upon the expiration of this two month period, a report is deemed to be complete and triggers the four month period for declaring the release of the invention. Without a timely declaration of release, all property rights in the ownership of service inventions transfer to the employer.[292]

Although the Bayh-Dole Act adopted the same default rule and claiming right, the Bayh-Dole Act lacked any mechanism to secure the transfer of ownership rights between contractors and their employees. Even though the Act gives contractors a claiming right with respect to their federal funding employer, it provides no express right to claim ownership of inventions made by the contractors' employee-inventors.[293] Whether contractors can secure ownership of such inventions depends on state contract law and special legislation that may limit the enforceability of pre-invention assignments, despite contractors' duties under the current default rule to transfer rights in such inventions to the federal funding agency if contractors do not exercise their right to elect title.

Under the German EIA, the complete ownership transfer mechanism functions only with respect to service inventions. To distinguish free inventions from service inventions, the EIA imposes a duty on employees to prepare a report on all inventions as soon as they complete them, unless such inventions are obviously un-

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[287] *Id.* § 6.

[288] *Id.* § 6(2).

[289] *Id.* § 7.

[290] *Id.* § 6(2).

[291] German EIA *supra* note 19, § 5(3).

[292] *Id.* § 7.

[293] *See generally id.*

related to the employers' business.[294] A report regarding a service invention must include information sufficient to understand and describe the technical problem, its solution, and how the invention was made.[295] To meet this duty, German inventors are required to keep records, similar to those necessary to establish first-to-invent priority under the U.S. patent system.[296]

If an employer decides that an invention is a free invention, the employee does not need to prepare a detailed report showing inventive activities.[297] However, the report must always include sufficient information for the employers to confirm that the nature of the invention is actually outside of the definition of a service invention.[298] Accordingly, the German EIA incorporates language clarifying the scope of inventions that are governed by the mandatory ownership transfer mechanism from employees to employers.

The Bayh-Dole Act also imposes a duty on contractors to disclose each subject invention to the federal funding agency within a reasonable time.[299] However, the scope of inventions under the duty of disclosure is not clear from the definition of "subject invention."[300] The *Stanford* Court interpreted the scope of subject invention to include "those owned by or belonging to the contractor."[301] It follows that contractors fall out of the duty to disclose if they fail to secure ownership of federally funded inventions due to the lack of written assignment or enforceability of such assignment due to the state contract policy.[302] Moreover, the Bayh-Dole Act does not impose any duty of disclosure on contractor employee-inventors , but instead solely relies on contracts between inventors and contractors.[303] Because state law also controls here, it is unclear whether these contracts are enforceable with respect to the same scope of inventions for all contractors' technical employees who might be involved in federally funded research activities.

Under the German EIA, the transfer of ownership rights through exercising a claiming right also results in a variety of obligations on employers. First, the EIA imposes a duty on employers to pay a reasonable remuneration by providing em-

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[294] *Id.* §§ 5(1), 18.

[295] *Id.* § 5(2).

[296] *Id.*

[297] *See* TRIMBORN, *supra* note 19, at 22–24 (providing a general discussion of the duty to report).

[298] German EIA *supra* note 19, § 18(1).

[299] 35 U.S.C. § 201(C)(1) (2006); Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 563 U.S. ___, 131 S. Ct. 2188, 2193 (2011).

[300] 35 U.S.C. § 201(e) (2006).

[301] *Stanford*, 563 U.S. ___, 131 S. Ct. at 2196.

[302] *See supra* Part I.4.

[303] *See* 37 C.F.R. § 401.14(f)(2) (containing a model patent contract included in Bayh-Dole Implementation Regulations that includes a clause to require contractors to impose a duty on their employees, except for clerical and nontechnical employees, to disclose their inventions).

ployees a right to compensation from the transfer of invention ownership to the employers.[304] However, an employee cannot enforce his right unless his employer starts utilizing the patent.[305] The EIA requires employers to take into account multiple factors for calculating compensation.[306] Due to the complexity of considering multiple factors, the EIA recommends consulting with established guidelines for calculating the amount of remuneration.[307]

Second, the EIA imposes a duty on employers to file a German patent or utility model application without delay.[308] Employers are not released from this duty unless their employee-inventors agree to forego the patent application or the employer protects the invention as a trade secret.[309] However, employers can only choose the latter option if they inform the employee-inventor of their decision to use trade secret protection while acknowledging patentability of the disclosed invention under German patent or utility model law.[310] If an employer fails to file a patent application within a reasonable time, the EIA authorizes employees to file applications under the name of the employer at the expense of the employer.[311] However, the Act does not give an option that allows employees to file applications in their own names even if their employers fail to file an application.[312]

Third, the EIA provides a right for employers to file foreign applications based on ownership of inventions acquired through claiming rights in employee inventions.[313] However, that right functions to impose a duty on employers to file foreign applications. Otherwise, the employees can request a release to file foreign applications on their own, if the employers are not interested.[314] Employers must inform their employees of their intent to release foreign applications early enough to allow employees to file an application within the priority period under the Paris Convention.[315] Although it is very unlikely that employees are interested in securing patents in foreign countries where their employers are not interested in exploiting the invention, if an employee-inventor does file and secure a patent in a foreign country, the resulting rights and licenses may be assigned and granted to any per-

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[304] German EIA, *supra* note 19, § 9(1).

[305] REITZLE, ET AL., *supra* note 19, § 9.

[306] German EIA *supra* note 19, § 9(2).

[307] *Id.* § 11.

[308] *Id.* § 13.

[309] *Id.* § 13(2).

[310] *Id.* § 17(1).

[311] German EIA, *supra* note 19, § 13(3).

[312] *See id.* (providing employee rights but not the right to file in one's own name).

[313] *Id.* § 14(1).

[314] *Id.* § 14(2).

[315] Paris Convention for the Protection of Industrial Property art. 4, Mar. 20, 1883, 24 U.S.T. 2140.

son, including the employer's competitors. For equity purposes, the EIA provides a compulsory license for the employer if its employee obtains a foreign patent on the employee's invention.[316]

Fourth, the EIA imposes a duty on employers to communicate with employee-inventors regarding patent prosecution.[317] This communication is particularly critical if the employer decides to abandon a patent application or patent right, which subsequently gives rise to employees' right to continue the patent application or maintain the patent right.[318] To avoid this cumbersome duty, employers in major German companies often offer a lump-sum payment to their employees to compensate for waiving this communication right.[319]

The Bayh-Dole Act imposes similar obligations on contractors when they elect to retain rights in the ownership of federally funded inventions.[320] However, the Bayh-Dole Act does not include a mechanism to effectively enforce these obligations. For example, the Act requires non-profit organizations to compensate employee-inventors through royalty sharing.[321] The Act provides neither methods of calculation nor sanctions for violations. Because the Act gives broad discretion to contractors-employers, it is very difficult for inventors to dispute their share of royalties.

The Bayh-Dole Act also requires contractors to file domestic and foreign patent applications prior to any statutory bar date.[322] The Act provides a sanction for failing to meet this requirement, but that sanction is simply to return ownership of the invention to the federal agency so that that agency can file a patent application.[323] Bayh-Dole regulations require elections to retain rights to be made 60 days prior to the date of the statutory bar; however, the Act does not require that there be notice to the agency with respect to a patent application.[324] Without any notice, it is very unlikely that the federal agency would discover the contractor's failure to file a patent application early enough to prepare a patent application on its own and file it prior to a statutory bar date. Even if the federal agency discovers the violation, it

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[316] German EIA, *supra* note 19, § 14(3).

[317] *Id.* § 15.

[318] *Id.* § 16.

[319] *See* TRIMBORN, *supra* note 19, at 31 (explaining that in general German companies pay 50 to 300 euros for buying out the rights of foreign patent applications and the rights of patent prosecution communication).

[320] 35 U.S.C.§ 202(c) (2006).

[321] *Id.* § 202(c)(7).

[322] *Id.* § 202(c)(3).

[323] *Id.*

[324] Standard Patent Rights Clauses, 37 C.F.R. § 401.14 (c)(2).

is unlikely that the agency would file a patent application because federal agencies are very reluctant to interfere with contractors' technology transfer activities.[325]

Finally, the Bayh-Dole Act does not create any duty on the part of either the federal government or contractors to communicate with inventors about a patent filing or prosecution of their inventions. There is no mechanism for inventors to exercise their rights and request to retain ownership of inventions if their employers choose not to file for patent protection.[326] If a patent application is not filed, inventors are deprived of their rights for compensation from the transfer of invention ownership, even if contractors elect to retain title of their inventions.

In contrast, the German EIA incorporates a mechanism to protect employees' compensation rights by allowing them to file domestic and foreign patent applications in a timely fashion if their employers fail to file a patent application.[327] Since these rights of compensation are supported by employers' ownership of exclusive rights to practice the invention, employees do not have any compensation right unless a patent application is filed. The EIA further protects employees' compensation rights by giving them opportunities to continue prosecution and maintain patents if their employers decide to abandon a patent application or patent right.[328] Employees lose their rights to compensation if a patent application does not result in a patent grant or a granted patent is invalidated. The EIA is based on the clear principle that in the absence of compensation, ownership should be returned to employees, because there is no longer justification for employers to retain ownership.

The Bayh-Dole Act includes none of these mechanisms that guarantee inventors' rights to compensation. Since contractors' technology transfer offices for many non-profit organizations are understaffed, many inventors are frustrated with delays in filing patent applications and loss of patent rights. Moreover, *Stanford* forces these contractors to adopt the practice of using contract terms to trigger assignments as soon as inventions are completed. Such practice should substantially increase the number of inventions that contractors secure through pre-invention assignments.[329] It is impossible for contractors to file applications for all inventions. Federal agencies obtain ownership in many of these inventions because contractors either refrain from electing to retain title or violate the duty of timely filing.[330] It is

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[325] Richard Li-Dar Wang, *Biomedical Upstream Patenting and Scientific Research: The Case for Compulsory Licenses Bearing Reach-Through Royalties,* 10 YALE J.L. & TECH. 251, 309 (2008).

[326] 35 U.S.C. § 202(d) (2006).

[327] German EIA *supra* note 19, § 14(1)(2).

[328] *Id.* § 16.

[329] Hogan Lovells, Stanford v. Roche: *Highlighting the Importance of Best Practices for Employee Assignments*, Intellectual Property Report (Apr. 21, 2011), *available at* http://ehoganlovells.com/ve/a918luVr9198Ztc/vT=1.

[330] Bayh-Dole Act, 35 U.S.C. § 202(c)(2)(3) (2006).

very unlikely that the agencies would file patent applications for such inventions prior to the statutory bar dates.

IV. Finding the Missing Piece of the Puzzle: Making the Bayh-Dole Act Complete

1. Adoption of Ownership Transfer Mechanism Under the German EIA

Unlike the ownership transfer mechanisms under the AEA and NAS Acts, the ownership transfer mechanism under the German EIA does not increase the administrative burden of the USPTO or applicants. The mechanism fits well within the Bayh-Dole Act because it was examined by Congress for adoption in the 1970s and 1980s and the German EIA and Bayh-Dole share common features for allocating ownership.[331] It is unlikely that U.S. industries and the legal community would oppose introducing the EIA ownership transfer mechanism because the introduction of the mechanism was not a factor that caused the past bills to be rejected by Congress; the bills failed because of opposition to imposing a duty on employers to pay a mandatory compensation.[332] Industry representatives criticized the mandatory compensation as being unfair to employers and impossible to administer.[333]

Adopting an ownership transfer mechanism in the Bayh-Dole Act should be relatively simple and easy. The current Bayh-Dole provision for contractors' rights to retain title of federally funded inventions[334] is textually very similar to the German EIA provision protecting employers' claiming rights.[335] Thus, the Bayh-Dole Act can be revised to clarify that an employee-inventor's ownership rights to any subject invention automatically transfers to the employer-contractor when the contractor elects to retain title in the invention under the current provision.[336] At this time, the Act only requires contractors to send written election notice to the federal funding agency.[337] This written notice executes a contractor's right to retain title to a subject invention when received by the federal agency unless one of the exceptions allows the agency to receive title of the invention.[338] The current provision can be revised to require contractors sending notice to employee-inventors to exe-

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[331] *See supra* Part I.2.

[332] Dratler, *supra* note 68, at 184 n.204.

[333] *Id.*

[334] 35 U.S.C. § 202(a) (2006) ("Each nonprofit organization or small business firm may, within a reasonable time after disclosure as required by paragraph (c)(1) of this section, elect to retain title to any subject invention . . . .").

[335] German EIA, *supra* note 19, §6 ([1] The employer can claim the right to a service invention on an unrestricted or restricted basis. [2] The claiming of right occurs by written declaration to the employee. The declaration shall be submitted as soon as possible, and no later than four months from the receipt of the proper report.).

[336] 35 U.S.C. § 202(a).

[337] *Id.* § 202(c)(2).

[338] *Id.* § 201(a).

cute transfers of the ownership of subject inventions upon the receipt of notice by the employee-inventor.

To clarify the effect of an employer's election to retain ownership of an invention, Congress may recycle a provision from the employee invention bills, modeled after the German EIA, and prevent inventors from assigning their inventions to third-parties.[339] Such a provision would make it clear that a contractor's right to elect to retain title of federally funded inventions cannot be terminated unilaterally by an inventor through separate agreements to assign the ownership of his invention to third-parties during the statutory two year period in which contractors are required to elect title of the inventions.[340] This would give priority to contractors' election rights over any other rights arising from private contracts and prevent inventors from assigning their inventions to third-parties. Once the statutory time period expires without a contractor's exercise of its election right, inventors should retain ownership of the invention and be free to assign such ownership to third-parties for commercialization. The current Bayh-Dole Act provides inventors a right to request retention of invention ownership from federal agencies[341] and such requests must be granted unless the agency itself files a patent application within a reasonable time and prosecutes the application for commercialization.

For the mechanism to function effectively, the Bayh-Dole Act should be revised to clarify the scope of subject inventions in which the ownership is transferred by contractor's election. The *Stanford* majority's decision that "subject inventions" excludes inventions that contractors failed to secure because of contract drafting traps or limitations on state legislation undermines the Act's basic objective for implementing a uniform federal policy and conflicts with Congress' intent to incorporate a mandatory compensation provision into the Bayh-Dole Act for non-profit organizations.[342] It is likely that Congress included the mandatory compensation provision—despite strong criticism, a major reason for the failed bills—because it viewed the provision as necessary to justify taking invention ownership through contractors from inventors. The definition of subject inventions must be revised to include all inventions made by contractors' employees so that contractors can secure ownership of such inventions through the ownership transfer mechanism.

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[339] H.R. 5605 § 412(b)(c) (1975) ("Any disposition of a service invention by the employee prior to the time of the declaration of a claim by the employer which impair the employer's rights under this section is invalid to the extent that it impairs such rights."); German EIA, *supra* note 19, § 7.

[340] 35 U.S.C. § 202(c)(2); Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 563 U.S. ___, 131 S. Ct. 2188, 2200–01 (2011). (Breyer, J., dissenting) (asserting that the current Bayh-Dole Act also guarantees the priority of contractors' election right over any rights arising from private contracts).

[341] 35 U.S.C. § 202(d) (2006).

[342] *Id.* § 202(c)(7).

Moreover, Congress could use the mandatory compensation provision to endorse contractors securing ownership of inventions made by inventors outside the employment relationship. Congress may have assumed a pre-invention assignment between contractors and their employees, including faculty members and students who do not fall into the category of hired-to-invent, and provided the mandatory compensation to justify employers taking ownership of those inventions, regardless of the common law. However, it may not have anticipated today's research environment where researchers inter-flow beyond the rational notion of a single legal entity and interact with students throughout the invention process.[343] Obviously, the *Stanford* Court rejected such a broad scope of invention to be governed by the Bayh-Dole Act when it excluded from "subject invention" an invention which was conceived and reduced to practice when the inventor was not an employee of a contractor or when the inventor received an insignificant amount of federal funding toward the invention.[344] However, such a restrictive interpretation of subject inventions will exclude many inventions which the federal government funded and which should be under the Bayh-Dole conditions and restrictions to promote special public interests for commercialization. To reflect the research environment resulting from academic-industry collaboration, Congress should consider applying the Bayh-Dole Act to any inventions resulting from the performance of work under a funding agreement or the Bayh-Dole Act by revising the definition of subject invention to include any invention made by any inventor, regardless of employment status, as long as the invention resulted from the performance of work under a funding agreement.

To ensure that such inventions are subjected to the ownership transfer mechanism, the revised Bayh-Dole Act must require any inventors involved in federally funded research to disclose their inventions.[345] It is not sufficient to impose such duties through contracts between contractors and inventors because inventors may not be employees. Further, state contract laws may prevent enforcement of the disclosure duty for non-employees.

The *Stanford* Court indicated a concern over the lack of procedures for protecting rights of inventors and third-parties that have been involved in federally funded research but did not receive funds from a federal agency.[346] To address a

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[343] Reder, *supra* note 6, at 17 (noting that in academic-industry collaborations, employee status of researchers is often unclear because many of them work as consultants, temporary staffs, interns and contract workers).

[344] *Stanford*, 563 U.S. ___, 131 S. Ct. at 2198.

[345] It can use provisions from the past bills with respect to the content and procedures for disclosing subject inventions. H.R. 5605 § 411(a) (1975) ("An employee who has made a service invention must give written notice of the service invention to his employer without undue delay...."). However, the definition of employee must be expanded to reflect the modern research environment at universities.

[346] Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 563 U.S. ___, 131 S. Ct. 2188, 2198 (2011).

similar concerns over disputes between inventors and their employers with respect to the scope of inventions that employers can claim through transfer of the ownership, the past employee invention bills incorporated judicial review and arbitration at the USPTO.[347] The Bayh-Dole Act may be revised to include these procedures to protect the interests of inventors and third-parties. For employers of visiting researchers who used federal funding and received ownership of invention, the common law rules guarantee a shop right, which will give employers bargaining power to negotiate with the researchers for an exclusive license.

2. Adoption of Compensation Right Protection Mechanism Under the German EIA

The Bayh-Dole Act should also be revised to adopt a mechanism similar to the one found in the German EIA that would protect employee-inventor's rights for compensation by allowing employee-inventors to file patent applications if their employer-contractors fail to file. Guaranteeing compensation to employee-inventors is essential for securing the ownership of all federally funded inventions. Since the term "subject invention" should be redefined to include all inventions made by any researchers who engage in the research with federal funding, the scope of subject inventions under the new definition would be much broader than the scope of inventions suggested by the *Stanford* Court[348] or covered by the common law and state contract laws, both of which allow automatic transfer of invention ownership upon the completion of invention, regardless of express assignment agreements.[349] The Bayh-Dole Act's strong federal policy of promoting important public interests justifies such takings regardless of inventors' employment status,[350] while the Fifth Amendment requires the federal government to compensate inventors.[351] Accordingly, the Act provides inventors a right of compensation when the ownership of invention is transferred to their employer-contractors.

However, the current Bayh-Dole Act is incomplete because it lacks a mechanism to protect inventors' right to compensation. The Act only allows inventors to exercise their rights to compensation if contractors license their employee-inventor's inventions and receive royalty revenues.[352] If contractors elect to retain title in an invention but fail to file a patent application, employees' rights to compensation are effectively eliminated. Without compensation, neither the federal agency nor the employer-contractor have justification for receiving ownership of

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[347] H.R. 5605 §§ 435–36 (1975).

[348] *Stanford*, 563 U.S. ___, 131 S. Ct. at 2198–99.

[349] *See supra* Part I.3–4.

[350] *See Stanford*, 563 U.S. ___, 131 S. Ct. at 2201 (Breyer, J., dissenting) (emphasizing important public interests the Bayh-Dole Act aims to promote).

[351] U.S. CONST. amend. V.

[352] 35 U.S.C. § 201(c)(7)(B) (2006).

inventions from inventors who did not have a chance to bargain for the ownership of their inventions and failed to receive salaries reflecting compensation for such.

Thus, the Bayh-Dole Act should be revised to impose a duty on contractors to send notice to the relevant federal agencies, as well as the employee-inventors when patent applications are filed with the USPTO. As provided in the German EIA,[353] if an employee does not receive notice that the employer is pursuing a patent application within a reasonable time after the employer has elected to retain title of the invention, the employee should be able to file a patent application on behalf of the contractor. A similar mechanism should be also incorporated with respect to foreign patent applications.

Contractors may have concerns over the costs of reimbursing inventors for filing. However, such costs would be marginal and basically involve the cost of a provisional application if the patent application is abandoned before any additional costs are incurred. To allow employee-inventors to continue the patent prosecution, the Bayh-Dole Act should be revised to give ownership of inventions back to inventors if neither the federal agency nor the contractor is interested in prosecuting patents, as provided in the German EIA.[354] Ownership should be returned to the employee-inventor if the contractor wants to abandon the patent. Once the patent prosecution or patent is abandoned, the government and contractors lose justification for retaining ownership because employee-inventor's rights of compensation are eliminated. Thus, if inventors are interested in pursuing patent prosecution and commercializing their own inventions, the ownership of invention should be returned to the employee-inventor. However, the government should retain rights to use the invention and "March-in Rights" once the employee obtains patents as provided in the current provision.[355] If inventors are willing to invest their time and money to successfully commercialize the invention, this mechanism will contribute to the goals of the Bayh-Dole Act instead of wasting all of the efforts and investments already made by the government and contractors.

Conclusion

While the *Stanford* Court's interpretation of the Bayh-Dole Act is technically correct, it is—as the dissent points out—inconsistent with the Act's basic purpose. *Stanford* highlights a serious flaw in the current Act. Under the current system, Stanford could not have avoided the result even if the inventor had executed an assignment contract with the private firm prior to its own assignment contract. U.S. courts should have given priority to the private firm. As illustrated in *Stanford*, it is difficult for a university to argue that it was a bona fide purchaser if the private firm is a research partner and the university is aware of the collaboration. The Act

[353] German EIA, *supra* note 19, §13.

[354] *Id.* § 16.

[355] 35 U.S.C. § 202(d) (2006).

should adopt a mechanism from the German EIA that allows contractors to secure ownership of federally funded inventions.

Such mechanisms will avoid a result that Congress did not intend: many federally funded inventions falling outside the scope of the Bayh-Dole Act due to contractors' failures to secure ownership of such inventions. Instead, contractor-employers would be able to secure ownership of federally funded inventions automatically from inventors when they elect to retain title. The mechanism effectively prevents inventors from lawfully assigning the ownership of federally funded inventions to third-parties. The Bayh-Dole Act should also be revised to protect inventors' rights to compensation so that the government can take the ownership of federally funded inventions from its contractors with just compensation.

Moreover, the Act should be revised to expand the scope of "subject invention" to include any invention resulting from federally funded research, regardless of the inventor's employment status with the contractors. In today's academic-industry collaborative research environment, researchers move from one institution to another with informal employment statuses. Unless the government can reach out to those inventions made by inventors without any formal employment contract, it cannot implement a uniform policy for federally funded inventions. Strong public interests involved in the Bayh-Dole Act should justify the government reaching out to all inventors involved in federally funded research while guaranteeing compensation with the inventors through royalty sharing.

The Sine Qua Non of Copyright is Uniqueness, not Originality

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I. Introduction

The 1976 Copyright Act limits copyright to "original works of authorship."[1] The Supreme Court tells us that originality is the *sine qua non* of copyright[2] and that it has two components: independent creation by the author and a modicum of creativity.[3] I argue that uniqueness is the true *sine qua non* of copyright and that the two components are rough heuristics for uniqueness. When we focus directly on uniqueness, many puzzles melt away. More melt away when we supplement uniqueness with a dominance principle, which limits protection for a work whose social value is due largely to inputs from parties other than the work's author.

A. Select Puzzles in Copyright Doctrine

1. *Curious Features of the Limiting Doctrines*

A student of copyright may notice three curious features of the limiting doctrines. The first is their large number. A non-exhaustive list includes the idea-expression dichotomy, fact-expression dichotomy, merger doctrine, useful article doctrine, *scènes à faire*, and regulations against protecting names, titles, single words and short phrases, blank forms, familiar shapes and designs, simple dance steps, and government works.

The second curious feature of the limiting doctrines is their mutual overlap.[4] Cases that involve a limiting doctrine implicate more than one. For example, the

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[1] 17 U.S.C. § 102(a) (2006).

[2] Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 345 (1991). *See also* L. Batlin & Son, Inc. v. Snyder, 536 F.2d 486, 489–90 (2d Cir. 1976) (quoting 1 MELVILLE B. NIMMER & DAVID NIMMER, THE LAW OF COPYRIGHT §10, at 32 (1975)) ("[T]he one pervading . . . prerequisite to copyright protection' . . . is the requirement of originality–that the work be the original product of the claimant.").

[3] *Feist*, 499 U.S. at 346.

[4] *See, e.g.*, Dymow v. Bolton, 11 F.2d 690 (2d Cir. 1926) (equating idea-expression dichotomy with merger); Whelan Assoc., Inc. v. Jaslow Dental Lab., Inc., 797 F.2d 1222, 1236 (3d Cir. 1986) (equating idea-expression dichotomy both with merger and with useful article doctrine); Edward Samuels, *The Idea-Expression Dichotomy in Copyright Law*, 56 TENN. L. REV. 321, 386 (1989) ("[S]ome of the cases which have held that *scènes à faire*... are not copyrightable based their reasoning upon the theory that the expression of stock scenes is merged with their idea."); *id.* at 440 (useful article doctrine "might be viewed as a subset of a more generalized idea-expression dichotomy"); Alan L. Durham, *Speaking of the World: Fact, Opinion and the Originality Standard of Copyright*, *in* INTELLECTUAL PROPERTY PROTECTION OF FACT-BASED WORKS: COPYRIGHT AND ITS ALTERNATIVES 133, 142 (Robert F. Brauneis ed., 2009) (mentioning that courts sometimes treat idea-expression and fact-expression dichotomies as a unitary principle); Richard H. Jones, *The Myth of the Idea/Expression Dichotomy in Copyright Law*, 10 PACE L. REV. 551, 570 n.100 (1990) (listing cases relating *scènes à faire* doctrine to idea-expression dichotomy); Thomas M. Byron, *Tying Up Feist's Loose Ends: A Probability Theory of Copyrightable Creativity*, 7 WAKE FOREST INTELL. PROP. L. J. 45, 51 (2006) ("Like merger, *scènes à faire* is predicated on the limited number of permutations that a work may assume within its general genre."); Justin Hughes, *Created Facts and Their Awkward Place in Copyright Law*, *in* INTELLECTUAL PROPERTY PROTECTION OF FACT-BASED WORKS: COPYRIGHT AND ITS ALTERNATIVES

famous case of *Baker v. Selden*[5] implicates at least the idea-expression dichotomy,[6] merger doctrine,[7] useful article doctrine,[8] and the blank forms doctrine.[9] Likewise, the well-known case of *Brandir v. Cascade* implicates at least the idea-expression dichotomy, merger doctrine, useful article doctrine, and the bar against copyrighting familiar symbols and designs.[10]

The third curious feature of the limiting doctrines is that they overlap both the threshold requirement of originality[11] and the infringement standard of substantial similarity,[12] which also overlap each other.[13]

186, 194 (Robert F. Brauneis ed., 2009) (arguing that when judges and copyright scholars say facts are not protected, they are subconsciously applying merger doctrine).

[5] Baker v. Selden, 101 U.S. 99 (1880).

[6] *See, e.g.*, Mazer v. Stein, 347 U.S. 201, 217 (1954) (characterizing *Baker v. Selden* as standing for idea-expression dichotomy); Samuels, *supra* note 4, at 326 ("The idea-expression dichotomy in America is said to have originated in the United States Supreme Court case of *Baker v. Selden*.").

[7] *See, e.g.*, *Baker*, 101 U.S. at 103 ("[W]here the art [that P's book] teaches cannot be used without employing the methods and diagrams used to illustrate the book, or such as are similar to them, such methods and diagrams are to be considered as necessary incidents to the art, and given therewith to the public."); Samuels, *supra* note 4, at 329 ("The Court in *Baker* invoked a merger theory by focusing upon the utilitarian or practical nature of the original work."). *See also* WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW 97–104 (2003) (discussing *Baker v. Selden* in context of merger, idea-expression dichotomy, and fact-expression dichotomy); Miriam Bitton, *Feist, Facts and Functions: Historical Perspective*, *in* INTELLECTUAL PROPERTY PROTECTION OF FACT-BASED WORKS: COPYRIGHT AND ITS ALTERNATIVES 3, 16 (Robert F. Brauneis ed., 2009) ("*Baker v Selden* represents the beginning of the modern fact/expression dichotomy.").

[8] *Cf. Whelan Assocs., Inc.*, 797 F.2d at 1236 (with reference to *Baker*, equating idea-expression dichotomy both with merger doctrine and with useful article doctrine); Durham, *supra* note 4, at 147 (*Baker* gave rise to a "process-expression dichotomy").

[9] *Baker*, 101 U.S. at 107 ("[B]lank account books are not the subject of copyright . . . ."); ROGER E. SCHECHTER & JOHN R. THOMAS, PRINCIPLES OF COPYRIGHT LAW 45 (West 2010) ("*Baker* is also considered to be the genesis for the prevailing rule today that blank forms are not copyrightable subject matter.").

[10] Brandir Int'l, Inc. v. Cascade Pac. Lumber Co., 834 F.2d 1142 (2d Cir. 1987).

[11] *See* Samuels, *supra* note 4, at 386 ("[S]ome of the cases which have held that *scènes à faire* . . . are not copyrightable based their reasoning upon the theory that the expression of stock scenes is merged with their idea. A better analysis would be that the stock treatments are not original . . . ."); *id.* at 427–28 ("Some of the originality cases contain language that also refers to the idea-expression dichotomy. Other originality cases seem to be based upon a purpose that overlaps with the purpose of the idea-expression dichotomy.") (footnotes omitted); *id.* at 437–38 (some of the works in Copyright Office's list of unprotectable works seem to lack sufficient originality, some seem to be works of utility, some seem to be ideas rather than expression, and some seem to be de minimis works); Jones, *supra* note 4, at 597 ("Short phrases, general plots and themes, *scènes à faire*, and other unprotectible expressions are generally unprotectible precisely because they usually do not evidence an original or creative writing."); *id.* ("The merger doctrine is invoked only with an uncreative statement or representation of an idea or fact."); *id.* at 598 ("Factual works are less open to protection only because they usually do not exhibit the requisite originality and creativity of expression."); CRAIG JOYCE, ET AL., COPYRIGHT LAW 122 (8th ed. 2010) ("Although it is sometimes viewed as a doctrine relating the *scope* of copyright protection, the idea/expression dichotomy has significant implications for the analysis of *copyrightability* in general (and *originality* in particular)."); *id.* at 131 ("[N]ot infrequently, the [merger] doctrine has been applied by a court simply as a convenient way to administer the *coup de grace*

2. *Dubious Assertions about Creativity*

A student of copyright may also notice strained claims about creativity. The courts tell us, for example, that raw footage of an event is creative enough for copy-

against protection for a work exhibiting *dubious* originality."); Michael Steven Green, *Copyrighting Facts*, 78 IND. L. J. 919, 939 (2003) ("Many copyright cases that appeal to the idea/expression distinction could have been decided on the basis of a lack of [P's] independent creation."). *See also* Sid & Marty Krofft Television Prods., Inc. v. McDonald's Corp., 562 F.2d 1157, 1168 (9th Cir. 1977) (suggesting that the more original P's work, the less likely the idea behind it will merge with its expression); Leslie A. Kurtz, *Speaking to the Ghost: Idea and Expression in Copyright*, 47 U. MIAMI L. REV. 1221, 1255–60 (1993) (arguing that simple, unprotectable ideas are unoriginal because they are derived from experience and direct impressions of world surrounding author); *id.* at 1248 n.159 (ideas unprotected in cases are trite); Edward C. Wilde, *Replacing the Idea/Expression Metaphor with a Market-Based Analysis in Copyright Infringement Actions*, 16 WHITTIER L. REV. 793, 802 (1995) (purpose of idea-expression "metaphor" is to distinguish between common and original).

[12] *See* 1 MELVILLE B. NIMMER, NIMMER ON COPYRIGHT § 2.03 [D] (1988) (The distinction between idea and expression is "not so much a limitation on the copyrightability of works, as it is a measure of the degree of similarity that must exist between a copyrightable work and an unauthorized copy, in order to constitute the latter an infringement.") (footnotes omitted); Samuels, *supra* note 4, at 330, 407–13, 419–20; *id.* at 409 ("Probably the greatest number of cases that are improperly or unnecessarily described as idea-expression cases actually deal with, or could have been decided on the basis of, substantial similarity (or lack of substantial similarity) between two works."); *id.* at 442 n.540 ("Many cases that appear to stand for the proposition that systems are not copyrightable depend to some extent, or could have been decided, on the basis of nonsimilarity."); Jones, *supra* note 4, at 576–78 (explaining merger is a matter of degree; scope of protection tracks variety of alternative expressions available); WILLIAM PATRY, PATRY ON COPYRIGHT § 4.42 (2010) (like *scènes à faire*, merger, if applied at all, should be applied at infringement stage). *See also* Apple Computer, Inc. v. Microsoft Corp., 35 F.3d 1435, 1444 (9th Cir. 1994) ("[W]hen an idea and its expression are indistinguishable, or 'merged,' the expression will only be protected against nearly identical copying."); Reyher v. Children's Television Workshop, 533 F.2d 87, 90–91 (2d Cir. 1976), (combining language of merger, idea-expression, and *scènes à faire* with substantial similarity); Herbert Rosenthal Jewelry Corp. v. Kalpakian, 446 F.2d 738, 740–42 (9th Cir. 1971) (combining language of merger, idea-expression, and substantial similarity).

[13] *See* Jones, *supra* note 4, at 601–02 ("The more markedly creative an expression is, the less of it that needs to be taken to find infringement."); *id.* at 586 ("Saying that an alleged infringer did not take the expression of Mickey Mouse but took only the idea of a cartoon mouse is a jargon-filled and confusing way of stating that the alleged infringer's drawing of a mouse does not capture the particular creativity embodied in Mickey Mouse."); Henkel KgaA v. Holdfast New Zealand Ltd., [2006] NZSC 102 ("In general terms the greater the originality, the wider will be the scope of the protection which copyright affords and vice versa."); John Shepard Wiley, Jr., *Copyright at the School of Patent*, 58 U. CHI. L. REV. 119 (1991) (three central elements of copyright doctrine–originality, idea-expression dichotomy, and infringement standards–are closely related placeholders for other considerations). *See also* Hart v. Dan Chase Taxidermy Supply Co., 86 F.3d 320, 322 (2d Cir. 1996) (Calabresi, J.) ("[T]he merger inquiry asks whether *all* realistic fish mannequins . . . will necessarily be 'substantially similar.' And only if this is so, is there no unique expression to protect under the copyright laws."); Crume v. Pac. Mut. Life Ins. Co., 140 F.2d 182, 183 (7th Cir.1944) (remarking that matter of infringement is closely related to, if not actually dependent upon, extent of protection to which plaintiff is entitled); Durham Indus., Inc. v. Tomy Corp., 630 F.2d 905, 908–15 (2d Cir. 1980) (basing holdings of unprotectability for some of P's toys on lack of originality, for others on lack of substantial similarity, and for others under useful article doctrine); Robert A. Gorman, *Fact or Fancy? The Implications for Copyright*, 29 J. COPYRIGHT SOC'Y 560, 560–61 (1982) (describing idea-expression dichotomy, substantial similarity, and fair use, and stating "[a]lthough there is a natural temptation to think of the three stages of copyright analysis–copyrightability, infringement, and defenses of privilege–as watertight compartments, they are not; there is a common substratum of social policy under all three of these issues").

right even if captured by a bystander or planted camera—[14] despite the fact that such footage seems wholly uncreative under the lay standard of creativity.[15] Also, the courts insist both that creativity is absolutely essential and that a tiny amount will suffice.[16] Why are they so confident that creativity is absolutely essential if a tiny amount will suffice, and why are they so confident that a tiny amount will suffice if creativity is absolutely essential?[17]

Also puzzling are the cases in which courts not only protect a work of dubious creativity, but they protect it robustly. They robustly protect raw footage of an event though it not only seems devoid of creativity under the lay standard but also barely meets the very lax standard courts purport to use. The mismatch—between the robust protection for such footage and its (at best) minimal creativity—seems to belie the common notion that the degree of protection tracks the degree of creativity.

This mismatch also belies the common notion that the degree of protection tracks the degree to which the work is fact-based. Courts and commentators say that work at copyright's core (such as fiction) is more protected than work at copy-

[14] *See, e.g.*, Time, Inc. v. Bernard Geis Assocs., 293 F. Supp. 130 (S.D.N.Y. 1987) (footage of Kennedy assassination captured by bystander's planted camera is copyrightable); L.A. News Serv. v. KCAL-TV Channel 9, 108 F.3d 1119 (9th Cir 1997) (footage of beating of Reginald Denny during Los Angeles riots protected); L.A. News Serv. v. Reuters Television Int'l, Inc., 149 F.3d 987 (9th Cir. 1998) (footage of Denny beating protected); L.A. News Serv. v. Tullo, 973 F.2d 791 (9th Cir. 1992) (footage of train wreck and plane crash protected); Hyde Park Residence Ltd v. Yelland & Others, [2000] EWCA (Civ) 37 (U.K.) (images captured by automated security camera protected; publication in newspaper not fair use). *See also* David McGowan, *Copyright and Convergence: A Pragmatic Perspective*, *in* INTELLECTUAL PROPERTY PROTECTION OF FACT-BASED WORKS: COPYRIGHT AND ITS ALTERNATIVES 233, 237 (Robert F. Brauneis ed., 2009) (asserting courts would protect footage of Rodney King beating captured by bystander George Holliday); *id.* at 246 ("At some point, we will have an iconic picture taken with a phone camera that gives its owner no choices to speak of at all; courts will still grant the owner rights.").

[15] *Id.* at 240 ("Many famous tapes [of spontaneous news events] involve nothing that deserves to be called creative at all, even in a trivial, *Feist*-ian sense."); *id.* at 243–44 (discussing non-creative acts of those who captured footage of Kennedy assassination, Denny beating, and King beating); *id.* at 246 (The choices courts point to as sources of originality are "window-dressing," and "the truth of the matter is that the originality requirement does not apply to camera operators [in these cases]."). *Cf.* Jewelers' Circular Pub. Co. v. Keystone Pub. Co., 274 F. 932, 934 (S.D.N.Y. 1921) (Hand, J.) (positing that any photo is affected by personality but that, even if a photo were not, it would still be protected because personality is not a constitutionally mandated prerequisite for copyright protection).

[16] Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 345 (1991) ("To be sure, the requisite level of creativity is extremely low; even a slight amount will suffice."); *id.* at 359 ("There remains a narrow category of works in which the creative spark is utterly lacking or so trivial as to be virtually nonexistent."); CMM Cable Rep. Inc. v. Ocean Coast Props., Inc., 97 F.3d 1504, 1516 (1st Cir. 1996) ("[T]he threshold of creativity . . . is very slight.").

[17] *See* McGowan, *supra* note 14, at 257 ("[T]he claim that creativity is a constitutional mandate seems hollow. What kind of constitutional mandate is it that makes courts announce a doctrine, only to proclaim in the next breath that we should not worry about it too much because in reality it has almost no teeth at all (as all courts do)?").

right's periphery (such as fact-based work).[18] But footage of an event is fact-based work: it faithfully records historical fact, it accurately documents the state of the world that existed at a certain time and place. The same is true of still photographs of events, which courts likewise protect robustly.

3. *Inconsistent Assertions about Novelty*

Another curiosity is the inconsistency in the cases and commentary with respect to whether a work must be novel to be copyrighted. Many courts say a work need not be at all novel.[19] Some say a work need not be especially novel.[20] At other times, courts in both camps say or hold that a work must be readily distinguishable from prior work, whether still under copyright or in the public domain,[21] which

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[18] *See, e.g.*, *Feist*, 499 U.S. at 349 ("[C]opyright in a factual compilation is thin."); *Robert A. Gorman, Copyright Courts and Aesthetic Judgments: Abuse or Necessity?*, 25 COLUM. J.L. & ARTS 1, 19 (2001) (courts routinely grant thin copyright protection for maps and functional works); Jacobsen v. Deseret Book Co., 287 F.3d 936, 944 (10th Cir. 2002) ("Because fact-based works differ 'as to the relative proportion of fact and fancy' [ranging from 'sparsely embellished maps and directories' to 'elegantly written biography'], the quantum of similarity required to establish infringement differs in each case."); A.A. Hoehling v. Universal City Studios, Inc., 618 F.2d 972, 974 (2d Cir. 1980) ("[T]he protection afforded the copyright holder has never extended to history, be it documented fact or explanatory hypothesis."). *But see* Matthew Sag, *Predicting Fair Use* (Aug. 12, 2011) (working paper), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1769130 (finding no evidence that a borrower of fact-based work is more likely to prevail under fair use than a borrower of fictional work).

[19] *See, e.g.*, *Feist*, 499 U.S. at 345 ("Originality does not signify novelty . . . ."); Baker v. Selden, 101 U.S. 99, 102 (1880) ("The copyright of the book, if not pirated from other works, would be valid without regard to the novelty, or want of novelty, of its subject-matter."); Johnson v. Donaldson, 3 F. 22, 24 (Cir. Ct., S.D. N.Y. 1880) ("If each of two persons should compose a poem identically alike . . . copyright would protect each in his own manuscript, but would not prevent either from using his own."); Sheldon v. Metro-Goldwyn Pictures, 81 F.2d 49, 54 (2d Cir. 1936) (J. Hand) ("[I]f by some magic a man who had never known it were to compose anew Keat's Ode on a Grecian Urn, he would be an 'author,' and, if he copyrighted it, others might not copy that poem, though they might of course copy Keat's."); Mag Jewelry Co. v. Cherokee, Inc., 496 F.3d 108 (1st Cir. 2007) (novelty not required); Jeffreys v. Boosey, 10 Eng. Rep. 681, 703 (1854) (Erle, LJ) ("[I]f two authors composed originally with the same order of words, each would have a property therein . . . ."). *See also* 1 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 2.01[A] (2007)) (separate copyrights would exist in each of two identical, independently created works); Arnstein v. Edward B. Marks Music Corp., 82 F.2d 275 (2d Cir. 1936) (separate copyrights would exist in each of two identical, independently created works); SCHECHTER & THOMAS, *supra* note 9, at 22 ("The work need not be novel. That something identical or virtually identical to it already was created by another is simply irrelevant so long as the second party did not copy from the first. Originality, as a legal term of art, is not synonymous with novelty."); MERRIAM-WEBSTER, DICTIONARY OF LAW (1996) (Originality is "the quality or fact of being the product of individual creation that warrants copyright protection for a particular work regardless of novelty."); H.R. REP. NO. 94-1476, at 51 (1976) (standard of originality "does not include requirements of novelty, ingenuity, or esthetic merit").

[20] Lee v. Runge, 441 F.2d 579, 581 (9th Cir. 1971) ("[N]either great novelty nor superior artistic quality is required.") (quoting Doran v. Sunset House Dist. Corp., 197 F. Supp. 940, 944, (S.D.Cal.1961) *aff'd* 304 F.2d 251 (9th Cir. 1962)); Mattel, Inc. v. Goldberger Doll Mfg. Co., 365 F.3d 133, 135 (2d Cir. 2004) ("To merit protection from copying, a work need not be particularly novel or unusual."); Alfred Bell & Co. v. Catalda Fine Arts, Inc., 191 F.2d 99, 102 (2d Cir. 1951) ("[N]othing in the Constitution commands that copyrighted matter be strikingly unique or novel . . . .").

[21] *See, e.g.*, L. Batlin & Son, Inc. v. Snyder, 536 F.2d 486 (2d Cir. 1976) (*en banc*) (Snyder's replica of public domain "Uncle Sam" bank not different enough from it to be copyrightable); *id.* at 490 ("[I]n

implies that a work must differ appreciably from work that precedes it; in other words, that P's work must be novel in a non-trivial way. In any event, courts never award damages to P when P's work lacks appreciable novelty or when the only material common to P's work and D's work lacks appreciable novelty. In such cases, courts always find some route (through a limiting doctrine, fair use, or a finding of no originality or no substantial similarity) to avoid awarding damages to P—even if D actually copied subject matter from P that P may have independently created.[22]

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order to obtain a copyright upon a reproduction of a work . . . the work [must] contain some substantial, not merely trivial originality" beyond the preexisting work.); *id.* at 492 ("To extend copyrightability to miniscule variations would simply put a weapon for harassment in the hands of mischievous copiers intent on appropriating and monopolizing public domain work."); *Alfred Bell & Co.*, 191 F.2d at 102–03 (author must have "contributed something more than a 'merely trivial' variation, something recognizably 'his own'"); Bridgeman Art Library v. Corel Corp., 25 F. Supp. 2d 421 (S.D.N.Y. 1998), *aff'd on reconsideration*, 36 F. Supp. 2d 191 (S.D.N.Y. 1999) (holding P's transparencies of public domain paintings uncopyrightable, likening them to photocopies and arguing that a finding of originality requires distinguishable variation beyond a mere change in medium from painting to transparency); ATC Distr. Grp., Inc. v. Whatever It Takes Transmissions & Parts, Inc., 402 F.3d 700, 712–13 (6th Cir. 2005) (hand-drawn sketches of transmissions parts slavishly copied from photographs cut out of competitor catalogs fall short of "substantial variation" required for copyright); Bucklew v. Hawkins, Ash, Baptie & Co., LLP, 329 F.3d 923, 929 (7th Cir. 2003) (no originality present unless distinguishable from prior work); Gracen v. Bradford Exch., 698 F.2d 300, 304 (7th Cir. 1983) (Posner, J.) ("[I]f the difference between [Mona Lisa] and A's reproduction is slight, the difference between A's and B's reproductions will also be slight, so that if B had access to A's reproductions the trier of fact will be hard-pressed to decide whether B was copying A or copying Mona Lisa itself."). *See also* Michael Green, *Two Fallacies About Copyrighting Factual Compilations*, *in* INTELLECTUAL PROPERTY PROTECTION OF FACT-BASED WORKS: COPYRIGHT AND ITS ALTERNATIVES 109, 122–26 (Robert F. Brauneis ed., 2009) (distinguishable variation requirement helps prevent protection for works that could be independently created); *id.* at 123 ("It makes sense not to protect works that have very little added value, since the small economic benefits that result from encouraging their protection will be overridden by the transaction and enforcement costs."); Green, *supra* note 11, at 935–36 (same); Douglas Lichtman, *Copyright as a Rule of Evidence*, 52 DUKE L. J. 683, 706–07 (2003) (discussing evidentiary benefits of distinguishable variation); 1 NIMMER ON COPYRIGHT §3.01, at 3–2, §3.03[A], at 3–10 (discussing requirement of distinguishable variation for derivative works).

[22] *See, e.g.*, Laureyssens v. Idea Grp., Inc., 964 F.2d 131, 141 (2d Cir. 1992) (protection for P's work withheld where evidence suggested P independently created flat-to-cube puzzle that others had created before); *A.A. Hoehling*, 618 F.2d at 979 (*scènes à faire* uncopyrightable as a *matter of law*); 37 C.F.R. § 202.1(a) (familiar symbols or designs are uncopyrightable); JOYCE, ET AL., *supra* note 11, at 256 (using non-novel elements is less creative); Alexander v. Haley, 460 F. Supp. 40 (S.D.N.Y. 1978) (courts must filter out clichés and material traceable to common source or to public domain); Designers Guild v. Russell Williams, 3 FSR 113 (2001) n.19, ¶ 39 (U.K.) (similarities may be disregarded if they are commonplace); Computer Assocs. Int'l v. Altai, Inc., 982 F.2d 693, 708–09 (2d Cir. 1992) (explaining that because efficient structure may be independently created by others, efficient structure should be filtered out during substantial similarity analysis); Gaste v. Kaiserman, 863 F.2d 1061, 1068–69 (2d Cir. 1988) ("[S]triking similarity between pieces of popular music must extend beyond themes that could have been derived from a common source or themes that are so trite as to be likely to reappear in many compositions."); Dymow v. Bolton, 11 F.2d 690, 691 (2d Cir. 1926); Kurtz, *supra* note 11, at 1236–37 and cites therein. *Cf.* Nichols v. Universal Pictures Corp., 45 F.2d 119, 122 (2d Cir. 1930) (Hand, J.) ("Even so, granting that the plaintiff's play was wholly original, and assuming that novelty is not essential to a copyright, there is no monopoly in such a background.").

Furthermore, policy seems to militate against protecting work that lacks novelty.[23] Why would we want to use the lure of legal monopoly to induce the re-creation of work that already exists?

4. *Non-unified Observations about the Level of Granularity*

Yet another curiosity is the failure of courts and commentators to notice or cleanly unify two seemingly diametric observations. Many have observed that no work is protectable when defined at a high level of abstraction[24] – the "bird's eye view." When we ascend too far up the ladder of abstraction from the literal work, we are left with an "idea"[25] that is unprotectable regardless of whether P independently created it.[26] For example, the play *Abie's Irish Rose* is considered an unprotectable idea when defined broadly as "a quarrel between a Jewish and an Irish father, the marriage of their children, the birth of grandchildren and a reconciliation."[27]

Yet commentators have also observed that no work is protectable when parsed very finely[28] – the "bug's eye view." When we subdivide a work into small sub-elements, and focus on each individually, we are left with granules that are unprotectable regardless of whether P may have independently created them. For example, a single phrase from a novel is unprotectable on its own.[29]

Are the bird's eye view and the bug's eye view uncopyrightable for the same reasons, or are the reasons for each distinguishable?

B. Uniqueness Resolves the Puzzles

Copyright protects only unique work: work that no one created before (novel) and that no one could independently create after (unrepeatable). Next is a very brief summary of how this insight resolves the foregoing puzzles. More detailed explanations appear in later sections.

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[23] *See infra* Part II.D.

[24] *See, e.g., Nichols*, 45 F.2d at 121 (Hand, J.) ("Upon any work . . . a great number of patterns of increasing generality will fit equally well, as more and more of the incident is left out. The last may perhaps be no more than the most general statement of what the [work] is about, and at times might consist only of its title; but there is a point in this series of abstractions where they are no longer protected . . . ."); Matthew J. Leary, *Welding the Hood Shut: The Copyrightability of Operational Outputs and the Software Aftermarket in Maintenance and Operations*, 85 B.U. L. REV. 1389, 1415-16 n.132 (2005) ("Since at the highest level of abstraction there is nothing but the ideas of functions that the program will ultimately perform, there cannot be any copyright protection at that level . . . .").

[25] *See infra* Part IV.C.

[26] *See supra* notes Part I.A.3.

[27] *Nichols*, 45 F.2d at 121 (Hand, J.).

[28] *See, e.g.*, Justin Hughes, *Size Matters (or Should) in Copyright Law*, 74 FORDHAM L. REV. 575 (Nov. 2005); Green, *supra* note 21, at 121 ("[N]o individual component of any aggregate . . . looks copyrightable in isolation.").

[29] *See* Material Not Subject to Copyright, 37 C.F.R. § 202.1(a) (1988) (excluding protection for names, titles and short phrases).

1. *Regarding Curious Features of the Limiting Doctrines*

The limiting doctrines overlap each other heavily because they all enforce the requirement of uniqueness. The same goes for originality and substantial similarity. The originality requirement screens out work so lacking in uniqueness that it merits no protection. The substantial similarity standard screens out causes of action against a D who either copied nothing unique from P's work or nothing valuable enough to warrant the administrative and transaction costs of protecting it.

2. *Regarding Dubious Assertions about Creativity*

The second component of originality, creativity, is both under-inclusive and over-inclusive. It is over-inclusive because some creative work is non-unique (and thus unprotectable). Specifically, creative work may be non-unique if it is non-complex (it has few elements), only moderately unconstrained, or both. Creativity is under-inclusive because some non-creative work is unique (and thus protectable). A work can be unique because it is complex and unconstrained or because it is complex and uniquely constrained. Unique creative work is unique because it is complex and unconstrained. Unique non-creative work is unique because it is complex and uniquely constrained.

The clearest example of unique non-creative work is video footage of an event captured by a planted camera or by a bystander who happened to be at the right place and time. This footage entails no creativity. It is unique because it uniquely records an event no one else captured before and no one else could capture after. Even if multiple parties recorded the event, in the vast majority of cases P will have recorded it at a readily distinguishable vantage point, angle, focus, resolution, and duration. In contrast, a plain photo of a stable, commonplace object (such as a bottle of a well-known brand of vodka)[30] is not unique. Because the photo is plain and the object is stable and commonplace, someone else could have created an indistinguishable image before or could create it after.

The degree of protection for a work matches its degree of uniqueness[31] more closely than its degrees of creativity, factuality, or functionality. Again, consider footage of a spontaneous event: the footage is unique and robustly protected though it is both non-creative and factual.

3. *Regarding Inconsistent Assertions about Novelty*

The first component of originality, independent creation by P, is over-inclusive because it demands less than novelty when copyright actually demands novelty and more. If copyright only required independent creation by P, copyright would protect a second creator's work even if it were identical to a first creator's,

[30] *See infra* Part II.A (discussing Ets-Hokin v. Skyy Spirits, 323 F.3d 763, 766 (9th Cir 2003)).

[31] For our purposes uniqueness is a matter of degree rather than an absolute or binary quality like pregnancy. *See infra* Part II.B.

so long as the second did not copy from the first. But in practice copyright does not protect such non-novel work.

The mistaken view that copyright requires no novelty arose because it is an easy mistake to make and because it was reinforced early on by erroneous[32] dicta from esteemed judges. It is an easy mistake to make because the novelty requirement is subsumed within the uniqueness requirement.[33] Unlike patent, copyright requires no formal or affirmative finding that work is novel. Instead, by protecting only unique work, copyright implicitly excludes non-novel work.

Not only is independent creation necessary but insufficient for novelty, novelty is necessary but insufficient for uniqueness. All unique works are novel, but some novel works—namely, the repeatable ones—are non-unique. Thus, copyright plaintiffs sometimes lose even when their works are novel,[34] and this observable phenomenon can reinforce the hasty conclusion that novelty has no bearing on copyright. Further clouding the copyright landscape is that in a small minority of cases plaintiffs lose even when their works are unique.[35] To explain this minority of cases we must look to the dominance principle.[36]

4. *Regarding Non-unified Observations about the Level of Granularity*

Work is uncopyrightable when we define it very broadly for the same reasons that it is uncopyrightable when we focus tightly on its individual sub-elements. That is, a general idea abstracted from a work is uncopyrightable for the same reasons a tiny literal fragment of the work is uncopyrightable. What the bird's eye view and the bug's eye view have in common is that both exclude so much of the work that what is left in view is too simple to be unique or too simple to be valua-

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[32] *See supra* Part I.A.3.

[33] *See infra* Part II.D.

[34] *See* Brandir Int'l, Inc. v. Cascade Pac. Lumber Co., 834 F.2d 1142 (2d Cir. 1987) (apparently novel bike rack unprotectable); ATC Distr. Grp., Inc. v. Whatever It Takes Transmissions & Parts, Inc., 402 F.3d 700, 707–13 (6th Cir. 2005) (holding that portions of P's catalog independently created by P were virtually inevitable and thus unprotectable); Computer Assocs. Int'l v. Altai, Inc., 982 F.2d 693, 708–09 (2d Cir. 1992) (because efficient structure may be independently created by others, efficient structure should be filtered out during substantial similarity analysis).

[35] *See, e.g.*, Lotus Dev. Corp. v. Borland Int'l, 49 F.3d 807 (1st Cir. 1995), *aff'd by an equally divided court*, 526 U.S. 233 (1996) (discussed *infra* Part III); Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340 (1991) (discussed *infra* Part IV.E); L.A. News Serv. v. CBS Broad., Inc., 305 F.3d 924 (9th Cir. 2002) (discussing fair use for D to incorporate a few seconds of P's footage of Reginald Denny beating in promotion of D's trial coverage); Time, Inc. v. Bernard Geis Assocs., 293 F. Supp. 130, 146 (S.D.N.Y. 1987) (stating forensic use of 22 still frames from film of Kennedy assassination in serious book on the subject was fair use).

[36] *See infra* Part III and Parts IV.B, E and F.

ble enough to justify the administrative and transaction costs of protection.[37] In essence, bird's eye works and bug's eye works are both "microworks."[38]

II. **Uniqueness**

A. Unique Works Are Free of Shared Constraints

P's work is unique if it was never independently created before (novel) and if it will never be independently created after (unrepeatable).[39] A work is novel and unrepeatable if it is (at least modestly) complex and either unconstrained[40] (e.g., random or whimsical) or uniquely constrained (e.g., dictated by circumstances exclusive to P). In either case, there are no shared constraints to guide another to independently create work not readily distinguishable[41] from P's.

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[37] *See infra* Part IV.B and C.

[38] *See infra* Part IV.B; Hughes, *supra* note 28, at 575 (introducing term "microwork").

[39] On occasion, courts and commentators refer to uniqueness, though apparently as a casual synonym for originality or creativity. *See, e.g.*, Bleistein v. Donaldson Lithographing Co., 188 U.S. 239, 250 (1903) (Holmes, J.) ("The copy is the personal reaction of an individual upon nature. Personality always contains something unique."); Walt Disney Prod. v. Air Pirates, 581 F.2d 751, 755 (9th Cir. 1979) ("[A] comic book character . . . is more likely to contain some unique elements of expression."); Carol Barnhart, Inc. v. Econ. Cover Corp., 773 F.2d 411, 419 (2d Cir. 1985) ("The unique artistic design was wholly unnecessary to performance of the utilitarian function."); Bright Tunes Music Corp. v. Harrisongs Music, Ltd., 420 F. Supp. 177, 178 (1976), *aff'd*, ABKCO Music, Inc. v. Harrisongs Music, Ltd., 722 F.2d 988 (2d Cir. 1983) ("While neither motif is novel, the four repetitions of A, followed by four repetitions of B, is a highly unique pattern."); *id.* at 180 n.11 ("The uniqueness is even greater when one considers the identical grace note in the identical place in each song."); Alan Durham, *The Random Muse: Authorship and Indeterminacy*, 44 WILLIAM & MARY L. REV. 569 (2002) (indeterminate or randomly-organized works are "inherently unique"); Matthew Sag, *Copyright and Copy-Reliant Technology*, 103 NW. U. L. REV. 1607, 1629 (2009) ("[I]n most cases, protecting the unique expression of an idea is sufficient to ensure that the author will be able to appropriate a return on her investment."). *See also* Hart v. Dan Chase Taxidermy Supply Co., 86 F.3d 320, 322 (2d Cir. 1996) (Calabresi, J.) (discussing the novelty and repeatability of fish mannequins); Ring v. Estee Lauder, 702 F. Supp. 76, 78 (S.D.N.Y. 1988), *aff'd*, 874 F.2d 109 (2d Cir. 1989) (discussing the novelty of make-over video); Marshall & Swift v. BS & A Software, 871 F. Supp. 952, 960 n.12 (W.D. Mich. 1994) (distinguishing fact tables in case from the listings in *Feist* largely because they are "unique").

[40] *Cf.* Daniel J. Gervais, Feist *Goes Global: A Comparative Analysis of the Notion of Originality in Copyright Law*, 48 J. COPYRIGHT SOC'Y. OF USA 949, 976–77 (2002) (defining creativity as choices made free of external constraints); Byron, *supra* note 4, at 46 ("Essentially, inherent in 'creativity' is a certain degree of unexpectedness or randomness . . . ."); Alan Durham, *Copyright and Information Theory*, 2004 BYU L. REV. 69 (2004) (original work is free of constraint); Hughes, *supra* note 4, at 204 (notion that choices are original when they are not dictated by extrinsic considerations is straightforward copyright doctrine); Matthew Bender v. West, 158 F.3d 674, 682 (2d Cir. 1988) ("[C]reativity inheres in making non-obvious choices from among more than a few options.").

[41] To be readily distinguishable, it is not enough that a work could be distinguished on close inspection; for instance, because the signature on it is different. To be readily distinguishable, the audience for the work must be able to easily recognize that the work has a worth or meaning different from that of other works. *Cf.* Peter Pan Fabrics, Inc. v. Martin Weiner Corp., 274 F.2d 487, 489 (2d Cir. 1960) (Hand, J.) (When considering how similar works must be for infringement "one shall consider the uses for which the design is intended, especially the scrutiny that observers will give to it as used.").

Suppose you make a list of your 100 favorite movies. Your list is protectable[42] because it is unique. That is, we are inclined to think no one before independently created, and no one after will independently create, a list with the same movies in the same order. We think this because the content and order of your list depends on your peculiarities, not on shared constraints that could have driven or that could later drive another creator to make the same list. Hence other creators' lists of their 100 favorite movies will differ appreciably from your list and from each other's.[43]

[42] *Cf.* Durham, *supra* note 4, at 180 ("Usually a list of the 100 'best' of anything does not purport to reflect a fact, other than the author's feelings; to treat such opinion as copyrightable content does not take anything of 'the real world' into the realm of property."); Gorman, *supra* note 13, at 572–73 (Copyright protection for "one's list of the fifty most livable cities in America, will because of the very subjectivity involved in the compilation, not likely deprive the public of quite as significant information as when the compilation is mechanical, streamlined, and exhaustive.").

[43] *See, e.g.*, the two lists to follow, which appeared at the top of search results in a Google® search for "100 best movies."

From 'List of 100 favorite movies' at www.angelfire.com/fl/layeroffilm/topfilms.html, last visited Jan. 25, 2011	From 'List of 100 best/favorite movies' at www.listology.com/jgandcag/list/100-best-favorite-movies-all-time, last visited Jan. 25, 2011
1. Annie Hall	1. Godfather 2
2. Vertigo	2. Casablanca
3. The Godfather	3. Citizen Kane
4. The Third Man	4. Pulp Fiction
5. Gates of Heaven	5. Man Who Shot Liberty Valance
6. Boogie Nights	6. The Third Man
7. A Clockwork Orange	7. Lawrence Of Arabia
8. E.T.	8. Mr. Smith Goes to Washington
9. This Is Spinal Tap	9. Singing in the Rain
10. Hoop Dreams	10. The Magnificent Ambersons
...	...
90. Back to the Future	90. Vertigo
91. Rosemary's Baby	91. Say Anything
92. The Last Picture Show	92. Z
93. Saboteur	93. A Face in The Crowd
94. High Art	94. Fargo
95. Paths of Glory	95. Great Escape
96. Palm Beach Story	96. Rio Bravo
97. Apocalypse Now	97. Gunga Din
98. The Red Shoes	98. Adventures Of Robin Hood
99. M*A*S*H	99. From Here to Eternity
100. Goodfellas	100. Dazed and Confused

P's work is non-unique if it was guided by constraints that could guide another to create work not readily distinguishable from P's. Copyright does not protect an accurate list of the 100 top-grossing movies. This list is non-unique because it is dictated by shared constraints, namely, historical records of box office receipts, DVD rentals, and so forth. These constraints would likewise dictate the content of another creator's accurate list of the 100 top-grossing movies. Hence, if you independently make an accurate list of the 100 top-grossing movies, and if I independently make an accurate list of the 100 top-grossing movies, our lists will not be readily distinguishable.

Creative work tends to be novel and unrepeatable because it is relatively unconstrained. The more unconstrained the work, the less likely it is to take a form others could independently create.[44] Nevertheless, creativity is both an over-inclusive and under-inclusive measure of uniqueness.[45] It is over-inclusive because even wholly unconstrained work, if it has few elements, may be non-novel or repeatable. For example, a string of numbers (3423749274) I banged out randomly on my keyboard shows up in thirty search results on Google®.[46] A string of randomly banged out letters (mfgpwoedfiuwon) shows up in one search result.[47]

On the other hand, creativity is under-inclusive because some non-creative work is uniquely constrained and thus unique. The clearest example is event footage captured by a bystander who happened to be at the right place and time. This footage is clearly protected by copyright.[48] It is a stretch to argue it is creative.[49] Indeed, even if we assume it entails a trace of creativity, we are left wondering why it is so thickly protected given its mere trace of creativity.

How thickly a work is protected depends more on how unique it is than on how creative it is.[50] Event footage is thickly protected because it is very unique. It

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In general, a much shorter list, such as a list of 10 favorite movies, is unlikely to be unique. It could be unique, however, if P had very idiosyncratic tastes and thus chose favorites that no one else would choose.

[44] *Cf.* Green, *supra* note 21, at 126 (creative work is not highly susceptible to parallel independent creation); McGowan, *supra* note 14 (the more variation is constrained, the less courts extend protection); Dan Burk, *Method and Madness in Copyright Law*, 2007 UTAH L. REV. 587, 602 ("The common thread here is that of determinism; courts declare that the law of copyright does not protect expression that can only be instantiated in a single, determined way.").

[45] *Cf.* McGowan, *supra* note 14, at 240 ("In some cases in which copyright protection is useful, creativity is undesirable, and perhaps impossible. In some cases where copyright is counterproductive, creativity is possible but irrelevant."); Marc K. Temin, *The Irrelevance of Creativity:* Feist's *Wrong Turn and the Scope of Copyright Protection for Factual Works*, 111 PENN ST. L. REV. 263 (2006).

[46] *See* www.google.com (last visited Aug. 1, 2011).

[47] *See* www.google.com (last visited Aug. 1, 2011).

[48] *See supra* Part I.A.2.

[49] *See supra* Part I.A.2.

[50] *See infra* Part II.C.

is very unique because no one else could ever independently create it—the event has come and gone. The main exception to thick protection for event footage applies when the footage is dominant; in other words, when it records an event of such historic or cultural importance that fully protecting the footage against all types of unauthorized use would over-reward the creator and deter socially beneficial use of the footage by others.[51]

Unlike footage of a spontaneous event, a photo of a stable object accessible to others is usually non-unique. In *Ets-Hokin v. Skyy Spirits*,[52] a case of no liability, P photographed Skyy's blue vodka bottle for use in Skyy's marketing campaign. Skyy later hired other photographers to photograph the bottle and used the new photos instead of P's; the lighting, angles, shadows, and background of the new photos differed from P's.[53] The only constant was the unadorned bottle, which is stable and widely accessible and thus something others could independently photograph.[54]

Consider also *Meshwerks v. Toyota*.[55] Meshwerks used special machines and techniques to painstakingly create digitized images of Toyota cars.[56] The court held Meshwerks's "slavish copies" unprotectable.[57] Yet slavishness is not dispositive.

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[51] *Cf.* Time, Inc. v. Bernard Geis Assocs., 293 F. Supp. 130, 146 (S.D.N.Y. 1987) (forensic use of 22 still frames from film of Kennedy assassination in serious book on the subject was fair use).

[52] Ets-Hokin v. Skyy Spirits, 323 F.3d 763 (9th Cir. 2003).

[53] *Id.* at 766.

[54] *Compare id.*, *with* Schrock v. Learning Curve Int'l, Inc., 586 F.3d 513, 519 (7th Cir. 2009). In *Schrock*, P photographed D's toys for use in advertisement and the court protected P's photograph. In my view, the reason was that, before taking the photograph, P arranged the toys in a particular way so that the resulting photograph was unique enough to be thinly protected. *Compare* Burrow-Giles Lithographic Company v. Sarony, 111 U.S. 53 (1884), *with* Oriental Art Printing v. Goldstar Printing, 175 F. Supp. 2d 542 (S.D.N.Y. 2001). In *Burrow-Giles* the Court upheld the copyright in P's photo of a posing Oscar Wilde. Note that other creators could have independently photographed Wilde during his lifetime but the probability was very low that any of them would have created a photograph that was both independent of and not readily distinguishable from P's. In *Oriental*, the court held that P's straightforward photographs of food dishes for a Chinese menu were not original enough for copyright. Note that, because P's photographs were straightforward representations of common items, independent photographers could plausibly create photographs not readily distinguishable from P's.

[55] Meshwerks, Inc. v. Toyota Motor Sales U.S.A., Inc., 528 F.3d 1258 (10th Cir. 2008).

[56] *Id.* at 1260.

[57] *See also* ATC Distr. Grp., Inc. v. Whatever It Takes Transmissions & Parts, Inc., 402 F.3d 700, 712 (6th Cir. 2005) ("The illustrations were intended to be as accurate as possible in reproducing the parts shown in the photographs on which they were based, a form of slavish copying that is the antithesis of originality."). *Compare* Bridgeman Art Library v. Corel Corp., 25 F. Supp. 2d 421, 427 (S.D.N.Y. 1998), *aff'd on reconsideration*, 36 F. Supp. 2d 191 (S.D.N.Y. 1999), *with* Alfred Bell & Co. v. Catalda Fine Arts, Inc., 191 F.2d 99, 102–03 (2d Cir. 1951). In *Bridgeman*, D copied P's transparencies of public domain paintings. The court held the transparencies uncopyrightable, likening them to photocopies and arguing that originality requires distinguishable variation beyond a mere change in medium from painting to transparency. My take on *Bridgeman* is that P's transparencies were not unique because someone else could independently make transparencies or other slavish reproductions of the public domain paintings that were not readily distinguishable from P's. In *Alfred Bell*, the court upheld copyright in P's mezzotint engravings of public domain paintings. The mezzotint engraving

Event footage is protectable though it slavishly copies the event that unfolds before the lens. What distinguishes Meshwerks's slavish copies of Toyota cars from photographers' slavish copies of events is that someone else could independently create slavish copies of the same Toyota cars, whereas no one else could independently create slavish copies of events that have come and gone.[58]

A non-slavish copy of a stable, widely accessible thing is protectable insofar as no one could independently recreate the non-slavish copy. For example, a translation of a well-known work from one human language to another is likely to be protectable[59] unless the translation is extremely short.[60] Consider a translation of a novella from Spanish to English. This translation is clearly unique—no one will ever independently make an indistinguishable translation. Even a translation of a single page of the novella might be unique, because English allows for some variety in syntax and contains many synonyms.[61]

B. Uniqueness as a Function of Three Variables

Uniqueness is a matter of degree, not an absolute or binary quality like pregnancy.[62] Every work is unique in trivial ways. No two works have exactly the same

process is an inexact art requiring skill and judgment and subject to error. *Id.* at 104–05. Insofar as the process was an inexact art, it would seem that P's engravings were readily distinguishable not only from the public domain paintings but also from independently created reproductions of them.

[58] *But see* Alva Studios, Inc. v. Winninger, 177 F. Supp. 265 (S.D.N.Y. 1959). The court in *Alva* upheld copyright protection for a faithful reproduction of Rodin's famous statue "Hand of God"–a stable object. Are *Alva* and *Meshwerks* in conflict? They may be. If so, *Alva* seems the wrongly decided of the two. There is, however, an argument that *Alva* and *Meshwerks* are not in conflict, and that *Alva* is rightly decided. The argument is that only in *Alva* was P's work repeatable enough to be protected, albeit thinly. Though P's reproduction in *Alva* was faithful to the contours of Rodin's statue, P's reproduction was half as large and the rear of its base was closed rather than open. Another creator who independently created a reproduction of Rodin's statue would be unlikely to create one with dimensions, base and materials indistinguishable from P's. Admittedly, it is questionable whether the likelihood of independent creation is low enough in *Alva*, but it is lower than in *Meshwerks*. Were Toyota to commission someone else to digitize its cars, it seems likely that the resulting images would not be readily distinguishable from Meshwerks' images. Furthermore, Meshwerks' images might not be readily distinguishable from regular digital photographs of the cars or from various images that Toyota made when it designed the cars.

[59] *Cf.* LANDES & POSNER, *supra* note 7, at 110 ("To translate The Brothers Karamazov into English is an enormously time-consuming task of the same general character as the expressive activities that copyright protects . . . .").

[60] *See* Material Not Subject to Copyright, 37 C.F.R. § 202.1(a) (1988) (excluding protection for names, titles, and short phrases).

[61] Synonyms for the word huge, for instance, include enormous, massive, immense, very big, very large, giant, gigantic, gargantuan, jumbo, colossal, mammoth, titanic, voluminous, vast, mega-sized, prodigious, humongous, and more.

[62] *See generally* JAMES CHAMPLIN FERNALD, ENGLISH GRAMMAR SIMPLIFIED: ITS STUDY MADE EASY 66–67 (2d ed. 1916) ("Adjectives expressing some quality that does not admit degrees are not compared when used in their strict or full sense, as square, perpendicular, circular, absolute, eternal, illimitable, complete, perfect, etc. But such adjectives are often used in a modified or approximate sense, and when so used admit of comparison. If we say, 'This is more perfect than that,' we do not mean

molecules arranged exactly the same way. Every work is created with some freedom from constraint or under some unique constraints. For our purposes, a work counts as unique if it has salient features unique enough to lead us to conclude that the work is readily distinguishable from all independently created work that came before and all that will come after.

The thickness of protection for a work tracks the degree to which the work is—or at least seems to be—unique.[63] A work as unique as *Alice in Wonderland* receives very thick protection. A typical list of 100 favorite movies is moderately unique and thus receives moderately thick protection. A mannequin head with stylized features suggestive of a hungry high-fashion look and with an inadvertent flaw in its hairline is unique enough to receive at least thin protection.[64] An accurate list of the 100 top grossing movies is non-unique and receives no protection.

To estimate or characterize the degree to which a work is unique, we can frame uniqueness as the probability that no one before independently created, and that no one after will independently create, work indistinguishable from P's. The higher that probability is, the more unique P's work is. The variables on which that probability depends can be defined in various ways. The following is one way.

The probability that P's work is unique depends on:

> (1) Added Complexity: the number of elements[65] in P's work–including combinations, arrangements, highlights, and omissions[66]–not manifestly devoid of novelty[67];

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that either is perfect without limitation, but that 'this' has 'more' of the qualities that go to make up perfection than 'that'; it is more nearly perfect.").

[63] *See infra* Part II.C. The sound recording right is an exception that corroborates this rule. *See infra* Part IV.B.

[64] *See infra* Part IV.A (discussing Pivot Point Int'l, Inc. v. Charlene Prods., Inc., 372 F.3d 913 (7th Cir. 2004)[hereinafter *Pivot Point I*]).

[65] *Cf.* Dennis W. Khong, *Copyright Doctrines, Abstraction and Court Error*, 3 REV. L. & ECON, Issue 3, Art. 5, 10 (2007) (pointing out that the probability of coincidental similarity falls as number of elements in work rises); Kurtz, *supra* note 11, at 1253–54 (characterizing ideas in terms of venn diagram, whereby ideas complex enough to be protectable reside only at small area where a number of simple ideas intersect).

[66] *Cf.* Pickett v. Prince, 207 F.3d 402, 405 (7th Cir. 2000) ("[A]ll works of art are ultimately combinations of familiar, uncopyrightable items."); Bright Tunes Music Corp. v. Harrisongs Music, Ltd., 420 F. Supp. 177, 180 n.11 (S.D.N.Y. 1976) ("[A]lthough the two motifs were in the public domain, their use here was so unusual that [D's expert witness], in all his experience, had never come across this unique sequential use of these materials."); Metcalf v. Bochco, 294 F.3d 1069, 1074 (9th Cir. 2002) ("The particular sequence in which an author strings a significant number of unprotectable elements can itself be a protectable element."); Warner Bros., Inc. v. American Broad. Cos., 720 F.2d 231, 243 (2d Cir. 1983) (finding that individual elements contribute to "expressive aspect of the combination," regardless of whether they are protectable in isolation); JOYCE, ET AL., *supra* note 11, at 692 ("*Altai* insists that public domain elements of programs should be 'filtered out' of the analysis. Ultimately, however, all copyrightable works, in all media, are simply combinations of public domain elements (be they individual words, or musical notes, or simple shapes)."); Roth Greeting Cards v. United Card

(2) Viable Alternatives: the number of alternative works[68] with which independent creators could, with equal or greater efficiency, achieve ends equivalent[69] or superior to those achieved by P's work; and

(3) Contenders: the number of other creators (past, present and future) with the ability, opportunity, and incentive to independently create work indistinguishable from P's.

The uniqueness of P's work rises with increases in added complexity, with increases in the number of viable alternatives, and with decreases in the number of contenders. Thus, a work is very unique when it has high added complexity, many viable alternatives, and few contenders.

Co., 429 F.2d 1106 (9th Cir. 1970) (explaining that short phrases by themselves are unprotected, but protected in combination with images and with splitting of phrases between front cover and inside of greeting card); Tufenkian Import/Export Ventures v. Einstein Moomjy, Inc., 338 F.3d 127, 134 (2d Cir. 2003) ("[I]nfringement analysis is not *simply* a matter of ascertaining similarity between components viewed in isolation."); Atari Games Corp. v. Oman, 979 F.2d 242, 247 (D.C. Cir. 1992) (finding combination of standard geometric shapes protectable); Runstadler Studios, Inc. v. MCM Ltd. P'ship, 768 F. Supp. 1292, 1298–99 (N.D. Ill. 1991) (finding combination of standard shapes may be protectable); Green, *supra* note 21, at 121 (arguing copyrightability is an emergent property that arises out of aggregation of uncopyrightable elements).

[67] *See supra* Part I.B.3 and Part II.D (explaining that copyright tacitly requires novelty).

[68] The intuition is that if there are few viable alternatives–if there are few viable ways to achieve the desired effect–the odds are relatively high that eventually someone else would independently choose the same way P chose. Conversely, if there are hundreds of viable ways to achieve the desired effect, the odds are low that someone else would independently choose the same way P chose. Looking to alternatives is not a new idea. *See, e.g., Pivot Point, Int'l, Inc.*, 372 F.3d 913 (discussing the many alternative designs available for mannequin head); Mattel, Inc. v. Goldberger Doll Mfg. Co., 365 F.3d 133 (2d Cir. 2004) (discussing many alternatives to the Barbie design); Dymow v. Bolton, 11 F.2d 690 (2d Cir. 1926) (holding that work is protected if same idea can be expressed in totally different manners); Kregos v. Assoc. Press, 937 F.2d 700, 704–07 (2d Cir. 1991) (holding P's combination of data categories protectable because it was drawn from a universe of thousands of alternatives); Lanard Toys Ltd. v. Novelty Inc., 375 Fed. Appx. 705, 710–11 (9th Cir. 2010) (upholding copyright and remarking that P's designer testified he "could have designed it in 'a million' other ways"); American Dental Ass'n v. Delta Dental Plans Ass'n, 126 F.3d 977, 979 (7th Cir. 1997) (J. Easterbrook) (upholding copyright in taxonomy of dental procedures and pointing out that "[d]ental procedures could be classified . . . in any of a dozen different ways"). *See also infra* Part IV.A and accompanying footnotes. Commentators also look to alternatives. *See, e.g.*, Byron, *supra* note 4, at 58–66 (discussing that as the number of possible alternatives increases, the probability of P's work being created decreases, making P's work more copyrightable); Thomas M. Byron, *As Long as There's Another Way:* Pivot Point v. Charlene Products *as an Accidental Template for A Creativity-Driven Useful Articles Analysis*, 49 IDEA 147, 153–54, 165–66, 188–91 (2009) (explaining that in cases involving useful articles courts look to number of viable alternatives, even when they purport to rely on different measures); Jones, *supra* note 4, at 576–78 (suggesting that merger is a matter of degree that tracks the variety of alternative expressions available); Burk, *supra* note 44, at 606 (discussing that there is only one way Pythagorean theorem will work, and "[t]his is not so for a work of art or of drama, . . . many original portraits may be painted [and] many plays can be written on the same themes as contained in those works").

[69] Viable alternatives are alternatives that would have been at least as good as P's work at achieving its ends. For instance, a comedy independently created by P is likely to be unique because myriad alternative comedies can achieve an equivalent effect (laughter).

Yet, the variables often offset each other, so a work may still be unique despite low added complexity or few viable alternatives or many contenders. Conversely, a work may be non-unique despite high added complexity or many viable alternatives or few contenders. Note, however, that if the number of contenders is zero, it cannot be offset. If there are no contenders—if P was and always will be the only party who could create the work—the work must be unique.[70]

Event footage is factual work that has no contenders. It has no contenders because it is constrained by an "exclusive reality" that is fleeting and localized or otherwise inaccessible to others. In contrast, unprotected factual work is constrained by a shared reality that is stable and accessible to others. A factual work constrained by shared reality tends to have many contenders over the long run because the facts are accessible to others and because consumers foreseeably value such work as a guide to action.[71] Works constrained by shared reality also have few viable alternatives, because works not constrained by shared reality make poor guides to action.[72]

Consider an unprotected factual work such as P's accurate list of the 100 top grossing movies. P's list has few viable alternatives, not only because it is accurate but also because it is accurate about something about which other creators can likewise be accurate.[73] In addition, 100 is a common list number, and shorter lists (e.g., the 50 top grossing) and longer lists (e.g., the 200 top grossing) will be indistinguishable from the corresponding portion of P's list.

There are many contenders for a list of the 100 top grossing movies because many people could access the information needed to independently create it. Also, for many in the film industry, the utility of such a list is foreseeably much greater than the cost of compiling it.

Finally, such a list has, at best, low added complexity. The movie titles, their number, and their arrangement (in descending order by earnings) are manifestly devoid of novelty. The only salient element not manifestly devoid of novelty

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[70] *Cf.* HUGH LADDIE, PETER PRESCOTT AND MARY VITORIA, THE MODERN LAW OF COPYRIGHT AND DESIGNS §3.19 (1995) (stating that a photo can be copyrighted if it captures a scene unlikely to recur); Khong, *supra* note 65, at 19–21 (explaining that some facts are single-sourced, or costs of gathering them are highly asymmetrical among producers, and when facts are single-sourced, likelihood of coincidental similarity to other works is low).

[71] *See* Green, *supra* note 11, at 945–46 ("Consumers value factual material as a guide for their action . . . .").

[72] For example, a road atlas is a poor guide to action insofar as it fails to correspond faithfully to real world locations, distances, and directions.

[73] *See infra* Part IV.E.

seems to be the combination of all of the manifestly non-novel elements together in one list.[74]

C. How Thickly a Work is Protected Depends on How Unique It Is

The limiting doctrines overlap not only each other but also the originality requirement and the substantial similarity standard,[75] which also overlap each other.[76] All of these doctrinal tools overlap because they all enforce the requirement of uniqueness.

To satisfy the threshold of copyrightability, a work must possess a threshold degree[77] of uniqueness. That is, there must be some salient, non de minimis[78] feature of the work that no other creator has or will independently create. How thickly a work is protected depends on how far its uniqueness exceeds the threshold; when P's work is very unique, courts are more likely to protect not only relatively small fragments of it but also moderately detailed patterns abstracted from it.[79]

A work is most unique in its most complex form: the entire literal work verbatim. When we subdivide a work into tiny sub-elements, and focus on a sub-

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[74] There may also be added complexity attributable to the specific date the list was made. That is, an accurate list made in the third quarter of 2011 may differ slightly from an accurate list made in, for example, the first quarter of 2012.

[75] *See supra* Part I.A.1.

[76] *See supra* Part I A.1.

[77] *See supra* Part II.B (arguing that uniqueness is a matter of degree).

[78] *Cf.* Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. at 363 ("[C]opyright protects only those constituent elements of a work that possess more than a *de minimis* quantum of creativity."); Ringgold v. Black Entm't Television, Inc., 126 F.3d 70, 74–75 (2d Cir. 1997) ("The legal maxim '*de minimis non curat lex*' (sometimes rendered, 'the law does not concern itself with trifles') insulates from liability those who cause insignificant violations of the rights of others . . . ."); ROBERT P. MERGES, ET AL., INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE 532 (5th ed. 2010) (explaining that cases applying *de minimis* doctrine tend to use it as a shorthand for lack of substantial similarity); Tufenkian Import/Export Ventures, Inc. v. Einstein Moomjy, Inc., 338 F.3d 127, 135 (implying that if P's work includes only *de minimis* originality, copying all of work would be a *de minimis* taking); Intervest Const., Inc. v. Canterbury Estate Homes, Inc., 554 F.3d 914, 920 (11th Cir. 2008) (finding that if there is very little protected expression, similarity between works is unlikely to be substantial); PATRY, *supra* note 12, at § 4.46 (asserting that to state that an idea has merged with expression because there are only a limited number of ways to express that idea "is, in reality, a statement that the purported copyright owner's way of expressing the idea contains only a *de minimis* number of non-ideas"); Sag, *supra* note 39, at 1633–34 (2009) (asserting that copyright permits copying of trivial expressive features, because to do so does not unfairly compete with P).

[79] *Cf.* Mark A. Lemley, *Convergence in the Law of Software Copyright?*, 10 HIGH TECH. L.J. 1, 30 (1995) ("Where the alleged similarities occurred at a high level of abstraction, at which the copyright owner is entitled to little protection, she must be able to show more striking similarities between the works than if the copying had occurred at a lower level of abstraction."); Kurtz, *supra* note 11, at 1260 (asserting that the more extraordinary and nonobvious the work, the more abstract forms of copying it is protected against); Bucklew v. Hawkins, Ash, Baptie & Co., 329 F.3d 923, 926 (7th Cir. 2003) ("[W]hen the similarities concern details of such an arbitrary character that the probability that the infringer had duplicated them independently is remote, an inference of copying may be drawn without any additional evidence."). *See also supra* Part I.A.1.

element in isolation, it seems too simple to be unique.[80] Rarely is an individual word in a book unique, and any unique word (such as "supercalifragilisticexpialidocious") can be subdivided into non-unique syllables and letters.[81] The same holds true for a small piece of an image and its pixels, indeed for sub-elements of any type of work.[82] Yet a very unique work can remain unique even after some degree of subdividing. A small fragment of a very unique work is more likely to be unique than an equally small fragment of a marginally unique work.

Similarly, when we abstract far away from a work and collapse its many elements into a handful of meta-elements we are left with a broad summary of the work that seems too simple to be unique.[83] A very unique work can remain unique even after some degree of abstracting. Thus, a moderately detailed summary of a very unique work is more likely to be unique than an equally detailed summary of a marginally unique work.

When the issue is whether P's work is copyrightable at all, courts usually view P's work at the level at which it is mostly likely to be unique. If the work is only marginally unique at this verbatim level, courts may also tacitly ask whether the benefits of protecting it seem to outweigh the transaction and enforcement costs.[84] When the issue is whether D's work infringes P's, courts usually identify the most detailed subject matter common to both works, tacitly ask what features of that subject matter are unique to P's work at that level of detail,[85] and, if D's taking is small, ask whether those features are so trifling that the benefits of protecting them seem to outweigh the costs. Sometimes courts perform these steps in different order.[86]

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[80] *See supra* Part II.B. *See also infra* Part IV.B.

[81] Example: "supercalifragilisticexpialidocious" is composed of non-unique parts such as "super," "cali," "frag," "ilistic," "expi," "ali," "doc," "ious," or s, u, p, e, r, c, a, and so on.

[82] The sound recording right appears to bend this rule. *See infra* Part IV.B.

[83] *See supra* Part I.B.4.

[84] *See generally* Green, *supra* note 11, at 932 (explaining the *de minimis* doctrine withholds protection when costs of enforcement and transaction exceed reduction in P's incentive to create); *id.* at 951–52 (pointing out that relative enforcement and transaction costs rise as size of borrowed portion decreases).

[85] *Cf.* Kurtz, *supra* note 11, at 1234 ("We can consider the level of abstraction at which the similarities between the plaintiff's work and the defendant's work lie. We can then attempt to determine, in that specific context, whether the similarity lies on the idea or expression side of the line."); *id.* at 1253 ("The similarity between the plaintiff's and defendant's works is more or less saturated with detail. The greater that saturation, the more appropriate a finding of infringement."); Nichols v. Universal Pictures Corp., 45 F.2d 119, 121 (2d Cir. 1930) (Hand, J.) ("[T]he less developed the characters, the less they can be copyrighted; that is the penalty an author must bear for marking them too indistinctly.").

[86] *See, e.g.*, Runstadler Studios Inc. v. MCM Ltd. P'ship, 768 F. Supp. 1292 (N.D. Ill. 1991). For purposes of the infringement inquiry, P in *Runstadler* characterized its work at the broad level where D's work shared the same pattern: a sculpture composed of glass rectangles overlying each other to form a tall spiral. The court elected D's more specific characterization of P's work, where D's work

The tacit goal is to match the degree of protection to the work's degree of uniqueness. The less unique P's work, the more similar to it D's work must be to infringe. If P's work is modestly unique, D's work must be more than modestly similar to it to infringe. To put it another way, if P's work is modestly unique, D's work infringes only if D's work includes either a large fragment of or a markedly detailed pattern in P's work.

Compare *Rosenthal Jewelry v. Grossbardt* (*Rosenthal I*)[87] with *Rosenthal Jewelry v. Kalpakian* (*Rosenthal II*)[88]. In each of those cases, both parties made jeweled pins shaped like bees.[89] In *Rosenthal I*, D had used one of P's pins to make a mold to produce a pin that was identical to P's except for inferior gems.[90] The district court found infringement and the appellate court affirmed.[91] In *Rosenthal II*, D produced its own pin from its own mold, resulting in a bee pin moderately similar to P's.[92] The district court found no infringement and the appellate court affirmed.[93]

The key distinction between *Rosenthal I* and *Rosenthal II* is that only in *Rosenthal I* did D's pin include subject matter unique to P's work. Given that insect-shaped pins have long been popular and given that bees are well-known insects, many independent creators have created and will create bee pins. To be recognized as a bee pin, it must approximate a real bee. The appearance of a real bee is a shared constraint that channels independent creators toward similar bee pins.[94] P has no cause of action against a D whose bee pin has no more than this convergent similarity.[95] P has a cause of action only against a D whose pin is so similar to

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differed from P's. In my view, the court properly found no infringement, because what was common to both works was not unique.

[87] Herbert Rosenthal Jewelry Corp. v. Grossbardt, 1970 WL 10069 (S.D.N.Y. 1970) [hereinafter *Rosenthal I*].

[88] Herbert Rosenthal Jewelry Corp. v. Kalpakian, 446 F.2d 738 (9th Cir. 1971) [hereinafter *Rosenthal II*].

[89] *Rosenthal I*, 1970 WL 10069; *Rosenthal II*, 446 F.2d at 739.

[90] *Rosenthal I*, 1970 WL 10069 ("defendants' pins are exact copies" except made with inferior gems).

[91] *Id.*

[92] *Rosenthal II*, 446 F.2d at 741.

[93] *Id.* at 738.

[94] Also, the number of alternative bee poses for pins is limited compared to, say, the number of alternative animal poses for taxidermy. *See* Hart v. Dan Chase Taxidermy Supply Co., 86 F.3d 320, 323 (2d Cir. 1996) (Calabresi, J.) ("In taxidermy, by contrast . . . the shape, volume, and movement of the animal are depicted by the underlying mannequin. Whether the fish is shown as resting, jumping, wiggling its tail, or preparing to munch on some plankton, is dictated by [P's choices about the mannequin].").

[95] *See Rosenthal II*, 446 F.2d at 741 ("Any inference of copying based upon similar appearance lost much of its strength because both pins were lifelike representations of a natural creature."); *id.* at 742 ("There is no greater similarity between the pins of plaintiff and defendant than is inevitable from the use of jewel-encrusted bee forms in both."). *See also* McGowan, *supra* note 14 (stating that the more convergence is fated, the less courts extend protection); Ty, Inc. v. GMA Accessories, Inc., 132 F.3d

P's that a court can assume not only that such close similarity was due to D's copying but also that no one else has or will independently create a pin as similar to P's as D's pin is.

Suppose similarity could be measured in percentages between 0 and 100, with 0% representing no similarity and 100% representing perfect identity. Suppose P's pin is 80% similar to the appearance of a real bee, and D's pin is 75% similar to P's pin. The 75% similarity may be due to both independently tracking a real bee. Accordingly, a court is unlikely to find that D infringes. Compare a case in which D's pin is still 75% similar to P's but that P's is highly stylized and only 30% similar to a real bee. In this case, a court is far more likely to find that D infringes.

We are now in a position to see why graphic characters are usually protected more thickly than non-graphic characters.[96] Graphic characters tend to be more unique because they tend not to closely approximate things on which others could converge. Mickey Mouse does not closely approximate a real mouse, a fact which is readily apparent to courts. In contrast, non-graphic characters tend to possess known traits and to face the recurrent problems of humankind.[97] This is not to say graphic characters are always more unique than non-graphic characters: graphic

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1167, 1170–71 (7th Cir. 1997) (Posner, J.) (stating that if either beanbag pig had resembled a real pig, court would have had a hard time determining whether one pig was copied from other or whether similarity resulted from efforts of both parties to create a pig in beanbag form); Ets-Hokin v. Skyy Spirits, Inc., 323 F.3d 763, 766 (2003) (finding the similarity between D's photo and P's photo was inevitable, given constraints imposed by subject matter and conventions of commercial product shot); Plains Cotton Coop. Ass'n v. Goodpasture Computer Serv., Inc., 807 F.2d 1256, 1262 (5th Cir.), *cert. denied*, 484 U.S. 821 (1987) (finding no infringement because shared constraints–dictates of cotton market–provided a plausible explanation for degree of similarity between D's work and P's); ATC Distr. Grp., Inc. v. Whatever It Takes Transmissions & Parts, Inc., 402 F.3d 700, 707–13 (6th Cir. 2005) (holding portions of P's catalog independently created by P were virtually inevitable and thus unprotectable); Computer Assocs. Int'l v. Altai, Inc., 982 F.2d 693, 708–09 (2d Cir. 1992) (explaining that because efficient structure may be independently created by others, efficient structure should be filtered out during substantial similarity analysis).

[96] *See* JOYCE, ET AL., *supra* note 11, at 149 ("Courts have had little trouble extending protection to characters in copyrighted cartoon strips or animated films . . .[b]ut literary characters are another matter entirely."); Jones, *supra* note 4, at 570–71 n.102–104 (listing cases suggesting protection greater for graphic characters); Walt Disney Prods. v. Air Pirates, 581 F.2d 751, 755 (9th Cir. 1978) ("[W]hile many literary characters may embody little more than an unprotected idea . . . a comic book character, which has physical as well as conceptual qualities, is more likely to contain some unique elements of expression."). The court in *Air Pirates* cited Warner Bros. Pictures v. Columbia Broad. Sys., 216 F.2d 945 (9th Cir. 1954). In *Warner,* the Court denied protection for hard-boiled detective character, Sam Spade, as developed in the book *The Maltese Falcon.* Justice Stevens reasoned that it is difficult to clearly delineate a literary character. "When the author can add a visual image, however, the difficulty is reduced." *Walt Disney Prods.,* 581 F.2d at 755. *See also* LANDES & POSNER, *supra* note 7, at 94 ("If Homer had not lived, eventually someone else would have written a poem about revenge, gods, and war over a beautiful woman. Yet once the *Iliad* is in existence, it becomes hard to determine whether subsequent authors of works on these themes are copying the *Iliad* or copying life.").

[97] In terms of our three variables, non-graphic characters tend to have lower added complexity, fewer viable alternatives, and more contenders.

characters that are relatively banal or undetailed may be less unique than non-graphic characters that are extra fanciful or richly delineated.[98]

D. Why Uniqueness?

A work is unique if it is a one-of-a-kind: novel and unrepeatable. Neither copyright nor patent protects work that lacks novelty because there are costs to protection but no benefits from inducing the re-creation of work that already exists.[99] One such cost is duplication of effort: for example, the expenditure of time and resources that could have been used to bring something new to the world. Other costs include the problems of proof and notice and the high costs of transaction and administration that result when multiple parties claim ownership of the same work.

The conventional wisdom is that copyright requires no novelty.[100] Taking the conventional wisdom as true, Roger Schechter and John Thomas suggest two reasons why copyright requires no novelty.[101] The first is that in many areas of pop culture works inevitably will resemble each other because of the limits of the genre and other conventions. For instance, a "comic book about a superhero will resemble many previous works of the same sort . . . ."[102] My response is simply that copyright does not protect a work insofar as it will inevitably resemble other works. Indeed, courts have refused to protect such features in superhero works.[103]

The alleged second reason why copyright requires no novelty is that "a novelty test can work only if there is some formal way—as in patent law—to compare newly created material with the body of previously existing work so that we can determine if it is genuinely novel."[104] My response is that no formal test or examination for novelty is needed so long as copyright only protects works very likely to be novel and only to the extent they are very likely to be novel.

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[98] *See, e.g.*, Metro-Goldwyn-Mayer, Inc. v. Am. Honda Motor Co., 900 F. Supp. 1287 (C.D. Cal. 1995) (protecting combination of non-graphic character and cinematic elements associated with character); Titan Sports, Inc. v. Turner Broad. Sys., Inc., 981 F. Supp. 65 (D. Conn. 1997) (holding that P could pursue copyright action for alleged infringement of professional wrestling character).

[99] *See infra* this section, discussing costs generated by work that is novel but repeatable. Work that is non-novel as well as repeatable generates the same costs but more so.

[100] *See supra* Part I.A.3.

[101] SCHECHTER & THOMAS, *supra* note 9, at 22.

[102] *Id.*

[103] *See* Conan Props., Inc. v. Mattel, Inc., 712 F. Supp. 353, 358 (S.D.N.Y. 1989) (finding that cartoonist cannot copyright idea of superhuman muscleman); Mattel, Inc. v. Azrak-Hamway Int'l, Inc., 724 F.2d 357, 360 (2d Cir. 1983) (holding that dolls positioned in crouched fighting stance of a Neanderthal man or that of a latter-day professional wrestler approaching opponent are uncopyrightable). *See also* Green, *supra* note 21, at 129 (arguing that general idea of superhero is unprotectable in part because it is susceptible to parallel independent creation).

[104] SCHECHTER & THOMAS, *supra* note 9, at 23.

Unlike copyright, patent protects some works that are novel but repeatable.[105] There are benefits from inducing the creation of work that is novel but repeatable; namely, the benefits of getting the work sooner rather than later. However, there are substantial costs. Utility patents, with their shorter term and formal screening process, seem to provide a better balance of benefits to costs for work that is novel but repeatable.

We reserve the long and easily obtained monopoly of copyright for work that is unique (novel and unrepeatable).[106] The benefit of liberally protecting unique work exceeds the benefit of liberally protecting work that is novel but repeatable. A particular unique work is made by a particular party. If the law fails to incentivize that particular party, and if that party has no other incentives to make the work, the work is lost to the world forever. In contrast, a non-unique work can be made by multiple parties. If the law fails to incentivize all but one of them, the world still gets the work. In sum, liberal protection ensures creation of unique work more effectively than it ensures creation of non-unique work.

Liberal protection for unique work also costs less than liberal protection for non-unique work. Protection for unique work does not encourage duplicative creation of the same thing; that is to say, no independent creator will repeat a unique work. By definition, a unique work—a one of a kind work—cannot be independently repeated by others. In contrast, protection for non-unique work can encourage duplicative creation of the same thing because non-unique work can be independently repeated by others.

To be sure, weak protection for non-unique work allows for free riding, which reduces the incentive for creators of non-unique work to be the first to create it. The choice of whether we should protect non-unique work requires a trade-off between the social costs of free riding and the social costs of duplicative creation. If we refuse to protect non-unique work, there is more free riding but less duplicative creation. If we protect non-unique work, there is less free riding but more duplicative creation. However, the main point to note here is that the choice of whether we should protect unique work does not entail this trade-off. If we refuse to protect unique work, there is more free riding and zero duplicative creation; if we protect unique work, there is less free riding and still zero duplicative creation.

Third–and tipping the balance affirmatively against copyright protection for non-unique work–is that copyright for non-unique work would generate problems

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[105] *See infra* Part II.E.

[106] I do not argue that the current copyright term is justified. It is too long from a policy standpoint. *See, e.g.*, Eldred v. Ashcroft, 537 U.S. 186 (2008) (Breyer, J., dissenting). I argue only that the copyright term should be longer than the patent term (at least if the patent term is not itself too long).

of proof,[107] problems of notice and overlapping claims of ownership,[108] high transaction costs,[109] and rent seeking.[110] If copyright protected non-unique work, multiple parties would often claim copyright in the same work and many more independent creators would get sued.[111] Some first creators would sue second creators,

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[107] *See* Lichtman, *supra* note 21, at 686–87, 705–07 (2003). According to Lichtman, the creativity requirement screens out works for which courts would be unable to use similarity to infer that D copied from P. If copyright protected uncreative work, two parties would come forward with very similar works, and the court would find it virtually impossible to determine whether one copied from the other or whether, instead, the similarity between them was a natural outgrowth of that both lack creativity. *See also* Khong, *supra* note 65, at 6–11 (accepting Lichtman's theory); SCHECHTER & THOMAS, *supra* note 9, at 27 (rationalizing creativity requirement on ground that, without it, independent creators would be charged with copying and courts would find it difficult to determine whether D's claims of independent creation were true); Green, *supra* note 11, at 926, 931–32, 941–42; *id.* at 934 ("[I]f the work is likely to be created by many people independently, the enforcement costs will be greater because the fact-finder in an infringement case will have to expend time and effort excluding the possibilities that the [D] came up with the work herself and that the plaintiff in fact copied the work from a third party."); L. Batlin & Son, Inc. v. Snyder, 536 F.2d 486, 492 (2d Cir. 1976) (*en banc*) ("To extend copyrightability to minuscule variations would simply put a weapon for harassment in the hands of mischievous copiers intent on appropriating and monopolizing public domain work."); LANDES & POSNER, *supra* note 7, at 90 ("The main function of conditioning copyright protection on a showing of some originality is . . . to lighten the evidentiary burden on the courts of having to decide whether two virtually indistinguishable works . . . were independently created or one was copied from the other . . . ."); *id.* at 103 ("The more likely independent creation is, the more costly and uncertain the litigation of a claim of copyright infringement will be, and this becomes an argument for denying copyright protection."); Assessment Techs. of WI, L.L.C. v. WIREdata, Inc., 350 F.3d 640, 643 (7th Cir. 2003) (Posner, J.) (describing creativity requirement as a means of identifying P's independent creation). *But see* McGowan, *supra* note 14, at 255–56 (remarking that "it is easy enough to weed out false positives by requiring strong proof of copying where the baseline probability of coincidental similarity is high"). For partial responses to McGowan, *see infra* text and footnotes to follow.

[108] *See generally* JAMES BESSEN & MICHAEL J. MEURER, PATENT FAILURE: HOW JUDGES, BUREAUCRATS, AND LAWYERS PUT INNOVATORS AT RISK (2008) (explaining importance of property's notice function, and arguing that notice is undermined when, among other things, multiple parties claim rights in same subject matter); MICHAEL HELLER, THE GRIDLOCK ECONOMY: HOW TOO MUCH OWNERSHIP WRECKS MARKETS, STOPS INNOVATION, AND COSTS LIVES (Basic Books 2008) (explaining that property system tends to fail when multiple parties claim overlapping rights to same subject matter).

[109] *Cf.* Green, *supra* note 11, at 926, 931–32, 941–42; *id.* at 934 ("The likelihood of parallel independent creation also increases transaction costs. If material has been created only once, it is easier to identify the person from whom one should obtain a license. But if there are many creators of the material, someone seeking to insulate herself from an infringement suit must expend a great deal of time and effort tracing the ultimate provenance of the material she borrowed – or obtain a license from every creator.").

[110] *Cf.* LANDES & POSNER, *supra* note 7, at 93–96 (arguing that protecting ideas, names, titles, short phrases, and *scènes à faire* would over-reward first creators, and increase rent seeking, transaction costs, and overall cost of creating works); CCH Canadian Ltd. v. Law Soc'y of Upper Canada, [2004] SCC 13 (Can.) (holding that a robust originality requirement serves as a safeguard against the author being overcompensated for his or her work).

[111] One reason to think many more independent creators would be sued were copyright extended (like patent) to non-unique work is that the vast majority of patent infringement lawsuits are against independent inventors, not against pirates who actually copied from the patentee. *See* Christopher Cotropia and Mark A. Lemley, *Copying in Patent Law* (Stanford Public Law Working Paper No.

some second creators would sue first creators, or both might sue or be sued by third creators. On occasion, independent creators would be sued by parties who had not independently created but had copied from the public domain, from other copyrighted works, or even from D's work.[112]

Independent creation is a defense to copyright infringement, but we could not rely entirely on this defense were we to extend copyright to non-unique work. Some bona fide independent creators would be unable to prove independent creation, because courts rely on similarity as proof of copying.[113] Courts would come to rely less on similarity and to more often require direct evidence of copying,[114] but then copiers would often escape liability because direct evidence of copying is seldom available.[115]

1270160, Feb. 2009), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1270160 (finding that vast majority of patent infringers independently invented the patented invention).

[112] The risk of copiers suing creators exists for unique works too, but the risk is much lower because the evidence will usually point to the true creator of a unique work. For example, if you independently write a novel, there will likely be a paper trail that corroborates your claim that you wrote it.

[113] *See, e.g.*, Green, *supra* note 11, at 934 ("Although independent creation remains a defense against a suit for infringement, juries routinely rely upon similarity when inferring copying . . . ."); Arnstein v. Porter, 154 F.2d 464, 469 (2d Cir. 1946) ("[A] case could occur in which the similarities were so striking that we would reverse a finding of no access, despite weak evidence of access (or no evidence thereof other than the similarities) . . . ."); Durham Indus., Inc. v. Tomy Corp., 630 F.2d 905, 910–18 (2d Cir. 1980) (holding originality requirement and idea-expression dichotomy are necessary because, by itself, test of substantial similarity would as a practical matter subject innocent parties to threat of suit); A.A. Hoehling v. Universal City Studios, Inc., 618 F.2d 972, 977 (2d Cir. 1980) (A "series of copyright cases in the Southern District of New York have granted defendants summary judgment when all alleged similarity related to *non*-copyrightable elements of the plaintiff's work. These cases signal an important development in the law of copyright, permitting courts to put a 'swift end to meritless litigation' and to avoid lengthy and costly trials.") (citations omitted). In Sid & Marty Krofft Television Prods., Inc., v. McDonald's Corp., 562 F.2d 1157 (9th Cir. 1977), the court said that limiting doctrines are necessary to prevent copyright from extending too far and that relying solely on the defense of independent invention would not suffice. Absent limiting doctrines, "[f]or example, a copyright could be obtained over a cheaply manufactured plaster statue of a nude. Since ownership of a copyright is established, subsequent manufacturers of statues of nudes would face the grave risk of being found to be infringers if their statues were substantially similar and access were shown. The burden of proof on the plaintiff would be minimal, since most statues of nudes would in all probability be substantially similar to the cheaply manufactured plaster one." *Id.* at 1162–65.

[114] *Cf.* Mag Jewelry Co. v. Cherokee, Inc., 496 F.3d 108, 119 (1st Cir. 2007) ("[W]here the simplicity of the design makes independent creation highly plausible, similarity alone could not establish access and, in turn, copying."); Ferguson v. Nat'l Broad. Co., 584 F.2d 111, 113 (5th Cir. 1978) ("If the two works are so strikingly similar *as to preclude the possibility of independent creation*, 'copying' may be proved without a showing of access.") (emphasis added); Selle v. Gibb, 741 F.2d 896, 901 (7th Cir. 1984); Ty, Inc. v. GMA Accessories, Inc., 132 F.3d 1167, 1171 (7th Cir. 1997); Gaste v. Kaiserman, 863 F.2d 1061, 1068–69 (2d Cir. 1988) ("[S]triking similarity between pieces of popular music must extend beyond themes that could have been derived from a common source or themes that are so trite as to be likely to reappear in many compositions.").

[115] Novelty Textile Mills, Inc. v. Joan Fabrics Corp., 558 F.2d 1090, 1092 (2d Cir. 1977) ("[D]irect evidence of copying is rarely, if ever, available."); Tiffany Design, Inc. v. Reno-Tahoe Specialty, Inc., 55 F. Supp. 2d 1113, 1120 (D.C. Nev. 1999) ("[D]irect evidence of copying is rarely available in copyright cases . . . .").

Further, if multiple parties claim ownership of the same works, potential users of the works will find it more difficult to clear rights. How does a potential user know who is a bona fide independent creator with the power to assign or to license? If the work is repeatable, multiple parties can plausibly claim to have independently created it. Given the high costs of clearing rights and the residual risks, potential users might forego clearing rights in favor of independently creating the works themselves or by commissioning others to do so. But in cases in which potential users find it less costly to create work from scratch than to buy or license it, the law should probably let them freely copy it[116] and thereby avoid wasteful duplication of effort.

E. Repeatability Forms the Line Between Patent and Copyright

Had the Wright Brothers not invented the powered airplane, someone else would have,[117] and soon.[118] In contrast, had Lewis Carroll not written *Alice in Wonderland*, no one would have ever written it.

The line between patent and copyright is the line between repeatable subject matter and unrepeatable subject matter. Contrary to popular opinion,[119] the line is not between subject matter with practical utility and subject matter without it. The entertainment and diversion provided by movies, music, and literature is a practical utility. In any event, copyright also protects "dry" works that we are more apt to label as practical, for example, maps, blueprints, technical manuals, price guides, textbooks, encyclopedias, and computer code.

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[116] *Cf.* Wendy J. Gordon, *Fair use as market failure: A structural and economic analysis of the* Betamax *case and its predecessors*, 82 COLUM. L. REV. 1600 (1982).

[117] More specifically, someone else would have invented an airplane that operates in the way described and claimed in the Wright Brothers' patent. No one would have invented their exact same working embodiment. Are the exact working embodiments of patentable inventions copyrightable? They are if the inventions are computer programs. For several decades copyright has protected the working embodiments of computer programs (the actual code), while patent has protected both the actual code and more generalized versions of the methods carried out by the actual code. Presumably, however, the exact working embodiments of most patentable inventions are protectable only under patent, which amounts to an exception to the rule that copyright protects unique work. This exception might be justified on the ground that it is preferable, for reasons of clarity and administrative convenience, to protect a work either with utility patent or with copyright and not with both.

[118] *See* Mark A. Lemley, *The Myth of the Sole Inventor*, 110 MICH. L. REV. 709, *passim* (2012) (discussing the collective nature of the invention of the airplane, the great improvements made by contemporaries of the Wright Brothers, and the fact that nearly all significant inventions are invented near simultaneously by parties working independently of each other). *See also* Robert K. Merton, *Singletons and Multiples in Scientific Discovery: A Chapter in the Sociology of Science*, 105 PROC. AM. PHIL. SOC'Y 470 (1961); William F. Ogburn & Dorothy Thomas, *Are Inventions Inevitable?* 37 POL. SCI. Q. 83 (1922).

[119] *See* LESTER HORWITZ & ETHAN HORWITZ, 1 INTELLECTUAL PROPERTY COUNSELING AND LITIGATION, § 3.03(1)(d) (1999) ("[A] judicial consensus developed that copyright protection of a useful article must end at the realm of utility, where patent protection begins.").

As discussed previously, liberal protection for non-unique work generates little social bang for the social buck. Thus we rely on the shorter and harder to obtain monopoly of utility patent[120] to protect a subset of non-unique work: non-symbolic work that is novel but moderately repeatable and that efficiently exploits physical principles ("invention").

Patent allows a degree of repeatability that copyright forbids. Hence most patent infringement suits are against inventors who independently created the invention, not against pirates.[121] When an invention is very repeatable, however, even patent withholds protection–typically on the ground that the invention is "obvious"[122] but occasionally on the ground that the invention is an "abstract idea."[123] An uncopyrightable idea is a repeatable pattern, whereas an unpatentable abstract idea is a very repeatable pattern.

Inventions are repeatable because they are constrained by shared reality.[124] More specifically, they are dictated by the laws of physics, by requisites of safety and compatibility, by costs of production, and by foreseen demand for solutions to well-defined problems. These shared constraints channel independent inventors toward the same inventions.[125] Furthermore, the costs of invention fall with time.[126]

Patents reward inventors enough to accelerate invention. A patent rewards an inventor not for bringing us an invention that would never have come absent the promise of exclusivity but for bringing us the invention sooner than it would have

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[120] *Cf.* Ralph Brown, *Eligibility for Copyright Protection: A Search for Principled Standards*, 70 MINN. L. REV. 579, 604 (1985) (asserting that the patent/copyright boundary "reflects the policy determination that a seventy-five year monopoly on a useful object would frustrate the policy that seventeen years is long enough for patent protection").

[121] Cotropia and Lemley, *supra* note 111.

[122] *Cf.* Tun-Jen Chiang, *A Cost-Benefit Approach to Patent Obviousness*, 82 ST. JOHN'S L. REV. 39 (2008) (framing obviousness as a function of how soon the invention would have been created absent the promise of patent protection). We might say that patent protects work that is moderately non-obvious, whereas copyright protects work that is very non-obvious. *Cf.* Amy L. Landers, *A Promising Field of Endeavor: A Grounded Approach to Patentability* (Aug. 2011) (working paper) (suggesting inventions should be considered obvious when they would occur in ordinary course through a series of mechanical steps).

[123] *See, e.g.*, Bilski v. Kappos, 561 U.S. ___, 130 S. Ct. 3218 (2010) (confirming longstanding rule that abstract ideas are unpatentable).

[124] *Cf.* Burk, *supra* note 44, at 602, 605–08 (arguing that patent law protects highly constrained works). *Cf.* Lemley, *supra* note 118 *passim* (surveying the literature on parallel independent invention and reports that almost all significant inventions have been invented simultaneously or nearly so by inventors working independently of each other, and one reason is that inventions are based on immutable physical principles, that is, independent inventors converge on the same path because there is a stable and optimal (if not inevitable) path for them to converge on).

[125] In terms of our three variables, inventions have relatively low added complexity, few viable alternatives, and many contenders over the long term.

[126] For example, it would be much easier to invent the polio vaccine today than it was to invent it in the 1950s.

come absent the promise.[127] In a world with no patents, most inventions would still come, but they would be postponed until they could be invented more cheaply.[128]

Because most inventions would eventually arrive even without the promise of exclusivity, and because protection for them generates substantial social costs, we protect them for less time (20 years from filing) than we protect copyrighted work (~120 years on average). Also, we examine patent applications to see whether applicants actually invented that which they claim and to see whether their claimed inventions are so repeatable that they would have been created soon even without the promise of exclusivity.[129]

F. Related Theories from Other Commentators

The main claims of this paper are repeatable because they are constrained by shared reality. Fortunately, most of them are novel in all but their most abstracted forms.

Khong, writing in the economic literature, very briefly sketches a theory similar to uniqueness.[130] His theory is that the originality requirement screens out work that has a high probability of being coincidentally similar to the work of another, thereby avoiding erroneous findings of infringement and related proof problems.[131] According to Khong, originality requires more than independent creation by P because, by itself, independent creation by P would fail to screen out some works that are coincidentally similar.[132] To serve as an effective screen, originality also includes creativity, which requires that a work contain elements unlikely to coincide with other works.[133] Khong's theory is essentially correct, but he does not elaborate or show how it unfolds in the case law or commentary.

Byron proposes a theory that, though informed by intuitions similar to mine, falls short of uniqueness.[134] Byron's theory is that a work tends to be copyrightable

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[127] *See* Chiang, *supra* note 122, at 57–58 ("[P]atents create incentives for additional research investment, leading to inventions being made *sooner* than they otherwise would be." (emphasis added)); Lemley, *supra* note 118 (suggesting that a supplemental justification for the patent system is that it encourages patent races and thereby accelerates invention).

[128] Samson Vermont, *Independent Invention as a Defense to Patent Infringement*, 105 MICH. L. REV. 475, 479 (2006); *see* Chiang, *supra* note 122, at 62–63.

[129] In general, we do not want to award 20 years of exclusivity for an invention someone else would have independently created in six months absent the promise of exclusivity. *See* Chiang, *supra* note 122, at 66–67 (using cost-benefit analysis to argue that an invention should not be patented if, even in the absence of patent protection, it would have been created by someone well before the patent would expire).

[130] *See generally* Khong, *supra* note 65.

[131] *Id.* at 10.

[132] *Id.* at 15–16.

[133] *Id.* at 6, 16.

[134] Byron, *supra* note 4, at 46.

when it is very unlikely to be created.[135] In contrast, under the uniqueness theory, a work is copyrightable when it is very unlikely to be created more than once. The difference is bigger than it seems. Byron's theory is very sensitive to the way we conceive of the probability that a work will be created. If we assess probability using our hindsight knowledge about the state of the world that existed when the work was created–including the existence of the creator with his individual attributes and circumstances as well as his expectation of copyright protection–then the creation of the work always seems likely. For instance, in determining whether *Alice in Wonderland* is copyrightable, if we assume the existence, attributes, and circumstances of Lewis Carroll, the creation of *Alice in Wonderland* seems likely and thus uncopyrightable under Byron's theory. In contrast, if we ask whether *Alice in Wonderland* is unlikely to be independently created more than once, the right answer jumps out at us: it is clearly copyrightable.

Byron's theory diverges further from mine in that he proposes a Goldilocks-like middle ground in which works are maximally protected when they are moderately unconstrained.[136] That is, protection decreases toward both ends of the spectrum of constraint, such that works are unprotected when either very constrained or very unconstrained, and most protected when moderately constrained.[137] Byron's aim here is to account for cases in which courts refuse to protect arbitrary codes, which are very unconstrained.[138]

If Byron were correct that very unconstrained works are uncopyrightable, we might expect Lewis Carroll's poem *Jabberwocky* and Jackson Pollock's paintings to be less copyrightable than more constrained works, but that does not appear to be the case. In any event, Byron's middle-ground does not explain cases, such as *Lotus v. Borland*,[139] in which courts refuse to protect moderately constrained works. I look to a distinct principle to explain cases in which courts refuse to protect works along the entire spectrum of constraint: dominance.

Other commentators with theories or arguments that overlap the uniqueness theory include Michael Green,[140] David McGowan,[141] Doug Lichtman,[142] and Alan Durham.[143]

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[135] *Id.* at 47 ("[O]nly the work that is unlikely to be created merits copyright protection.").

[136] *Id.* at 67, 74. *See also* Thomas Byron, *Of Dancers, Black Panthers, Cheerleaders, and Icons: Reflections of the Idea/Expression Dichotomy in the Relevance Prong of the Rogers Test*, 13 TUL. J. TECH. & INTELL. PROP. 1, 7–8 (2010) (discussing a continuum of constraint).

[137] Byron, *supra* note 4, at 95.

[138] *See supra* Part II.A. *See also infra* Part III.

[139] Lotus Dev. Corp. v. Borland Int'l, 49 F.3d 807 (1st Cir. 1995), *aff'd by an equally divided court*, 516 U.S. 233 (1996).

[140] *See* Green, *supra* note 11, at 936 (arguing that a creativity requirement helps screen out works that have a high probability of being independently created by others); *id.* at 941, 951 (asserting that ideas and facts are susceptible to independent creation); Green, *supra* note 21, at 123 (proposing that distin-

III. **Dominance**

Uniqueness explains most but not all of the cases that involve the limiting doctrines. More can be explained by supplementing uniqueness with dominance, which is akin to antitrust. Courts limit protection for a dominant work even if it is unique. A work is dominant if the work has itself become a lasting constraint on other parties for reasons apart from the work's intrinsic merit or P's contribution to it, especially if the social value of the work is due largely to inputs from other parties.[144] When the success or social value of a work clearly outweighs its merit or P's contribution—because of, for instance, lock-in through path dependence, network effects, chance, or adoption as law or industry standard—imposing liability against everyone who engages in any copying of the work over-rewards P, deters efficient use of the work by others, and generates wasteful litigation and high transaction costs.[145] Conversely, it is efficient to allow others to engage in at least some unauthorized copying of a dominant work.

Consider *Lotus v. Borland*.[146] Lotus's 1-2-3 spreadsheet software had become the *de facto* standard.[147] After laboring for three years to develop spreadsheet soft-

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guishable variation requirement helps prevent protection for works that could be independently created).

[141] *See* McGowan, *supra* note 14, at 233 (the more convergence is expected and useful, the less courts extend protection).

[142] *See* Lichtman, *supra* note 21, at 686–87, 705–07 (suggesting that the creativity requirement screens out works that could be independently created so that courts could not rely on similarity as strong evidence that D copied).

[143] *See* Durham, *supra* note 39, at 638 (suggesting that indeterminate or randomly-organized works are inherently unique, which makes infringing works readily identifiable and which may be one of the reasons for the originality requirement).

[144] The most successful designs are not always the best. Those who would argue otherwise should, for starters, consider the metric system. *See also* SCOTT BERKUN, THE MYTHS OF INNOVATION, 116–21 (2007) (suggesting that HTML and JavaScript are far from best software development languages); *id.* at 116 (arguing that the Phillips screw is inferior to lesser-known Robertson screw).

[145] *See* MERGES, ET AL., *supra* note 78, at 459–60 ("Courts have declined to find copyright protection (often on the grounds of merger) in cases where similarity in computer programs has been dictated by (a) standard practices in the industry for which the software programs are designed, (b) methods or practices that a large population has come to rely upon for daily activities, and (c) the need to operate on common hardware or with common software."); Hughes, *supra* note 4, at 220–21, 225–31 (discussing essential facilities doctrine of antitrust law and other rationales for limiting protection for otherwise copyright-protected work); Peter S. Menell, *An Epitaph for Traditional Copyright Protection of Network Features of Computer Software*, 43 ANTITRUST BULL. 651, 674 (1998); Peter S. Menell, *Tailoring Legal Protection*, 39 STAN. L. REV. 1329, 1343–44 (1987). The dominance principle is also consistent with the European exemption for copying necessary to achieve interoperability. *See* Directive on the Legal Protection of Computer Programs, 1991, 91/250/EEC, art. 6, O.J. (L 22) (setting forth the exemption).

[146] Lotus Dev. Corp., v. Borland Int'l, 49 F.3d 807 (1st Cir. 1995), *aff'd by an equally divided court*, 526 U.S. 233 (1996).

[147] *Id.* at 821 (Boudin, J., concurring) ("Apparently, for a period Lotus 1-2-3 has had such sway in the market that it has represented the *de facto* standard for electronic spreadsheet commands.").

ware superior to Lotus 1-2-3, Borland released Quattro.[148] To enable users familiar with the Lotus menu to use Quattro, Borland included an option to operate Quattro through an emulation of the Lotus menu command hierarchy.[149] Lotus claimed the emulation infringed its copyright.[150]

The appellate court held the Lotus menu command hierarchy unprotectable.[151] The reason was not lack of originality or creativity; with 469 commands arranged into more than fifty menus and submenus, the Lotus menu entailed a litany of evitable choices.[152] Nor was the reason that Lotus's idea of spreadsheet software had merged with Lotus's expression.[153] From the standpoint of technology and intrinsic utility, innumerable other menu trees would have served equally well[154] in a counterfactual world in which the Lotus menu did not exist. Indeed, Borland claimed that its own menu was superior.[155]

The majority reasoned that the Lotus menu was a "method of operation" and thus barred by 17 U.S.C. 102(b).[156] The majority's stated reason is dubious.[157] As

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[148] *Id.* at 810.

[149] *Id.*

[150] *Id.*

[151] *Id.* at 819.

[152] *Lotus Dev.*, 49 F.3d at 809, 811, 816.

[153] *Cf.* Apple Computer, Inc. v. Franklin Computer, 714 F.2d 1240, 1253 (3d Cir. 1983) (achieving compatibility with other programs "is a commercial and competitive objective which does not enter into the somewhat metaphysical issue of whether particular ideas and expressions have merged").

[154] *Lotus Dev.*, 49 F.3d at 811.

[155] *Id.* at 810.

[156] *Id.* at 815.

[157] The majority's reading implies not only that software menus are uncopyrightable but that most if not all computer programs are uncopyrightable because they are methods of operation. Yet Congress explicitly decided that computer programs are copyrightable. Hence the majority's reading of 102(b) essentially conflicts with the definition of "computer program" in 17 U.S.C. § 101: "A 'computer program' is a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result." The majority's reading of § 102(b) also conflicts with legislative history stating that § 102(b) was not supposed to change the law. *See* H.R. Rep. No. 94-1476, at 57, *reprinted in* 1976 U.S.C.C.A.N. 5659, 5670 ("Section 102(b) in no way enlarges or contracts the scope of copyright protection under the present law."). Finally, the majority's reading conflicts with other cases. *See* Mitel, Inc. v. Iqtel, Inc., 124 F.3d 1366, 1372 (10th Cir. 1997) (stating that an element may contain copyrightable expression even if the element can be characterized as a method of operation); *Apple Computer*, 714 F.2d at 1251 (holding that § 102(b) does not bar copyright for software applications or operating systems); Compaq Computer Corp. v. Procom Tech., Inc., 908 F. Supp. 1409, 1419 (S.D. Tex. 1995) (finding method for predicting failure of disk drives is copyrightable where many of P's choices were based on opinion and where it was impossible to empirically verify whether P's choices were optimal). *But see* Durham, *supra* note 4, at 176 (arguing Compaq's system is candidate for patent, not copyright). The majority's reading of § 102(b) also lead the majority to conclude that whether the menu could have been designed differently was irrelevant. *See Lotus*, 49 F.3d at 816 ("The fact that Lotus developers could have designed the Lotus command hierarchy differently is immaterial to the question of whether it is a 'method of operation.'"). This conclusion suggests that the number of alternatives is irrelevant, which conflicts with most case law.

the concurring opinion suggests, the real reasons Lotus lost were: (1) the Lotus menu had become the *de facto* standard (much like the QWERTY keyboard layout);[158] (2) Borland could not compete with Lotus unless it provided the emulation as an option for users who had invested in learning the Lotus menu; and (3) Borland limited its free-riding by designing its own spreadsheet and by not copying any of Lotus's code to create the emulation.[159] In other words, the Lotus menu had become dominant and thus unprotected against uses like Borland's.

The dominance principle may express itself at the threshold of copyrightability[160] through a limiting doctrine or the originality requirement, at the infringement stage through a finding that the accused work is too dissimilar or the taking too *de minimis* to infringe, or at a later stage through the affirmative defense of fair use.[161] Where a work falls into a category of works that seem clearly dominant at the outset, a court is likely to hold the work unprotectable at the threshold of copyrightability.

Names, titles, and other pure designators usually seem dominant at the outset.[162] They tend to get locked in. Indeed, their social value depends on their getting locked in through the inputs of other parties–through their learning and using the names and titles (and only those names and titles) to refer to the persons and things named and titled.[163] Unique names and titles—such as Moon Unit Zappa and *I Heart Huckabees*—are just as dominant as non-unique names and titles. Whether or not unique, allowing people to freely use names and titles tends to be efficient,[164] so they are uncopyrightable.[165]

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[158] *Lotus Dev.*, 49 F.3d at 821. *See also* LANDES & POSNER, *supra* note 7, at 99, 392 (copyright protection for user interface that has become industry standard would, like copyright protection for QWERTY, generate deadweight costs that exceed costs of reducing incentive to create user interface).

[159] *Lotus Dev.*, 49 F.3d at 821 (J. Boudin concurring).

[160] *See infra* Part IV.E (arguing that dominance explains the outcome in Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340 (1991)). *See also infra* Part IV.B (discussing dominance of names, titles, and part numbers).

[161] *See, e.g.*, Time, Inc. v. Bernard Geis Assocs., 293 F. Supp. 130, 131–32, 146 (S.D.N.Y. 1987) (noting that bystander's footage of Kennedy assassination was most important photographic evidence and D's book on assassination was a serious analysis of evidence that deserved to be heard); L.A. News Serv. v. CBS Broad., Inc., 305 F.3d 924, 942 (9th Cir. 2002) (finding it fair use for D to incorporate few seconds of P's footage of Reginald Denny beating in promotion of D's trial coverage).

[162] *Cf.* Hughes, *supra* note 4, at 198–203 (discussing copyright protection for names and other designators such as addresses, part numbers, and codes for medical and dental procedures); *id.* at 199 ("[H]aving names for things – both general and proper names – is fundamental to communicating any other facts.").

[163] *Cf.* McGowan, *supra* note 14, at 250 (noting that variation in names is undesirable even when they are not industry standards because a new set of names, or codes, would impede understanding and raise information and transaction costs).

[164] *Cf. id.* at 248–49 (arguing names are uncopyrightable even when they are creative, because protecting names would be inefficient).

Codes for parts and procedures can qualify as dominant for the same reasons names and titles do.[166] That is, such codes qualify as dominant when most of their social value is due to input other than their creators'. If a code is arbitrary, most of its social value is likely due to the inputs of others because an arbitrary code is a pure designator that costs very little to create.[167] Hence courts tend to find arbitrary codes uncopyrightable[168] even though they are unique at least when aggregated together.[169] Arbitrary codes are unique when aggregated together precisely because they are arbitrary—in other words, unconstrained.[170] That courts nonetheless find them uncopyrightable strongly suggests uniqueness must be supplemented by a distinct principle.[171] This is harder to see in close cases involving non-arbitrary codes that are borderline unique, borderline dominant, or both.

Government works are another category of works that seem dominant at the outset; hence, they are unprotected.[172] A traditional rationale is that the public has

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[165] *See* 37 C.F.R. § 202.1(a) (2007) (excluding protection for names and titles).

[166] *Cf.* Hughes, *supra* note 4, at 201 (The ADA's code numbers were, in effect, names for dental procedures. "[T]hey are the only practical way to refer to particular medical and dental procedures just as your home address is the only practical way to refer to the particular place where you live."); *id.* at 220 (suggesting that SouthCo part numbers were necessary for carrying out non-expressive activities and that no copyright protection was needed to incentivize SouthCo to create its part numbers); McGowan, *supra* note 14, at 247 (discussing a continuum of expression and that numbers that designate parts or medical procedures serve as names).

[167] Suppose that the QWERTY layout were under copyright and that P had slapped it together at low cost. The fact that other keyboard suppliers do not slap together their own non-infringing layouts is evidence that QWERTY is dominant. In general, if P's cost to produce the work was very low, D's cost to produce non-infringing work will also be very low. The fact that D chose to copy P's low cost work rather than to produce non-infringing low cost work is itself evidence that P's work is dominant. As another example, consider the siren sounds that one hears in different countries. Competing siren makers could make different siren sounds at trivial cost but to do so would be futile given the dominance of particular siren sounds in particular countries.

[168] *See, e.g.*, Mitel, Inc. v. Iqtel, Inc., 124 F.3d 1366, 1373 (10th Cir. 1997) (holding command codes uncopyrightable because arbitrary selection of numbers "required *de minimis* creative effort"); Toro Co. v. R & R Prods. Co., 787 F.2d 1208, 1213 (8th Cir. 1986) (holding arbitrary part numbering system unprotectable).

[169] No single random number that is, say, ten digits long is unique on its own. On the other hand, an aggregation of more than a few random ten-digit numbers is unique, especially when further aggregated with references to specific parts, procedures, or persons.

[170] *See* Durham, *supra* note 4, at 182 (explaining randomly-organized works are inherently unique).

[171] *See, e.g.*, SouthCo, Inc. v. Kanebridge Corp., 390 F.3d 276, 284–85 (3d Cir. 2004) (involving part numbers that denoted functional characteristics of each product, e.g., thread type, grip length, and knob finish, and the court described the part numbers as mechanically produced by the inflexible rules of the SouthCo system). The decision in *SouthCo* implies that SouthCo's numbers were non-unique or at least less unique than arbitrary codes. Yet, SouthCo's mechanical production implies low cost of creation, which is itself evidence of dominance. Moreover, SouthCo's part numbers "had [become] to some degree an industry standard." Hughes, *supra* note 4, at 201, citing *SouthCo*, 258 F.3d 148, 150 (3d Cir. 2001). So *SouthCo* was a difficult case.

[172] *See* Copyright Act, 17 U.S.C. § 105 (1976) (stating federal works uncopyrightable); Wheaton v. Peters, 33 U.S. 591, 668 (1834) ("[N]o reporter has or can have any copyright in the written opinions delivered by this Court . . . ."); Banks v. Manchester, 128 U.S. 244, 253 (1888) ("The whole work done by the judges constitutes the authentic exposition and interpretation of the law, which, binding

already paid for government works through taxes.[173] One problem with this rationale is that it fails to explain why privately funded works, such as model codes, also tend to lose protection when the government adopts them without compensating the private party.[174] A better rationale is that works adopted by the government seem dominant at the outset. A privately-funded work adopted by the government is just as likely to be dominant as a government-funded work adopted by the government.[175]

Where the dominance of a work is a close call, the dominance principle is more likely to express itself through a finding of fair use. For example, unauthorized use of footage of a spontaneous event could qualify as fair use if the event is important and if the footage is the best or sole record of it.[176] In such cases, fully protecting the footage against any and all forms of unauthorized use could bestow a large windfall[177] on P while deterring efficient use of the footage by others. Accordingly, courts may protect footage of important events against some but not all unauthorized uses.[178]

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every citizen, is free for publication to all . . . ."); Veeck v. S. Bldg. Code Cong. Int'l, 293 F.3d 791 (5th Cir. 2002) (en banc), *cert. denied*, 539 U.S. 969 (2003) (citing 1 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 5.06(c) at 5–92 (2000) ("[S]tate statutes, no less than federal statutes, are regarded as being in the public domain.")).

[173] Hughes, *supra* note 4, at 209 (noting the view that the expression of government employees has already been bought and paid for by the citizenry).

[174] *Cf. Veeck*, 293 F.3d at 816 (5th Cir. 2002) (en banc), *cert. denied*, 539 U.S. 969 (2003) (Wiener, J., dissenting) ("[U]nlike judges and legislators who are paid from public funds to issue opinions and draft laws, [defendant] relies for its existence and continuing services, in significant part, on revenues from the sale of its model codes.").

[175] *Cf.* New York Mercantile Exch., Inc. v. Intercontinental Exch., Inc., 497 F.3d 109, 116, 118 (2d Cir. 2007). The fact that the NYMEX settlement prices were established by committee suggests they were probably unique. But they were probably dominant, as illustrated by the appellate court's point that P was required by law to create them and by the district court's point that NYMEX prices are "widely publicized and used as benchmarks by market participants." New York Mercantile Exch., Inc. v. Intercontinental Exch., Inc., 389 F. Supp. 2d 527, 542 (S.D.N.Y. 2007). *See also* CCC Info. Servs., Inc. v. Maclean Hunter Mkt. Reports, Inc., 44 F.3d 61, 74 (2d Cir. 1994) (holding Red Book guide to used car prices protectable). Despite the holding in *CCC*, a court would likely allow some unauthorized use of the Red Book when the use is attributable to the legal requirement in some states to take the average, for insurance purposes, of the value in the Red Book and the value in the Kelly Blue Book.

[176] That a work is important does not by itself make it dominant. *Cf.* Harper & Row v. Nation Enters., 471 U.S. 539, 559 (1985) ("It is fundamentally at odds with the scheme of copyright to accord lesser rights in those works that are of greatest importance to the public."); Folsom v. Marsh, 9 F. Cas. 342, 348 (1841) (holding that D's copying of George Washington's private letters was not fair use where P had already published them in his biography of Washington). To be dominant, the work must be important for reasons other than its merit or P's contribution to it.

[177] *Cf.* McGowan, *supra* note 14, at 262 (noting that absolute copyright protection would seem to confer an unjustifiable windfall on bystanders who captured footage of Kennedy assassination and Rodney King beating).

[178] *Compare* Time, Inc. v. Bernard Geis Assocs., 293 F. Supp. 130, 131–32, 146 (S.D.N.Y. 1987) (explaining that bystander's footage of Kennedy assassination was most important photographic

IV. The Limiting Doctrines Unified

Copyright's many limiting doctrines largely reduce to the uniqueness requirement. What remains largely reduces to the dominance principle.

A. Useful Article Doctrine

Examples of useful articles include belt buckles, ashtrays, furniture, dinnerware, candle holders, lighting fixtures, and automobile bodies. In an attempt to codify[179] the useful article doctrine, the copyright statute instructs courts to protect the design of a useful article "only if, and only to the extent that, such design incorporates pictorial, graphic, or sculptural features that can be identified separately from, and are capable of existing independently of, the utilitarian aspects of the article."[180] This instruction is a source of great confusion[181] that has spawned ten or so "separability tests."[182]

In reality, the useful article doctrine does not limit protection only to those features of a useful article separable from its utilitarian features. Separability per se is irrelevant, which is why most of the so-called separability tests actually ignore separability per se.[183] Copyright protects unique features regardless of whether they are separable from utilitarian features.[184]

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evidence and D's book on assassination was a serious analysis of evidence that deserved to be heard), *with* L.A. News Serv. v. Tullo, 973 F.2d 791 (9th Cir. 1992) (finding there was no fair use where other versions of newsworthy event were readily available). *Compare* L.A. News Serv. v. CBS Broad., Inc., 305 F.3d 924, 942 (9th Cir. 2002) (holding it was fair use for D to incorporate a few seconds of P's footage of Denny beating in promotion of D's trial coverage), *with* L.A. News Serv. v. Reuters Television Int'l, Ltd., 149 F.3d 987 (9th Cir. 1998) (finding no fair use for D to copy and broadcast to news outlets over half minute of P's footage of Denny beating).

[179] *See* H.R. Rep. No. 94-1476 at 54–55 (1976).

[180] 17 U.S.C. § 101 (2006 & Supp. IV 2010) (stating this proposition under the definition of "Pictorial, graphic, and sculptural works").

[181] SCHECHTER & THOMAS, *supra* note 9, at 76 ("[C]ourts and commentators have struggled to define this notion of conceptual separability and it is our sad duty to report that the law is in disarray."); Matthew C. Broaddus, *Designers Should Strive To Create "Useless" Products: Using The "Useful Article" Doctrine To Avoid Separability Analysis*, 51 S. TEX. L. REV. 493, 509 (2009) ("The vast array of confusing and potentially conflicting tests for conceptual separability is troublesome on many levels."); Richard G. Frenkel, *Intellectual Property in the Balance: Proposals for Improving Industrial Design Protection in the Post-TRIPS Era*, 32 LOY. L.A. L. REV. 531, 545 (1999) (Case law dealing with "useful articles does not reveal any consistency as to what constitutes 'useful.'").

[182] John B. Fowles, *The Utility of a Bright-Line Rule in Copyright Law: Freeing Judges from Aesthetic Controversy and Conceptual Separability in* Leicester v. Warner Bros., 12 UCLA ENT. L. REV. 301, 322 (2005) (noting that there are at least ten tests for conceptual separability). *See also* Byron, *supra* note 68, at 171–82 (reviewing many tests of copyrightability of useful articles).

[183] *See, e.g.*, Pivot Point Int'l, Inc. v. Charlene Prods., Inc., 372 F.3d 913, 921 (7th Cir. 2004) [hereinafter *Pivot Point I*] (purporting to adopt Denicola test but looking to availability of alternative designs that could serve same utilitarian function as P's design); Carol Barnhart, Inc. v. Econ. Cover Corp., 773 F.2d 411, 419 (2d Cir. 1985) (suggesting that test is whether aesthetic features are required by utilitarian features); Kieselstein-Cord v. Accessories by Pearl, Inc., 632 F.2d 989, 993 (2d Cir. 1980) (explaining that the test is whether artistic features are "primary" and utilitarian features "subsidiary"); 1 PAUL GOLDSTEIN, GOLDSTEIN ON COPYRIGHT, § 2.7.3 at 2:78 (3d ed. 2005) ("[A] . . . feature incor-

Compare *Pivot Point v. Charlene*[185] with *Carol Barnhart v. Economy Cover*.[186] In *Pivot Point*, P hired an artist to create a stylized mannequin head used by beauty schools to teach make-up application.[187] Dubbed "Mara," the head included distinctive angular features such as an upturned nose and almond-shaped eyes.[188] The production version included hair with an inadvertent double hairline.[189] P sued D for selling a nearly identical mannequin head complete with double hairline.[190] The court protected P's work, dismissing the argument offered by the district court[191] and by the dissent that Mara served a utilitarian function as a teaching tool and that separating her aesthetic features would leave a useless egg on a stick.[192]

In *Carol Barnhart*, P's works were four unstylized male and female mannequin torsos with hollow backs that were used by stores to display clothing.[193] Two of the four were nude, the third was contoured to resemble a generic button-down men's shirt, and the fourth was contoured to resemble a generic blouse.[194] P sued D

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porated in the design of a useful article is conceptually separable if it can stand on its own as a work of art traditionally conceived, and if the useful article in which it is embodied would be equally useful without it."); MELVILLE B. NIMMER & DAVID NIMMER, 1 NIMMER ON COPYRIGHT §2.08[B][3] (2004) (explaining that the test is whether design would still be marketable to some significant segment of community simply because of its aesthetic qualities even if it served no utilitarian function); WILLIAM F. PATRY, COPYRIGHT LAW AND PRACTICE 285 (1994) (explaining that test is whether alternative design choice was available); Byron, *supra* note 68, at 195 (explaining that test is whether alternatives were available at time P created work); Robert C. Denicola, *Applied Art and Industrial Design: A Suggested Approach to Copyright in Useful Articles*, 67 MINN. L. REV. 707, 741 (1983) ("[C]opyrightability ultimately should depend on the extent to which the work reflects artistic expression uninhibited by functional considerations."); Barton R. Keyes, *Alive and Well: The (Still) Ongoing Debate Surrounding Conceptual Separability in American Copyright Law*, 69 OHIO ST. L.J. 109, 141–42 (2008) (proposing two-factor balancing test in which courts balance degree to which designer's subjective process is motivated by aesthetic concerns and degree to which design is objectively dictated by its utilitarian function).

[184] The House Report teaches away from this point. *See* H.R. Rep. No. 94-1476 at 55 (1976) ("The test of separability . . .does not depend upon the nature of the design . . . only elements, if any, which can be identified separately from the useful article as such are copyrightable."). Former 37 C.F.R. § 202.10(c) (1956) likewise teaches away: "[i]f the sole intrinsic function of an article is its utility, the fact that the article is unique and attractively shaped will not qualify it as a work of art. [The article is protectable only if it has features] . . . which can be identified separately and are capable of existing independently as a work of art . . . ."

[185] *Pivot Point I*, 372 F.3d 913.

[186] *Carol Barnhart*, 773 F.2d 411.

[187] *Pivot Point I*, 372 F.3d at 915.

[188] *Id.* at 931.

[189] *Id.* at 915.

[190] *Id.* at 916.

[191] Pivot Point Int'l, Inc. v. Charlene Prod., Inc., 170 F. Supp. 2d 828, 832 (N.D. Ill. 2001) [hereinafter *Pivot Point II*].

[192] *See Pivot Point I*, 372 F.3d at 933 (Kanne, J., dissenting) ("Without features, the mannequin's head and neck would be little more than an egg on a stick, useless for its intended purpose.").

[193] *Carol Barnhart*, 773 F.2d at 412.

[194] *Id.* at 420.

for selling nearly identical mannequin torsos.[195] The court held that P's mannequin torsos were unprotectable.[196]

The key distinction between *Pivot Point* and *Carol Barnhart* is one of degree: P's work in *Pivot Point* was more unique. In *Pivot Point*, the probability was very low that an independent creator of a mannequin head would create one not readily distinguishable from Mara. To put it another way, anyone who created a mannequin head without knowledge of Mara would be very likely to create one differing from Mara more than D's mannequin head did. Because Mara was only moderately stylized, she was protected only within a thin range, but D's nearly identical mannequin head fell within it.

Recall the three variables summarized in Part II (B). The uniqueness of a work rises with increases in added complexity, increases in the number of viable alternatives, and with decreases in the number of contenders. Mara's added complexity was moderately high, in part because of her flawed hairline.[197] The number of viable alternatives to Mara was also moderately high: a variety of mannequin heads can serve as props for teaching make-up application.[198] The number of contenders who could independently create indistinguishable work was moderately low, because Mara's particular design required an artist's skill and months of effort and because the commercial value of her particular design was not widely foreseeable. Together, our three variables suggest Mara is unique enough to be protected against works as close as D's.

In *Carol Barnhart*, P's torsos were straightforward representations of average, lean torsos with generic contours.[199] Together, our three variables suggest that P's torsos, especially the nudes, were not unique enough to be protected even against works as close as D's. P's torsos include little added complexity. Their contours

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[195] *Id.* at 413 (internal quotations omitted) (explaining that for purposes of its summary judgment motion, D conceded that it "contracted to have produced for it four forms . . . [to be] copied from Barnhart's display forms and [to be] . . . substantially similar to Barnhart's display forms").

[196] *Id.* at 418 ("Applying these principles, we are persuaded that since the aesthetic and artistic features of the Barnhart forms are inseparable from the forms' use as utilitarian articles the forms are not copyrightable.").

[197] *See infra* Part IV.E (arguing that errors translate into more added complexity, more viable alternatives, and fewer contenders).

[198] *See Pivot Point I*, 372 F.3d at 931–32 ("It certainly is not difficult to conceptualize a human face, independent of all of Mara's specific facial features . . . that would serve the utilitarian functions of a hair stand and, if proven, of a makeup model."). *See also* Mattel, Inc. v. Goldberger Doll Mfg. Co., 365 F.3d 133, 136 (2d Cir. 2004) (implying that dolls can be made in many ways that differ from Barbie); Hart v. Dan Chase Taxidermy Supply Co., Inc., 86 F.3d 320, 321, 323 (2d Cir. 1996) (J. Calabresi) (concluding that for taxidermy the universe of possible expressions can be broad enough to sustain copyright protection because even realistic animal mannequins can vary sufficiently in artistic details such as pose, attitude, and appearance).

[199] *See* COHEN, ET AL., COPYRIGHT IN A GLOBAL INFORMATION ECONOMY 202 (3d ed. 2010) (displaying pictures of torso forms from *Barnhart*); JOYCE, ET AL., *supra* note 11, at 185, 193–94 (describing torso shapes as constrained).

seem to lack novelty–somewhere in the world there were already indistinguishable contours on a mannequin, doll, statue, mold, or other depiction of a body, shirt or blouse. The only salient added complexity seems to be the combination of these contours with a hollow back, and only then if hollow backs were not already widely known in the industry.

While the inclusion of a hollow back may provide some added complexity, it reduces the number of viable alternatives. Hollow backs have distinct, predictable advantages: they economize on material, on weight, and on costs of manufacture and shipping. They are also more maneuverable and can be stacked, which economizes on costs of use, storage, packing, and packaging. Another reason to think there are few viable alternatives to P's torsos is that clothing must fit them, which means they must approximate the average size and shape of human torsos.[200] The torsos contoured to resemble a shirt and blouse have more viable alternatives than the nude torsos, but the number still seems low.

The number of contenders also seems higher than in *Pivot Point*. The market for clothing displays is larger and more foreseeable and the skill required to independently create torsos like P's seems lower than the skill required to independently create a mannequin head like Mara.

We can likewise distinguish *Kieselstein-Cord v. Accessories by Pearl*[201] from *Brandir v. Cascade*.[202] In *Kieselstein*, P's work was a highly stylized belt buckle sold at high-fashion jewelry stores and that had been included in museum collections.[203] P sued D for selling a similar buckle.[204] The appellate court protected P's buckle, rejecting D's argument that its aesthetic features were inseparable from its utilitarian features that served its utilitarian function of holding up pants.[205]

Contrary to the court's reasoning in *Kieselstein*, it is not clear that the unique features of P's buckle are separable from the utilitarian features. From a photo-

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[200] *Carol Barnhart*, 773 F.2d at 419 ("[A] model of a human torso, in order to serve its utilitarian function, must have some configuration of the chest and some width of the shoulders."). *Compare Carol Barnhart*, 773 F.2d 411, *with Hart*, 86 F.3d at 323 (Calabresi, J.) (distinguishing *Barnhart* torsos from taxidermy mannequins for mounting fish skins). "In *Barnhart*, the headless, armless, backless styrene torsos were little more than glorified coat-racks used to display clothing in stores . . . In taxidermy, by contrast . . . the shape, volume, and movement of the animal are depicted by the underlying mannequin. Whether the fish is shown as resting, jumping, wiggling its tail, or preparing to munch on some plankton, is dictated by the mannequin and its particular form . . . ." *Hart*, 86 F.3d at 323. *See also* Superior Form Builders v. Dan Chase Taxidermy Supply Co., 74 F.3d 488, 494 (4th Cir. 1996) (distinguishing *Barnhart* on grounds that *Barnhart* torsos were used for displaying clothing whereas P's taxidermy mannequins portray their own appearance).

[201] Kieselstein-Cord v. Accessories by Pearl, 632 F.2d 989 (2d Cir. 1980).

[202] Brandir Int'l, Inc. v. Cascade Pac. Lumber Co., 834 F.2d 1142 (2d Cir. 1987).

[203] *Kieselstein-Cord*, 632 F.2d at 991.

[204] *Id.* at 990.

[205] *Id.* at 993.

graph of P's buckle[206] it appears that at least some of the unique features are seamlessly intertwined with and reinforce the structural integrity of the non-unique features.

The underlying reason P prevailed in *Kieselstein* was that P's buckle was sufficiently unique.[207] In terms of our three variables, P's buckle had high added complexity, many viable alternatives, and few contenders with the skill and foresight to create the particular design. Thus anyone who independently created a buckle (e.g., created a buckle without knowledge of P's) would be unlikely to create one that resembled P's as much as D's did.

In *Brandir*, P's work was the "Ribbon Rack," a bike rack consisting of a metal tube undulated from end to end like a series of waves (sinusoidal).[208] P sued D for selling a very similar bike rack.[209] The appellate court held that P's rack was unprotected because its aesthetic features were inseparable from its utilitarian features and function.[210]

The underlying reason P lost in *Brandir* was that P's rack was not unique; specifically, it was repeatable. Had P never invented a sinusoidal bike rack, it is not unlikely that someone else eventually would have. Again, consider our variables. The added complexity in P's rack consists solely of the combination of a bike rack and a basic sinusoid shape. As separate elements, they clearly lack novelty. Bike racks are commonplace and the sinusoid, like other unprotectable basic shapes,[211] is ubiquitous in art, nature, and technology.

The number of viable alternatives to a sinusoidal rack is low because a sinusoidal rack provides benefits other shaped racks do not. Compared with a cornered rack, for instance, a sinusoidal rack is more durable, lacks sharp edges, and can be made of a single metal tube in a few steps with few or no welds, bolts or brackets. A sinusoidal rack also fits bikes alternately over the troughs and under the adjacent crests, thereby supporting and separating each bike along its entire height and on

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[206] *See id.* at 995 (displaying photographs of P's buckles); COHEN, ET AL., *supra* note 199, at 199 (same).

[207] *See id.* at 994 (stating that the buckles rose to the level of creative art).

[208] Brandir Int'l, Inc. v. Cascade Pac. Lumber Co., 834 F.2d 1142, 1147 (2d Cir. 1987).

[209] *Id.* at 1146.

[210] *Id.* at 1146–47.

[211] Basic shapes are unprotectable on their own. *See, e.g.*, John Muller & Co., Inc. v. New York Arrows Soccer Team, Inc., 802 F.2d 989, 990 (8th Cir. 1986) (finding that simple arrow shapes are not copyrightable); Esquire Inc. v. Ringer, 591 F.2d 796, 801–02 (D.C. Cir. 1978), *cert. denied*, 440 U.S. 908 (1979) (affirming the view that a simple, elliptical lighting fixture is uncopyrightable because basic geometric shapes are in the public domain); 37 C.F.R. § 202.1(a) (2005) (barring copyright protection for familiar symbols or designs); Tufenkian Import/Export Ventures, Inc. v. Einstein Moomjy, Inc., 338 F.3d 127, 132 (2d Cir. 2003) (remarking that public domain includes standard geometric forms); OddzOn v. Oman, 924 F.2d 346, 350 (D.C. Cir. 1991) (holding that it is not an abuse of discretion for the Copyright Office to refuse to register the applicant's spherical "Koosh ball").

both sides. This shape allows for twice the storage of conventional racks and accommodates all types of bikes and mopeds.[212] Insofar as a sinusoidal rack best provides these benefits, the path toward a sinusoidal rack is a path upon which others could plausibly converge.

Likewise, the number of contenders in *Brandir* is relatively high. The market for bike racks is large and known, and a sinusoidal rack can be made in one step by heating a pipe and thus requires no great skill or resources.

We are now in a position to solve the main puzzles surrounding the useful article doctrine. The first puzzle concerns the statute's definition of a useful article as "an article having an intrinsic utilitarian function that is not merely to portray the appearance of the article or to convey information."[213] Why does the statute define a useful article as excluding a work that merely conveys information or portrays its own appearance? Lack of usefulness is not the reason. Many copyrightable works that merely convey information or portray their own appearance are plenty useful. Some are even useful in a way we are apt to label as utilitarian: blueprints, technical manuals, dictionaries, textbooks, encyclopedias, and architectural models.

The underlying reason the statute defines a useful article as excluding a work that only conveys information or portrays its own appearance is that, as a rough rule of thumb, such a work is likely to be unique more or less from its top to its bottom. Such a work is likely to be unique from its top to its bottom because there tend to be many alternative ways (viable alternatives) to convey information about or to portray any given subject and because such a work often has relatively high added complexity. So, as a rough rule of thumb, the odds are low that more than one creator would independently convey the same information about the same thing in the same way,[214] or independently portray the appearance of the same thing in the same way.

Works that courts and commentators have labeled as useful articles are sculptural (three-dimensional) works with a large proportion of non-unique features, non-unique because they are dictated by mechanical principles and because they serve well-defined and common needs, which translates into relatively low added complexity, few viable alternatives, and many contenders. For example, much of a belt buckle consists of non-unique features, including an opening for a belt, a tongue, and a tongue swivel. These features are dictated by mechanical principles and serve the well-defined and common need of securing a belt and holding up pants. Hence a court would neither automatically protect a belt buckle nor protect

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[212] *Brandir Int'l*, 834 F.2d at 1147.

[213] 17 U.S.C. § 101 (2006 & Supp. IV 2010).

[214] For the same reason, information in filled-in forms is copyrightable whereas blank forms that "do not in themselves convey information" are uncopyrightable. *See* 37 C.F.R. § 202(1)(C) (2005) (stating that blank forms are uncopyrightable).

it in its entirety. Instead, a court would protect only those features of a belt buckle, if any, that are unique.

Unfortunately, the copyright statute does not explicitly instruct courts to protect only the unique features of a useful article. Instead, it instructs courts to protect only the pictorial, graphic or sculptural features that are separable from the utilitarian features.[215] The statute's language does not faithfully capture the case law it was meant to codify. For example, the term "utilitarian" is somewhat misleading. The term "mechanical" seems to better capture the case law. In most cases, mechanical features are non-unique, because they are constrained by shared reality: the laws of physics, requisites of safety and compatibility, costs of production, and by longstanding demand for specific solutions to defined problems.[216] Yet, in some cases the work seems unique even though its features seem mechanical. One example is *Lanard v. Novelty*, in which the court protected features of a flying toy that helped it fly and that helped the user to operate it.[217]

The statute distracts and confuses courts.[218] It should not instruct them to determine whether a work's pictorial, graphic or structural features are separable from its utilitarian features.[219] It should simply instruct courts to protect only those fea-

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[215] *See* 17 U.S.C. §101 (2006 & Supp. IV 2010) (stating that pictorial, graphic or sculptural works . . . "includes works of artistic craftsmanship . . . but not their mechanical or utilitarian aspects ").

[216] *Cf.* Byron, *supra* note 4, at 66 ("Where a functional or utilitarian constraint dictates the work, the likelihood that the work will result becomes that much higher due to the fact that any choice that the author may have confronted was one of a smaller set of choices.").

[217] Lanard Toys Ltd. v. Novelty Inc., 375 Fed. Appx. 705, 709–10 (9th Cir. 2010); *id.* at 714–17 (Clifton, J., dissenting) (arguing that protected portions of toy serve utilitarian function). *See also* Spinmaster, Ltd. v. Overbreak LLC, 404 F. Supp. 2d 1097, 1104 (N.D. Ill. 2005) (finding that motor and main propeller of toy flying saucer were uncopyrightable, but hub, blades, outer ring, separate controller and base station were copyrightable).

[218] The Second Circuit, for example, has discussed at least seven different tests for separability and has ostensibly relied on at least three. *See, e.g.*, Kieselstein-Cord v. Accessories By Pearl, Inc., 632 F.2d 989, 993 (relying on whether artistic features are "primary" and utilitarian features "subsidiary"); Carol Barnhart, Inc. v. Econ. Cover Corp., 773 F.2d 411, 419 (2d Cir. 1985) (discussing whether aesthetic features are required by utilitarian features); Brandir Int'l, Inc. v. Cascade Pac. Lumber, 834 F.2d 1142, 1144 (purporting to apply Denicola test of whether design has features that reflect "artistic expression uninhibited by functional considerations").

[219] Some courts and commentators suggest that we interpret or revise the statute to switch its order of analysis from asking whether the work's pictorial, graphic or sculptural (PGS) features are separable from its utilitarian features to asking whether its utilitarian features are separable from its PGS features. *See, e.g.*, *Carol Barnhart, Inc.*, 773 F.2d at 419 (suggesting that aesthetic features embodied in a useful article are conceptually separable from that article if they are not required by the article's utilitarian features); GOLDSTEIN, *supra* note 183, at § 2.76 (stating that PGS feature "is conceptually separable . . . if the useful article in which it is embodied would be equally useful without it"); Stacey Dogan and Wendy Gordon, Functionality, Works in Progress in Intellectual Property Colloquium, Boston U. School of Law (Oral Presentation, Feb. 11, 2011) (no written version yet available). Switching the order of analysis improves on the order literally recited in the statute. The reason is that if separating features from a work appears to destroy its utility, those features are less likely to be unique. However, merely switching the order of analysis would perpetuate the incorrect view that separability matters and thereby fail to explain some of the case law outcomes.

tures of a work that are expressive or, better yet, unique. This, in the end, is what courts do anyway.

Some of the so-called separability tests look to the number of alternatives to the work.[220] This makes sense for two reasons. First, looking at alternatives is not wholly inconsistent with the statutory language. When we can imagine separating a feature from the work, we implicitly imagine alternatives standing in for the separated feature. The more readily we can imagine such alternatives, the more separable the feature appears.

Second, and more importantly, the number of viable alternatives is a respectable measure of the uniqueness of useful articles and of other works—such as computer programs—[221] that are often constrained by shared reality.

So, should we rely exclusively on the number of viable alternatives to assess the copyrightability of useful articles and other works that are frequently constrained? Probably not. Some works that seem fully constrained by shared reality may not be. Consider a work that is mechanical but whimsical, such as a Rube Goldberg Machine[222] or P's flying toy in *Lanard*. At first glance, P's flying toy seems constrained by shared reality in that its features efficiently exploit physical principles. On closer inspection, its sheer existence–the decision to make this type of flying toy in the first place–does not seem inevitable. Even once that decision is made, the particular shape and size of the toy do not seem inevitable.[223] Had P never created this particular toy, it seems that no one else would have ever independently created an indistinguishable flying toy. Hence P's toy is probably unique enough for thin protection.

Granted, we might conclude that the *Lanard* toy is protectable even if we consider only the number of viable alternatives. But what counts as a viable alter-

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[220] The best reasoned proposal along these lines is Thomas M. Byron, *As Long as There's Another Way: Pivot Point v. Charlene Products as an Accidental Template for A Creativity-Driven Useful Articles Analysis*, 49 IDEA 147 (2009). Yet Byron's alternatives test is slightly off-base because it focuses on the alternatives available to the creator when the work was created. *See id.* at 170–71. His test would be better if it focused on the alternatives available to other creators past, present, and future.

[221] *See, e.g.*, Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240, 1253 (3d Cir. 1983), *cert. dismissed*, 464 U.S. 1033 (1984) (reasoning that computer programs are copyrightable expression of an idea when the idea can be expressed in many ways). *Accord* Whelan Assoc., Inc. v. Jaslow Dental Lab., Inc., 797 F.2d 1222 (3d Cir. 1986), *cert. denied*, 479 U.S. 1031, 1236 (1987); Dymow v. Bolton, 11 F.2d 690, 691 (2d Cir. 1926); Compaq Computer Corp. v. Procom Tech., Inc., 908 F. Supp. 1409, 1415, 1418 (S.D. Tex. 1995).

[222] *See* MERRIAM-WEBSTER DICTIONARY, http://www.merriamwebster.com/dictionary/rube%20goldberg (last visited May 20, 2012) (describing the nature of a Rube Goldberg machine).

[223] *See* Lanard Toys Ltd. v. Novelty Inc., 375 Fed. Appx. 705, 710–11 (9th Cir. 2010) (noting that P's designer testified that he "could have designed it in 'a million' other ways").

native is not always clear and not all viable alternatives are equally likely.[224] It is helpful to also consider the number of contenders. The number of contenders is relatively low in *Lanard* because few independent creators in the toy industry would foresee that creating that particular design–with its particular shape and size–would exceed the opportunity costs of creating a different flying toy.

B. Names, Titles, Phrases, and Other Small Works

Size matters in copyright law.[225] Courts tend to reject claims that very small works merit protection and that very small portions of larger works merit protection independent of the larger works.[226] When withholding protection for very small works ("microworks"[227]), courts find them to be unoriginal or uncreative[228] or they invoke the idea-expression dichotomy, the merger doctrine, or the *scènes à faire* doctrine.[229] This makes sense because smallness correlates with lack of uniqueness.[230]

Microworks tend to be non-unique because they tend to have low added complexity, few viable alternatives, and many contenders.[231] Consider an answer key for a multiple choice exam with 50 questions, each having one of five possible answers–A, B, C, D, or E. The key is a mere list of 50 numbers paired with 50 letters: 1. D, 2. B, 3. C, and so on. Each answer by itself is a very non-unique microwork that takes one of five alternative forms. For example, "2. B" is very non-novel and

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[224] *See* Byron, *supra* note 4, at 65 ("Cases might exist where few variations are possible but one of the few variations is of such low probability as to merit copyright protection.").

[225] Hughes, *supra* note 28, at 578 (asserting that "a small expression is deemed to lack sufficient originality").

[226] *See id.* at 577 ("[T]he smaller the amount copied, the fairer the copying.").

[227] *Id.* at 575–76.

[228] *See id.* at 605–07. *See, e.g.*, Magic Mktg. v. Mailing Serv. of Pittsburgh, Inc., 634 F. Supp. 769, 772 (W.D. Pa. 1986) (holding "Contents Require Immediate Attention" and other short phrases unprotectable for lack of originality); Takeall v. PepsiCo, Inc., 809 F. Supp. 19, 21 (D. Md. 1992), *aff'd*, 14 F.3d 596 (4th Cir. 1993), *cert. denied*, 512 U.S. 1236 (1994) ("[T]he court is not prepared to hold . . . that the phrase at issue so lacks originality as to be unworthy of copyright protection."); Acuff-Rose Music Inc. v. Jostens Inc., 155 F.3d 140, 143–44 (2d Cir. 1998) (Calabresi, J.) (holding the phrase "[y]ou've got to stand for something, or you'll fall for anything" unprotectable, and remarking that use of same or similar phrase by Abraham Lincoln, John Cougar Mellencamp, and Martin Luther King Jr. made it very unlikely that P had independently created phrase). *See also* JOYCE, ET AL., *supra* note 11, at 85 (arguing that phrase in *Acuff-Rose* did not meet *de minimis* standard of creativity).

[229] Hughes, *supra* note 28, at 605.

[230] *Cf.* Green, *supra* note 11, at 947 (arguing that smaller works are more likely to be independently created because "the shorter the series of letters or numerals, the more likely it is that a number of people will stumble upon it"); LANDES & POSNER, *supra* note 7, at 89 ("The shorter the phrase, the likelier is independent duplication; and it is difficult by the methods of litigation to distinguish between it and deliberate copying.").

[231] *Cf.* GOLDSTEIN, *supra* note 183, at § 2.96 (3d ed. 2005) (arguing that the smaller the piece of expression, the less likely it is to have acceptable substitutes and thus the more likely it is to merge with idea it expresses); Hughes, *supra* note 28, at 617–18 (expanding on Goldstein's point).

very repeatable. In contrast, the whole key—50 sequential numbers each paired with one of five alternative forms—is very unique. The whole key (a "macrowork") takes one of up to 5^{50} alternative forms.

Yet, some microworks are unique.[232] It is very unlikely that more than one creator would independently create the word "supercalifragilisticexpialidocious," or the name Moon Unit Zappa, or the title *I Heart Huckabees*, or the line "'Twas brillig, and the slithy toves."[233]

Copyright may or may not protect a unique microwork.[234] Copyright withholds protection for a unique microwork when it is dominant.[235] Names and titles are usually dominant; they get locked in by path dependence and network effects.[236] Further, their social value depends on inputs other than their creators' contribution, specifically, on others learning and using those names and titles—and only those names and titles—to refer to the persons and things named and titled.[237]

Unique names and titles are as dominant as non-unique names and titles. Whether or not unique, allowing people to freely use them tends to be efficient. The same holds for slogans that serve as designators in the way names and titles do.[238] Hence the Copyright Office prohibits registration for names, titles, and most short phrases[239] regardless of whether they are "novel or distinctive."[240]

Even if a microwork is unique and non-dominant, copyright withholds protection when protecting it would generate transaction and administrative costs that seem to well exceed any harm caused by D's unauthorized use.[241] Using P's

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[232] Hughes, *supra*, note 28 ("Many very small expressions positively leap over the low threshold of originality . . . ."); *id.* at 607 (explaining that there are "thousands or millions of short phrases that are original enough to cross the modicum of the creativity threshold").

[233] Lewis Carroll, *Jabberwocky*, *in* JABBERWOCKY AND OTHER POEMS, 17 (Denver Publications) (2001).

[234] *Cf.* Hughes, *supra* note 28, at 583 ("[T]here are many occasions when courts have succumbed to arguments that very small pieces of expression are worthy of independent copyright protection.").

[235] *See supra* Part III. *See* LANDES & POSNER, *supra* note 7.

[236] *See supra* Part III.

[237] *See also* McGowan, *supra* note 14, at 248–50 (arguing that it would be inefficient to protect names because the social value of names is predicated on everyone using them to refer to things).

[238] *Cf. id.* at 251 n.100 (noting that some slogans serve as designators in the way that names and titles do).

[239] *See* Material Not Subject to Copyright, 37 C.F.R. § 202.1(a) (1988) (excluding protection for names, titles and short phrases). Regarding protection for some short phrases, see discussion to follow.

[240] *See* U.S. COPYRIGHT OFFICE, COPYRIGHT PROTECTION NOT AVAILABLE FOR NAMES, TITLES, OR SHORT PHRASES, Circular 34 (2010).

[241] *Cf.* Hughes, *supra* note 28, at 610–19 (discussing transaction costs and other reasons not to protect microworks); Green, *supra* note 11, at 951–52 (relative transaction and enforcement costs rise as size of borrowed portion decreases).

microwork tends not to harm P much. Seldom does it cost P much to create a microwork and seldom does a microwork serve as a market substitute for P's macrowork. Furthermore, in most cases we cannot say D would have licensed the microwork from P had D believed he would be held liable for using it without permission. In most cases, D would simply forego use of the microwork rather than incur the transaction costs to get permission.[242]

For example, in *Murray Hill v. ABC*,[243] a radio station borrowed from P's movie the line, "This is JP on the JR in the AM. Have a swell day."[244] The court held the line unprotectable, saying it had merged with the idea or information it conveyed and that it was constrained by the need to convey "whose morning show, what radio station, and what time."[245] The court's reasoning suggests the line is repeatable, but it may not be. Another creator would be very unlikely to independently create the line verbatim. *Murray* may be an example of a case in which the verbatim work, though unique, is denied even thin protection because the work is so trifling that the costs of protecting it exceed the benefits.

Copyright protects microworks when they are unique, non-dominant and when protection does not generate excessive transaction or administrative costs. For example, copyright protects some short phrases despite the Copyright Office's ostensible prohibition against them. In *Foxworthy v. Custom Tees*,[246] P's calendar included 365 one-line jokes all beginning with the phrase "You might be a redneck if . . . ."[247] The court implied each joke was protected[248] and held D liable for copying 11 of them onto 11 T-shirts.[249] Other cases in which courts have expressed willingness to protect unique microworks include *Heim v. Universal Pictures*,[250] *Warner Bros. v. American Broadcasting*,[251] *Narrell v. Freeman*,[252] and *Life Music v. Wonderland Music*.[253]

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[242] *See* Hughes, *supra* note 28, at 614–16.

[243] Murray Hill Publ'ns, Inc. v. ABC Commc'ns, Inc., 264 F.3d 622, 627–28 (6th Cir. 2001).

[244] *Id.* at 627.

[245] *Id.* at 633.

[246] Foxworthy v. Custom Tees, Inc., 879 F. Supp. 1200 (N.D. Ga. 1995).

[247] *Id.* at 1204.

[248] *See* Hughes, *supra* note 28, at 588 n.72.

[249] *See id.* at 581–97 (discussing *Foxworthy* and other cases in which small works were protected or in which dicta suggests they would be).

[250] Heim v. Universal Pictures Co., 154 F.2d 480, 487 n.8 (2d Cir. 1946) (remarking in dicta that it may be an infringement were someone to copy a highly original phrase such as "Twas brillig, and the slithy toves" or "Euclid alone has looked on Beauty bare").

[251] Warner Bros. v. American Broad. Co., 720 F.2d 231, 242 (2d Cir. 1983) (suggesting that small, highly original phrases can be protected under copyright law) ("[I]t is to be expected that phrases and other fragments of expression in a highly successful copyrighted work will become a part of the language. That does not mean they lose all protection . . . .").

The sound recording right, a product of acute political compromise,[254] is the exception that corroborates the rule that small works are less unique and thus receive less protection than large works. The size of sound recordings matters less. To be sure, a one-second sample of a sound recording is less likely than a one-minute sample of the same sound recording to be unique, to be readily distinguishable from all independently created sound recordings in the past and future. However, under current law, the degree to which copyright protects a sample does not track the degree to which the sample is unique. The sound recording right, as defined in the statute, always affords very thin protection. It protects sound recordings only against the most direct form of copying–mechanical re-capture of "the actual sounds fixed in the recording."[255] An owner of a sound recording right cannot through that right prevent less direct copying, such as close imitation.[256]

So defined, the sound recording right does not conform to my theory of uniqueness. Still, where they can the courts protect samples in a way that conforms to some of the policy rationales for uniqueness.[257] Courts are more willing to protect small samples of sound recordings than other works (or portions thereof) that are equally small.[258] This disparity probably makes sense. When courts protect small samples, they protect them only against mechanical re-capture and never against imitation or non-mechanical copying. In this sense, protection for small samples is thinner. Courts can partially compensate for this thinner protection by protecting very small samples. Compensation is not problematic because we need not worry that a small sample lacks uniqueness–because we never protect it against independent creators.

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[252] Narrell v. Freeman, 872 F.2d 907, 911 (9th Cir. 1989) (remarking in dicta that Frank Zappa's "Weasels Ripped My Flesh" is an "original and hence protected phrase").

[253] Life Music, Inc. v. Wonderland Music Co., 241 F.Supp. 653, 655–56 (S.D.N.Y. 1965) (suggesting in dicta that "supercalifragilisticexpialidocious" is protectable). *See also* Google Inc. v. Copiepresse SCRL, Court of First Instance of Brussels, 13 February 2007, 2007 WL 1623283 (RB (Brussels)), [2007] E.C.D.R. 5 (non-descriptive newspaper headlines could be copyrightable).

[254] *See, e.g.*, MERGES, ET AL., *supra* note 78, at 483 (limited protection for sound recordings "reflects the lobbying clout of broadcasters").

[255] Sound Recording Amendment of 1971, 17 U.S.C. § 114(b) (2006 & Supp. IV 2010).

[256] *See id.* (stating that copyright does not protect a sound recording against the making "of another sound recording that consists entirely of an independent fixation of other sounds, even though such sounds imitate or simulate those in the copyrighted sound recording").

[257] *See supra* Part II.D.

[258] *See* Hughes, *supra* note 28, at 579. *See also* Grand Upright Music, Ltd. v. Warner Bros. Records, Inc., 780 F. Supp. 182, 183–84 (S.D.N.Y. 1991) (finding liability for sampling of three words and a short keyboard riff); Bridgeport Music, Inc. v. Dimension Films, 410 F.3d 792, 801 (6th Cir. 2005) ("[A] sound recording owner has the exclusive right to 'sample' his own recording."); Newton v. Diamond, 349 F.3d 591, 592 (9th Cir. 2003), *amended* 388 F.3d 1189, 1196–97 (9th Cir. 2004), *cert. denied*, 545 U.S. 1114 (2005) (stating that D's use of six-second sample did not infringe musical composition, though it may have infringed sound recording had defendant not licensed it).

Also, a small sample would be very hard pressed to become dominant–in part because others are free to imitate it. In addition, freedom to imitate implies that transaction costs less often justify letting D off the hook for copying a small sample. After all, if D faced high transaction costs to license the sample, D could avoid them by just imitating it. Thus courts can assume D's transaction costs are capped at D's cost of imitating. The smaller the sample, the smaller D's costs of imitating. Further undermining the transaction costs rationale for withholding protection for small samples is that some of them, such as catchy guitar riffs, are valuable despite their smallness.

C. Idea-Expression Dichotomy

An "idea" is a term of art[259] in copyright that refers to a pattern so far abstracted[260] from P's work that either it is too simple[261] to be unique—it could likewise be abstracted from the work of someone (in the past, present or future) who

[259] *Cf.* Jones, *supra* note 4, at 552–53, 569 ("Ideas and expression can merge only if they are the same type of entity. Ideas are themselves expressions. No idea can exist separately from some expression of the idea. The real dichotomy in copyright law is not between idea and expression but between unprotectable expression and protectable expression.").

[260] *Cf.* Green, *supra* note 11, at 941 ("[T]he more abstract material is, the more vulnerable it is to multiple independent creations. The chance of abstract material being independently created by any one person is the sum of that person's chances of independently creating each of the concrete examples that fall under it. For example, my chance of independently creating the idea of a superhero is the sum of the chances of my independently creating each particular superhero–my chance of creating Superman plus my chance of creating Aquaman plus my chance of creating the Green Lantern, and so on."); Kurtz, *supra* note 11, at 1243–44 ("Perhaps we can sort unprotectible [sic] abstract ideas (labeled [sic] ideas) from protectible [sic] concrete ideas (labeled [sic] expression)."); *id.* at 1257–58 (arguing that one reason not to protect a general idea is that it is difficult to determine whether D copied it from P or created it independently); Khong, *supra* note 65, at 7–8, 18–19 (positing that the probability of coincidental similarity is higher at a higher level of abstraction because "elements at higher levels of abstraction are fewer and more common").

[261] *Cf.* Durham, *supra* note 4, at 139 ("The difference between unprotectable 'ideas' and protectable 'expression' is one of specificity."); Jones, *supra* note 4, at 565–66 (pointing out that courts never define what they mean by an idea, but look to degree of detail and arrangement); IBCOS Computers Ltd. v. Barclays Mercantile Highland Fin. Ltd. [1994] FSR 275 (U.K.) (finding only general ideas are unprotected; detailed ideas may be protected under copyright); Kurtz, *supra* note 11, at 1248 ("The process of abstraction can be seen as involving an omission, a setting aside, as more and more of the detail is left out . . . .The more abstract an idea is . . . the more it is a part of the culture as a whole."); *id.* at 1251 ("The ideas left unprotected by copyright . . . are reductions from the work, a lessening of its complexity . . . ."); *id.* at 1253 (arguing that unprotected ideas are simple, conventional, and, like primary colors or elements of matter, exist in limited number); *id.* at 1253–54 (arguing that ideas complex enough to be protectable reside only at the small area where a number of simple ideas intersect); *id.* at 1255 ("Simple [hence unprotectable] ideas tend to be derived from experience and impressions–from the direct impact of that which exists in the world surrounding the author. More complex [and hence protectable] ideas are more the creation of the author . . . ."); *id.* at 1256 ("General ideas are abstract and partial ideas of more complex ones. The idea of 'horse' leaves out those particulars in which individual horses differ and retains only those wherein they agree."); Byron, *supra* note 4, at 73–74 (translating Kurtz's discussion of Venn diagrams into language of probability); Sheldon v. Metro-Goldwyn Pictures, Corp., 81 F.2d 49, 54 (2d Cir. 1936) (J. Hand) (finding "the more general patterns" of the work are unprotectable).

did not copy from P—or it is too simple to be valuable enough to outweigh the transaction and administrative costs[262] of protecting it.

Imagine you are a copyright lawyer and a client tells you he is producing a movie in which a prairie dog meets a seahorse on Pluto. The notion of a prairie dog meeting a seahorse on Pluto comes from a book he read to his child. The client would rather not seek a license from the book's author. He assures you that his movie takes nothing else from the book and that the prairie dog and the seahorse in the movie differ greatly from the prairie dog and the seahorse in the book.

After perusing the book and the movie screenplay, you decide he is correct that the movie takes nothing else from the book and that the characters differ greatly. Can you immediately conclude with confidence that if the book author sues she will lose her prima facie case against your client? Perhaps not. The reason to hesitate is that "prairie dog meets seahorse on Pluto" is a unique pattern that would appear only in the work of someone who copied from P.[263]

Now imagine your client has decided against producing that movie in favor of a movie in which a boy meets a girl at a dance. You recall that a boy meets a girl at a dance in the same book in which a prairie dog meets a seahorse on Pluto. After perusing the new screenplay and re-perusing the book, you decide that the movie takes nothing else from the book and that the boy and the girl in the movie differ greatly from the boy and the girl in the book. Can you immediately conclude with confidence that if the book author sues she will lose her prima facie case against your client? Yes, because "boy meets girl at a dance" is clearly a non-unique pattern that has appeared and will appear in the work of many creators who did not copy from P.[264]

Although "prairie dog meets seahorse on Pluto" is unique, whether a court would actually protect it by holding D liable for damages is another question. Cop-

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[262] *See, e.g.*, Green, *supra* note 21, at 130 (stating that individual ideas are likely to entail relatively high transaction costs, because they are usable by many parties but of little worth to any single party). *See also supra* text and notes Part IV.B.

[263] This pattern has some added complexity, meaning a combination of elements not manifestly devoid of novelty. More importantly, it has innumerable viable alternatives. There is nothing valuable about this particular choice of creatures and meeting place. It reflects no stable features of shared reality. Indeed, in shared reality seahorses are found only where prairie dogs are not, and neither could survive for an instant on Pluto. Finally, this pattern has few contenders. Although it takes no skill to create, no one would foresee any value from creating it as opposed to creating some other random pairing of creatures.

[264] In terms of our variables, this pattern has no added complexity. That is, its elements–boy, meets, girl, dance, and the combination thereof–are manifestly devoid of novelty. It also has few viable alternatives. Although there are alternative ways for a boy and girl to meet in an atmosphere conducive to new romance, a dance is more closely associated with new romance than most alternatives. Finally, this pattern has many contenders. Innumerable creators ignorant of P's work have created and will create this pattern cost-effectively, because it foreseeably achieves valuable ends and because it directly reflects obvious features of shared reality.

yright withholds protection for a unique work if protecting it would generate transaction or administrative costs that seem to exceed the benefits. There is nothing inherently compelling or fitting about "prairie dog meets seahorse on Pluto." It poses no clear advantage over other random pairings such as "frog meets polar bear in volcano." Given the low value of "prairie dog meets seahorse on Pluto," it seems the transaction costs to get permission to use it would exceed the value of using it, which suggests a court is likely to let D off the hook, either by labeling the pattern an unprotectable idea, finding it insufficiently original, finding D's use fair or de minimis, or finding no substantial similarity between D's work and P's.

D. Merger of Idea and Expression

There is no important difference between the idea-expression dichotomy and the merger doctrine. Merged expression—expression that has merged with an idea—is a term of art for a pattern that is not unique or not valuable enough to justify protection despite the fact that the pattern is relatively detailed because it includes elements in (or only slightly abstracted from) P's verbatim work.

The conventional view is that the idea-expression dichotomy differs from merger in that the idea-expression dichotomy turns on whether the work constitutes idea or expression, whereas merger turns on whether the idea or goal behind the work can be conveyed or achieved through alternative expressions.[265] This view is incomplete. Both the idea-expression dichotomy and merger turn on whether the pattern in question is unique and non de minimis. The conventional view implies that merger turns solely on viable alternatives, but, even when there are no viable alternatives, courts do not always find merger. Again, for example, there are usually no viable alternatives to footage of spontaneous events, yet no court has held that such footage merges with the event it records.[266]

Like the other limiting doctrines, merger turns on all three variables. Indeed, cases in which courts find that expression has merged with idea appear to be cases in which relatively high added complexity is offset by a low number of viable alternatives and/or a high number of contenders.

Consider *Morrissey v. Procter & Gamble*.[267] P was in the business of devising games and contests.[268] The work in question consisted of P's straightforward

[265] *Cf.* Samuels, *supra* note 4, at 382–83 ("Whereas the focus of the idea-expression dichotomy is upon whether the work constitutes idea or expression, the merger doctrine focuses upon whether the work is capable of alternative expressions. Thus, the doctrine requires reference not only to a given work, or to two given works, but to a whole range of works that might use the idea of the original work.").

[266] *Cf.* Time, Inc. v. Bernard Geis Assocs., 293 F. Supp. 130, 146 (S.D.N.Y. 1968) (holding that film of Kennedy assassination did not merge with the event).

[267] 379 F.2d 675, 675–679 (1st Cir. 1967).

[268] *Id.* at 676.

instructions for a product box-top sweepstakes.[269] D's instructions were identical in parts and very similar overall, differing mainly in that they referred to D's product and used more standard grammar.[270] The appellate court held P's expression was so straightforward that it merged with the unprotectable sweepstakes idea.[271]

Independent creation of similar instructions seems plausible here because P's instructions are simple, straightforward, and foreseeably valuable. Simplicity, efficiency,[272] and foreseeable value constitute—especially in combination—a path of least resistance on which others could converge. Or, speaking in terms of our three variables, we might say that the relatively high added complexity of the work was outweighed by its low number of viable alternatives and moderately high number of contenders.

More relevant than whether someone could independently create instructions similar to P's is whether someone could independently create instructions not readily distinguishable from P's. If no one could create the latter, P's instructions are unique, albeit marginally so. *Morrissey* may be a case in which the work is unique but not valuable enough to justify the costs of protecting it.

Suppose instead that P had composed his sweepstakes instructions in the form of a colorful and circuitous limerick. Suppose also that D's instructions were as similar to P's limerick as D's instructions were to P's straightforward instructions in the unaltered version of *Morrissey*. D would be liable in the altered version because P's limerick would seem unique and valuable enough to justify the costs of protection.

E. Fact-Expression Dichotomy

The courts assert that facts—by which they mean representations of facts—[273] cannot be copyrighted.[274] That assertion is wrong.[275] Representations of facts can

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[269] *Id.* at 678 ("1. Entrants should print name, address and social security on a boxtop, or a plain paper. Entries must be accompanied by ***boxtop or by plain paper on which the name ***is copied from any source. Official rules are explained on ***packages or leaflets obtained from dealer. If you do not have a social security number you may use the name and number of any member of your immediate family living with you. Only the person named on the entry will be deemed an entrant and may qualify for a prize. 'Use the correct social security number belonging to the person named on entry ***wrong number will be disqualified.'").

[270] *Id.* at 678.

[271] *Id.* at 678–79.

[272] *Cf.* Computer Assocs. Int'l, Inc. v. Altai, Inc., 982 F.2d 693, 708 (2d Cir. 1992) ("[E]fficiency concerns may so narrow the practical range of choice as to make only one or two forms of expression workable options.").

[273] *See* Hughes, *supra* note 4, at 193 (suggesting that when judges and copyright scholars refer to facts, they mean representations or statements of facts.); Green, *supra* note 11, at 948–49 (discussing *Feist* majority's conflation of reality with representations of reality).

be copyrighted when they are unique. At other times, courts and commentators emphasize that it is only representations of "discovered facts,"[276] "historical facts,"[277] or "hard facts,"[278] (what I call "accurate facts") that cannot be copyrighted. That, too, is wrong. Representations of accurate facts can be unique. Raw footage of a spontaneous real world event, for example, is unique and protectable though it represents accurate facts. More generally, representations of accurate facts are unique when they derive from P's unique access to accurate facts. Hence, an accurate list of your 100 favorite movies is unique and protectable though it represents the accurate fact that those are your 100 favorite movies.

There are four things that stymie our recognition that some representations of accurate facts are protectable because they are unique. One is the inexplicable willingness of courts and commentators to ignore the factual nature of some works that are clearly protectable (e.g., event footage, or an accurate list of one's 100 favorite movies).

Another is that unique works that represent accurate facts are more likely than other unique works to be dominant and thus unprotectable despite being unique.[279] Consider *Feist*. There, P's phonebook listings were unique; apparently, P created all of the phone numbers independently,[280] not just the fake seed numbers.[281] The

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[274] *See, e.g.*, Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340 (1991) ("[F]acts . . . are not original, and, thus, not copyrightable."; Miller v. Universal City Studios, Inc., 650 F.2d 1365, 1369 (5th Cir. 1981) ("[F]acts . . . may not be copyrighted.")).

[275] Most commentators avidly reject the Court's assertions about facts. *See, e.g.*, Hughes, *supra* note 4, at 186 ("The problem with the *Feist* analysis is that it is wrong–and that error has produced a decade of distortion in copyright doctrine."); Green, *supra* note 21, at 111 ("[T]he *Feist* approach is incoherent.").

[276] *See, e.g.*, *Feist*, 499 U.S. at 347 ("The distinction is one between creation and discovery."); CDN Inc. v. Kapes, 197 F.3d 1256, 1259 (9th Cir. 1999) (same); Durham, *supra* note 4, at 142 (same).

[277] *See, e.g.*, A.A. Hoehling v. Universal City Studios, Inc., 618 F.2d 972, 974 (2d Cir. 1980), *cert. denied*, 449 U.S. 841 (1980) ("[T]he protection afforded the copyright holder has never extended to history, be it documented fact or explanatory hypothesis."); *CDN*, 197 F.3d at 1260–61 (finding coin price guide protectable where coin prices were not historical market prices but imperfect estimates based on author's judgment and expertise); CCC Info. Servs., Inc. v. Maclean Hunter Mkt. Reports, Inc., 44 F.3d 61, 63 (2d Cir. 1994) (holding Red Book used car guide protectable where prices "are not historical market prices but predictions, based on a wide variety of information sources and . . . professional judgment."); Nash v. CBS, Inc., 899 F.2d 1537, 1541 (7th Cir. 1990) ("[T]he first person to conclude that Dillinger survived does not get dibs on history.").

[278] Durham, *supra* note 4, at 172 n.239 (stating that recent cases distinguish between uncopyrightable hard facts and copyrightable soft facts; hard facts refer to information that is relatively certain and independent of any point of view; soft facts refer to information that is relatively uncertain and "infused with opinion").

[279] *Cf.* Khong, *supra* note 65, at 20 (explaining that when facts are single-sourced, likelihood of coincidental similarity to other works is low) ("However, from a welfare perspective, protecting sole-sourced facts under copyright law may lead to a severe monopolisation [sic] problem necessitating further remedy.").

[280] *See* Hughes, *supra* note 4, at 196; *id.* at 584 n.42.

[281] *Feist*, 499 U.S. at 343–44.

phone numbers were not "preexisting" facts; they were created facts–works.[282] Presumably, they were also arbitrary, or the manner in which they were assigned to particular individuals was arbitrary, or at least the initial starting number was arbitrary. When the numbers and names were aggregated, the resulting listings were highly complex. Hence no one could ever independently create the same listings. If a phone company other than Rural had created and assigned phone numbers from scratch, everyone in the area would have ended up with a number different from the one Rural assigned them.[283]

P in *Feist* lost because P's unique listings were dominant,[284] dominant for the same reasons names, addresses, and arbitrary part numbers are dominant. Phone numbers are cheap to create and assign and they get locked in. Indeed, their value derives from lock-in and from investments others make in learning and using them.

The third and greatest obscurant to seeing that some representations of accurate facts are unique is simply that a great many representations of accurate facts are not unique. Many are constrained by shared reality and thus have few viable alternatives[285] and numerous contenders. These constrained works stand in stark contrast to works that include fictions, inaccuracies, or errors (especially random as opposed to systematic ones[286]). The latter works deviate from shared reality and

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[282] *See* Castle Rock Ent'mt v. Carol Publ'g Grp., 150 F.3d 132, 139 (2d Cir. 1998) (holding that unauthorized trivia book, *Seinfeld Aptitude Test*, infringed Seinfeld television series because "facts" appearing in D's book had been created by P).

[283] In terms of our variables, P's phonebook had high added complexity and innumerable viable alternatives. Given P's exclusive right to assign phone numbers, P's phonebook also had no contenders. According to Michael Green, facts presented in a phonebook are "likely to be duplicated by anyone who undertakes the same protect." Green, *supra* note 21, at 125 n.47. Green is correct insofar as anyone who independently creates a phonebook listing is likely to include most of the same names and addresses in the same order, but he is wrong to imply that anyone would independently create and assign the same numbers to the same people.

[284] *Cf.* Rural Tel. Serv. Co. v. Feist Publ'ns, Inc., 737 F. Supp. 610, 622 (D. Kan. 1990) (finding that Rural had an unlawful purpose to extend its monopoly in phone service).

[285] *See* Hughes, *supra* note 4, at 194 (arguing that there are few ways of expressing facts, particularly quantitative facts); Green, *supra* note 21, at 124 ("The problem of parallel independent creation is surely the main reason that individual facts have been thought insufficiently 'original' to be protected."); Green, *supra* note 11, at 951 (facts are susceptible to parallel independent creation. "That many people are liable to arrive at the same factual representations is particularly true concerning those representations that depend upon simple observation . . . People's factual beliefs, unlike their fanciful stories, tend to overlap."); Robert Post, *The Constitutional Concept of Public Discourse*, 103 HARV. L. REV. 603, 657–58 (1990) (arguing that we treat a statement as factual when we expect reasonable persons engaged in the inquiry to reach same conclusion); Byron, *supra* note 4, at 66 (asserting that accuracy is a constraint that increases probability that the work will be created). *See also* LANDES & POSNER, *supra* note 7, at 102–03 ("When the 'originality' of a work consists mainly in the disclosure of facts, it will often be difficult to determine whether a subsequent author's similar work is a copy of the previous work or a work of independent creation because there will be other routes of access to facts besides the previous work.").

[286] *Cf.* Byron, *supra* note 4, at 66 (suggesting that perfect copy of a prior work is more likely to be created than any given imperfect copy of prior work); Green, *supra* note 21, at 125 ("[C]reative works can be produced through inadvertence."); Alfred Bell & Co. v. Catalda Fine Arts, Inc., 191 F.2d 99,

therefore usually have many viable alternatives[287] (including other inaccurate works as well as accurate works) and few contenders (because no independent creator is likely to be motivated to create P's particular fictions, inaccuracies, or errors).

Consider Einstein's $E=MC^2$, which also implicates the idea-expression dichotomy because it is a pattern abstracted from nature. Though a product of genius, this equation is not unique and thus not protected by courts.[288] Not only could independent creators have later formulated mass-energy equivalence as $E=MC^2$, one independent creator, Italian scientist Olinto de Pretto, did so several years before Einstein.[289] Furthermore, this equation has no viable alternatives because it cleared the view toward nuclear weapons and because it resolves what would otherwise be lingering puzzles in theoretical physics.[290]

A work that aims to represent accurate facts but falls short might be described as representing "soft facts," but it seems clearer to describe such a work as representing "estimates." Works that represent estimates are both more likely to be unique and less likely to be dominant than works that represent accurate facts tightly constrained by shared reality.

Consider the following excerpts from lists of values of U.S. coins.

B. From a list of the values of U.S. coins in current circulation: "A nickel is worth five cents."

C. From a list of estimated values of U.S. collectible coins: "A 1924 Denver Mint buffalo nickel in fine condition is worth $16.09."[291]

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105 (2d Cir. 1951) ("A copyist's bad eyesight or defective musculature, or a shock caused by a clap of thunder, may yield sufficiently distinguishable variations. Having hit upon such a variation unintentionally, the 'author' may adopt it as his and copyright it."); JOYCE, ET AL., *supra* note 11, at 632 (discussing a number of cases in which copying could be proved by presence of errors in D's work also present in P's work).

[287] *Cf.* Khong, *supra* note 65, at 19–21 (arguing that number of phenomena that have actually occurred—factual phenomena—is smaller than number of possible fictional phenomena. Because factual phenomena are less abundant than fictional phenomena, odds of coincidental similarity are higher for works based on factual phenomena.); Hughes, *supra* note 4, at 215 ("[E]lements of fiction are rarely needed for *non-expressive activity*."). Hughes' argument implies that a copyright monopoly on fictional work is seldom a meaningful economic monopoly.

[288] *See* Am. Dental Ass'n v. Delta Dental Plans Ass'n, 126 F.3d 977, 979 (7th Cir. 1997) (Easterbrook, J.) (referring to $E=MC^2$ as unprotectable fact). *But cf.* Green, *supra* note 11, at 954–57 (proposing alternative reason for lack of protection for explanatory theories: their creators benefit more when they are freely disseminated).

[289] *See* AL KELLY, CHALLENGING MODERN PHYSICS: QUESTIONING EINSTEIN'S RELATIVITY THEORIES 15 (BrownWalker Press 2005) (discussing Pretto's formulation of the theory of relativity). .

[290] *Id.* Given the transcendent importance of nuclear weapons, this equation is also likely dominant.

[291] *Cf.* Durham, *supra* note 4, at 172–73 (presenting this example of a 1924 nickel).

Excerpt A, which represents an accurate fact, is non-unique.[292] Independent creators could include—indeed, have included—[293] the same statement in their own work.

Excerpt B, which represents an estimate, is probably unique. Other independent creators of collectible coin valuations are very unlikely to report a value of $16.09 for a 1924 Denver Mint buffalo nickel in fine condition. Although B has little added complexity, it has many viable alternatives and relatively few contenders. B has many viable alternatives because it is not tightly constrained by a stable, shared reality[294] and because alternative valuations (*e.g.*, $15.68 or $17.02) are readily distinguishable. Other estimates for this coin are unlikely to converge on $16.09 because the values of the inputs on which such estimates are based are in constant flux, because different estimators use different inputs, assumptions and methods,[295] and because the inputs, assumptions and methods that lead to $16.09 are unlikely to be manifestly superior[296] to those that lead to $15.68, $17.02, and so

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[292] With respect to our three variables, A has no or low added complexity, few viable alternatives, and a moderately high number of contenders. The number of contenders is only moderately high because, although anyone could obtain this information at no cost, few people would expect a reward from stating something so obvious.

[293] *See, e.g.*, EduTech, *What Do You Know About the Penny, Nickel, and Dime?* http://www.leroy.k12.ny.us/Elementary/LinksPages/money/sld019.htm (last visited Nov. 9, 2011).

[294] *Cf.* Durham, *supra* note 4, at 173 ("Nothing in the world 'out there' compels the choice of exactly $16.09."); CDN v. Kapes, 197 F.3d 1256, 1260 (9th Cir. 1999) (finding collectible coin price guide based on imperfect estimates requiring judgment and expertise); CCC Info. Servs. v. Maclean Hunter Market Reports, 44 F.3d 61, 63, 72–73 (2d Cir. 1994) (Red Book used car prices are estimates infused with opinion and "based on a wide variety of information sources and . . . professional judgment."); Hughes, *supra* note 4, at 204 (suggesting that court in *CCC* implied that Red Book was original because it was inaccurate); Green, *supra* note 21, at 119 ("[I]t is common in factual compilation cases for a court to claim that content is protected, even though it is rightly described as factual, because extensive judgment was required for its creation."). *But see* Burk, *supra* note 44, at 607–08 ("The Red Book tables [in *CCC*] provide testable and falsifiable predictions about the value of used automobiles and a recommendation as to how one ought to act—what one ought to pay—in the market for used automobiles. While the value estimate may have been the result of choices, those choices were profoundly constrained by the logic of science, by the need to conform to the state of the external world.").

[295] *Cf.* Green, *supra* note 21, at 124 (stating the more judgment required to create a factual compilation, the less likely it is to be independently created; courts hold factual content unprotectable when it has a high likelihood of parallel independent creation); McGowan, *supra* note 14, at 259 ("If any reasonable person replicating CDN's inquiry would . . . reach the same price as CDN, then CDN's price expresses a fact . . . .").

[296] In *Kregos v. Associated Press*, 937 F.2d 700, 702, 704–07 (2d Cir. 1991), D was held liable for producing a virtually identical form used to predict the performance of baseball pitchers matched for an upcoming game. The court pointed out that P's form was the first ever to list nine particular categories of data concerning the previous performances of pitchers and that P's combination of nine categories was both drawn from a universe of thousands of alternatives and based on P's subjective opinion as to the data newspaper readers should consider in making their own predictions. Note that, if Kregos' compilation of pitching data were the best way to predict outcomes, it would probably be repeatable. However, it is very unlikely to be the best way. *See generally* Durham, *supra* note 4, at 167–70 (discussing *Kregos*). *Compare* Kregos, *with* Bibbero Sys., Inc. v. Colwell Sys., Inc., 893 F.2d 1104, 1108 (9th Cir. 1990) (denying copyright in medical claim forms).

on. This is especially true of estimates for collectibles, because their values depend not on any intrinsic utility, but on speculation about the expectations of others.[297]

Even if B were not unique standing on its own, the aggregation of B with other parts of the list from which it came clearly is. As discussed earlier, sub-elements of works are not unique in isolation.[298] Uniqueness emerges when sub-elements aggregate to form elements and elements aggregate to form salient features of the work. For work just unique enough to be copyrightable, uniqueness emerges only when all elements aggregate to form the entire work verbatim.

Consider maps. Much of the content of the typical map is unprotectable.[299] In the past, geographical maps were more unique because they were more inaccurate, but even then a map's uniqueness emerged in large part from aggregation of non-unique elements.[300] Today, most geographical maps contain few to no individual elements that are unique on their own. For these maps, uniqueness must emerge wholly from aggregation of non-unique elements to form a unique medley of highlights and omissions.[301]

Yet, it is not accuracy per se that creates for these maps an uphill battle for protection. They face an uphill battle because they are accurate about things other map-makers can likewise be accurate about. In contrast, if P creates an accurate map of something to which no one but P will ever have access, P's map is unique no matter how accurate it is. Consider a map to P's buried treasure that includes specific directions from or to a non-addressed location.

A detailed fictional map, such as Tolkien's map of Middle Earth, is probably the most unique kind of map. It may possess some individual elements that are

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[297] B also has few contenders because the market for collectible coin valuations is smallish and because other estimators are likely to base their estimates on inputs whose values have changed since B was created.

[298] *See supra* Part II.C (discussing fact that tiny sub-elements of works are not unique).

[299] SCHECHTER & THOMAS, *supra* note 9, at 70. *See also* Gorman, *supra* note 18, at 19 (suggesting that maps tend to be thinly protected); MERGES, ET AL., *supra* note 78, at 480 (stating that limited range of expressive choices necessarily limits scope of protection for maps); Darden v. Peters, 488 F.3d 277, 287 (4th Cir. 2007) (upholding refusal of Copyright Office to register standard census maps, finding that adding color, shading and labels with standard fonts and shapes did not render maps sufficiently original).

[300] *Cf.* Gen. Drafting Co. v. Andrews, 37 F.2d 54, 55 (2d Cir. 1930) ("The elements of the copyright [in a map] consist in the selection, arrangement, and presentation of the component parts."); JOSEPH STORY, COMMENTARIES ON EQUITY JURISPRUDENCE AS ADMINISTERED IN ENGLAND AND AMERICA 243 (1836) ("The difficulty [for maps] is to distinguish, what belongs to the exclusive labors of a single mind, from what are the common source of the materials of the knowledge used by all.").

[301] *Compare* Kern River Gas Transmission Co. v. Coastal Corp., 899 F.2d 1458, 1465–66 (5th Cir. 1990) (concerning the placement on a map of Kern River's proposed location for a prospective pipeline), *with* Mason v. Montgomery Data, Inc., 967 F.2d 135, 140 (5th Cir. 1992) (concerning bringing together the available information on boundaries, landmarks, and ownership and choosing locations and effective pictorial expression of those locations). *See also* Byron, *supra* note 4, at 51 (analyzing *Kern*).

unique standing on their own. In any event, it will likely emerge as unique well before all of its elements fully aggregate to form the entire work verbatim.

In sum, four types of maps tend to be unique:

(i) estimated maps,

(ii) fictional maps,

(iii) maps that accurately represent things accessible to others but that include evitable highlights and omissions, and

(iv) maps that accurately represent things accessible only to P.

A type (i) map is likely to be a one-of-a-kind because it is not tightly constrained by shared reality or by a reality exclusive to P. No independently created map of the same thing is likely to be inaccurate in the same way.[302] A type (ii) map is likely to be a one-of-kind for the same reasons a type (i) map is, only more so. A type (iii) map is likely to be a one-of-a-kind because, although some of its elements are tightly constrained by shared reality, some of its highlights and omissions are not.[303] A type (iv) map is likely to be a one-of-a-kind even if tightly constrained, so long as it is tightly constrained by a reality exclusive to P.[304]

Compare maps to biographies. The vast majority of accurate biographies are analogous to maps of type (iii).[305] Suppose Jones plans to write a biography of Napoleon.[306] Many biographies of Napoleon have been written and Jones wants to do more than retell in his own words the same series of already-known tales about the Emperor. Jones decides instead to describe a handful of less famous tales in great detail, to summarize others, to pass over others entirely, and to deviate now and again from chronological order.

Suppose Smith reads Jones's biography and then writes a biography that tells, in Smith's own words, the same tales Jones told, with the same degree of emphasis and in the same order. Will a court find Smith to be an infringer? Yes. Had Smith written a biography without first reading Jones's, Smith's biography would have been much less similar to Jones's. More to the point, anyone who writes a biog-

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[302] In terms of our variables, a type (i) map is unique because it has many viable alternatives. It may also have high added complexity and few contenders.

[303] In terms of our variables, a type (iii) map is unique because it has many viable alternatives. It may also have high added complexity.

[304] In terms of our variables, a map of type (iv) is unique because it has zero contenders.

[305] Any given accurate biography is likely to have many viable alternatives and high added complexity. *Cf.* Am. Dental Ass'n v. Delta Dental Plans Ass'n, 126 F.3d 977, 979 (7th Cir. 1997) (Easterbrook, J.) ("There can be multiple, and equally original, biographies of the same person's life, and multiple taxonomies of a field of knowledge.").

[306] This hypothetical is based on one in JOYCE, ET AL., *supra* note 11, at 148.

raphy of Napoleon independent of Jones's is very likely to write one that differs from Jones's more than Smith's does.

Accurate autobiographies are analogous to maps of type (iv). Accurate autobiographies represent some accurate facts that could never be represented by anyone but the autobiographer. When facts are exclusive to P, so that no one else could independently represent them, the number of contenders is zero. This implies that, if all other things are equal, accurate autobiographies are protected[307] more thickly than equally accurate biographies.[308]

The fourth obscurant to realizing that some representations of accurate facts are protectable because they are unique is the apparently persistent but varying influence[309] of the sweat of the brow doctrine.[310] Sweat—effort, skill or resources—is significant not only for its own sake but also because it correlates with the number of contenders. High sweat correlates with few contenders (and thus with uniqueness) because, the more sweat required to create the work, the lower the number of independent creators with the ability and motivation to create it.[311] Conversely, low sweat correlates with many contenders and thus with non-uniqueness.

But this correlation is weak and unreliable. A bystander's event footage requires low to no sweat yet has no contenders. For other factual works, high sweat can translate into many contenders rather than few. When high sweat increases the accuracy of a work—by making it conform more closely to shared reality—high sweat thereby increases the number of other parties who could independently con-

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[307] *See, e.g.*, Folsom v. Marsh, 9 F. Cas. 342, 349 (1841) (holding it was not fair use for D to copy portions of George Washington's private letters owned by P and published in P's biography of Washington); Harper & Row v. Nation Enters., 471 U.S. 539, 540–41 (1985) (finding no fair use for *The Nation* to scoop former President Ford's autobiography by obtaining pilfered copy of prepublication manuscript).

[308] Suppose an accurate autobiography and an accurate biography about the same person include equally unique highlights and omissions of information accessible to other biographers. The autobiography will be additionally unique insofar as it also includes information accessible only to the autobiographer.

[309] *See* McGowan, *supra* note 14, at 237 ("[C]ost recovery–sweat of the brow doctrine–is alive and well."); *id.* at 257 ("*Feist* rejected the 'sweat of the brow' doctrine in name only. The doctrine lives on in the tacit acceptance that spontaneous news reporting is creative, when much of the time that is not true.").

[310] *See, e.g.*, Alfred Bell v. Catalda Fine Arts, 191 F.2d 99, 104–05 (2d Cir. 1951) (upholding copyright in mezzotint engravings of paintings in public domain, based in part on great skill and effort required to simulate public domain oil paintings via mezzotint process); Alva Studios, Inc. v. Winninger, 177 F. Supp. 265, 267 (S.D.N.Y. 1959) (upholding copyright in half-size reproduction of Rodin's statue "Hand of God," based in part on long hours and great skill required to create reproduction); U.S. Payphone, Inc. v. Execs. Unlimited of Durham, Inc., 18 U.S.P.Q. 2d 2049, 2050–51 (4th Cir. 1991) (upholding copyright in publication that distilled complicated payphone tariff information in public domain into a convenient one-page-per-state format).

[311] *Cf.* Green, *supra* note 21, at 125 n.47 ("[T]he difficulty of assembling facts will reduce the extent to which parallel independent creation is a problem.").

verge on the same work.[312] In addition, some work that requires high sweat promises very high reward, thereby ensuring that other creators will be motivated to cultivate the skill and obtain the resources to create the work. For example, a work that accurately represents a stable object would require high sweat if the object were very large (e.g., the earth) or very small (e.g., an atom) or if the method of recording were very high tech.[313] Yet, the foreseeable value of the work could well exceed the high sweat needed to create it, ensuring many contenders over the long run.

V. Conclusion

Others have observed that there is some common substratum that underlies seemingly disparate copyright doctrines.[314] Uniqueness is that common substratum, or at least a close heuristic for it. Originality is a rough heuristic. Originality is over-inclusive in that some original work is uncopyrightable. Consider, for example, a colorful turn of phrase independently created by plaintiff.[315] Though original, the phrase is unlikely to be unique and thus unlikely to be protectable. Where originality is over-inclusive, courts withhold protection via a limiting doctrine or a finding of no infringement.

Originality is under-inclusive in that some unoriginal work (specifically, some non-creative work) is copyrightable. The clearest example is raw footage of a spontaneous event captured by a bystander. When such non-creative work is unique, courts simply declare it creative. That is, they resort to legal fiction.

The current patchwork unduly multiplies doctrine and produces puzzles and paradoxes that distract, confuse, and increase uncertainty about copyright ownership and enforceability. We are puzzled to see limiting doctrines overlapping not only each other but also originality and substantial similarity, also overlap each other. We read dubious assertions about creativity in the case law, for example, that footage taken from a helicopter during the Los Angeles riots is creative. We are puzzled by the mismatch between the (at best) minimum creativity of such footage and the fairly robust protection it receives. This leads some to conclude that the sweat of the brow doctrine must be doing heavy work behind the scenes, but then

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[312] *Cf.* Byron, *supra* note 4, at 66 (suggesting that perfect copy of a prior work is more likely to be created than any given imperfect copy of prior work). *See also supra* Part IV.E.

[313] *See, e.g.*, Meshwerks Inc. v. Toyota Motor Sales U.S.A., Inc., 528 F.3d 1258, 1260–61 (10th Cir. 2008) (involving special digital imaging of Toyota cars).

[314] *See* Gorman, *supra* note 13, at 560–61 ("Although there is a natural temptation to think of the three stages of copyright analysis—copyrightability, infringement, and defenses of privilege—as watertight compartments, they are not; there is a common substratum of social policy under all three of these issues . . . ."). *Cf.* Wiley, *supra* note 13, at 119–20 (positing that three central elements of copyright doctrine—originality, idea-expression dichotomy, and infringement standards—are closely related placeholders for other considerations).

[315] Though original, the phrase is likely non-unique (and uncopyrightable), because it includes relatively few elements and because it is only moderately unconstrained (assuming it is not a nonsense phrase).

what to make of cases in which footage captured without sweat is still protected? We also witness inconsistency surrounding the issue of novelty. Some courts say copyright requires no novelty at all. Others say copyright requires no striking novelty. In any event, courts never actually hold defendant liable for damages when plaintiff's work lacks appreciable novelty. Most puzzling of all is the useful article doctrine, for which more than ten tests have been proposed, none of which are reliable.

We can solve these puzzles and streamline doctrine by focusing directly on uniqueness. A work is unique if it is a one-of-a-kind: a work that no one created before (novel) and that no one could independently create after (unrepeatable). A work is novel and unrepeatable when it is (at least modestly) complex and either unconstrained or uniquely constrained.

Why is uniqueness the touchstone for copyright? It makes no sense to protect work that lacks novelty. What would be the point of inducing the re-creation of work that already exists? There is a point to inducing the creation of novel but repeatable work—to get it sooner rather than later—but patent protection better suits such work. Patent law economizes on the costs of protecting repeatable work, such as duplication of effort and problems of proof.

Copyright arises automatically and lasts a long time and is thus a liberal form of protection. Liberal protection suits unique work. For unique work there is no such thing as duplication of effort—by definition, no one can independently duplicate unique work. Unique work also generates few proof problems, because the evidence usually points straight to its true creator. Another reason to protect unique work more liberally is that we get only one chance to incentivize its creation. If we fail to incentivize the one and only creator who can create it, it is lost to the world forever.

State Bar Section News

Letter from the Chair

By Bart Showalter

It is always a pleasure to introduce another one of our outstanding Texas Intellectual Property Law Journal. This edition includes several substantive articles covering topics for intellectual property practitioners. Many thanks to the editors and individual authors who provided these articles.

The 2011-2012 State Bar year is well underway, and a highlight of the year was the Advanced Patent Litigation program held July 14-15 in San Antonio. Craig Lundell chaired the event with Sanford Warren and it was a great success. Programs included a very popular judges panel moderated by Jerry Selinger, and in house counsel panel moderated by Brianna L. Hinojosa-Flores, and an impressive set of opening statements by Damon Young and Bill Cavanaugh. Thanks to Mary McDonald of the State Bar for her invaluable help with this program.

Our next CLE program will the State Bar Annual Meeting on June 15th in Houston. Chair-Elect Scott Breedlove is chairing that event, which should be another outstanding program. Once again, our Section will offer a full day CLE program for the price of a one-day Friday registration to the Annual Meeting. There will also be a reception the Thursday evening before our CLE program. In keeping with tradition, we will hold our annual business meeting and luncheon on June 15th, where we will elect new officers and council members, as well as present our Section's awards. Those awards include the Women & Minorities Scholarships, the Outstanding Texas Inventor of the Year Award, and the Chair Award. You can register for the Annual Meeting at http://www.texasbar.com/annualmeeting, and please confirm your plans to attend our Section's ticketed business luncheon on Friday.

In my first letter, I encouraged volunteerism by joining one of our outstanding committees. I'll reiterate that focus once again. With over 2,000 members in our Section, Committees truly offer the best opportunity for you to get involved and to get to know other IP practitioners from around the state.

I look forward to seeing you at one of our upcoming CLE programs. If you have any ideas about how the Section leadership can better serve our members, I encourage you to contact me or any other officer or council member.