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Innovation and Competition Policy, Chapter 7 (2d ed): Intellectual Property Misuse

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This book of CASES AND MATERIALS ON INNOVATION AND COMPETITION POLICY is intended for educational use. The book is free for all to use subject to an open source license agreement. It differs from IP/antitrust casebooks in that it considers numerous sources of competition policy in addition to antitrust, including those that emanate from the intellectual property laws themselves, and also related issues such as the relationship between market structure and innovation, the competitive consequences of regulatory rules governing technology competition such as net neutrality and interconnection, misuse, the first sale doctrine, and the Digital Millennium Copyright Act (DMCA). Chapters will be updated frequently. The author uses this casebook for a three-unit class in *Innovation and Competition Policy* taught at the University of Iowa College of Law and available to first year law students as an elective. The table of contents is as follows (click on chapter title to retrieve it):

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INNOVATION AND COMPETITION POLICY: CASES AND MATERIALS

HERBERT HOVENKAMP

CHAPTER 7 (2d ed) INTELLECTUAL PROPERTY MISUSE

LASERCOMB AMERICA, INC. v. REYNOLDS 911 F.2d 970 (4th Cir. 1990)

SPROUSE, Circuit Judge:

Appellants Larry Holliday and Job Reynolds appeal from a district court judgment holding them liable to appellee Lasercomb America, Inc., for copyright infringement and for fraud, based on appellants' unauthorized copying and marketing of appellee's software. We affirm in part, reverse in part, and remand for recomputation of damages.

Appellants and defendants below are Larry Holliday, president and sole shareholder of Holiday Steel Rule Die Corporation (Holiday Steel), and Job Reynolds, a computer programmer for that company. Appellee is Lasercomb America, Inc. (Lasercomb), the plaintiff below. Holiday Steel and Lasercomb were competitors in the manufacture of steel rule dies that are used to cut and score paper and cardboard for folding into boxes and cartons. Lasercomb developed a software program, Interact, which is the object of the dispute between the parties. Using this program, a designer creates a template of a cardboard cutout on a computer screen and the software directs the mechanized creation of the conforming steel rule die.

In 1983, before Lasercomb was ready to market its Interact program generally, it licensed four prerelease copies to Holiday Steel which paid $35,000 for the first copy, $17,500 each for the next two copies, and $2,000 for the fourth copy. Lasercomb informed Holiday Steel that it would charge $2,000 for each additional copy Holiday Steel cared to purchase. Apparently ambitious to create for itself an even better deal, Holiday Steel circumvented the protective devices Lasercomb had provided with the software and made three unauthorized copies of Interact which it used on its computer systems. Perhaps buoyed by its success in copying, Holiday Steel then created a software program called "PDS-1000," which was almost entirely a direct copy of Interact, and marketed it as its own CAD/CAM die-making software. These infringing activities were accomplished by Job Reynolds at the direction of Larry Holliday.

There is no question that defendants engaged in unauthorized copying, and the purposefulness of their unlawful action is manifest from their deceptive practices. For example, Lasercomb had asked Holiday Steel to use devices called "chronoguards" to prevent unauthorized access to Interact. Although defendants had deduced how to circumvent the chronoguards and had removed them from their computers, they represented to Lasercomb that the chronoguards were in use. Another example of subterfuge is Reynolds' attempt to modify the PDS-1000 program output so it would present a different appearance than the output from Interact.

When Lasercomb discovered Holiday Steel's activities, it registered its copyright in Interact and filed this action against Holiday Steel, Holliday, and Reynolds on March 7, 1986. Lasercomb claimed copyright infringement, breach of contract, misappropriation of trade secret, false designation of origin, unfair competition, and fraud. Defendants filed a number of counterclaims. On March 24, 1986, the district court entered a preliminary injunction, enjoining defendants from marketing the PDS-1000 software.

The procedural history of this case is complex, with various claims and defenses experiencing both death and resurrection on various pretrial motions and at the bench trial itself. For purposes of this appeal it suffices to say that, ultimately, all of the counterclaims were dismissed; Lasercomb's claims of misappropriation of trade secret, false designation of origin, and unfair competition were dismissed as preempted by the Copyright Act; the court found the defendants liable to Lasercomb for copyright infringement, rejecting their affirmative defenses of misuse of copyright and lack of statutory copyright notice; and the court held for Lasercomb on its claims of breach of contract and fraud.

The district court awarded Lasercomb $105,000 in actual damages for copyright infringement and for fraud—with Holiday Steel, Holliday, and Reynolds jointly and severally liable—plus $10,000 against Holliday and $5,000 against Reynolds as punitive damages on the fraud claim. All defendants were permanently enjoined from publishing and marketing the PDS-1000 software.

Holliday and Reynolds raise several issues on appeal. They do not dispute that they copied Interact, but they contend that Lasercomb is barred from recovery for infringement by its concomitant culpability. They assert that, assuming Lasercomb had a perfected copyright, it impermissibly abused it. This assertion of the "misuse of copyright" defense is based on language in Lasercomb's standard licensing agreement, restricting licensees from creating any of their own CAD/CAM die-making software. Appellants also argue that the district court's finding of fraud was erroneously based on facts not alleged in the complaint. Finally, they contend that, even if they are liable, the district court erred in the calculation of damages. We consider these issues seriatim.

A successful defense of misuse of copyright bars a culpable plaintiff from prevailing on an action for infringement of the misused copyright. Here, appellants claim Lasercomb has misused its copyright by including in its standard licensing agreement clauses which prevent the licensee from participating in any manner in the creation of computer-assisted die-making software. The offending paragraphs read:

> D. Licensee agrees during the term of this Agreement that it will not permit or suffer its directors, officers and employees, directly or indirectly, to write, develop, produce or sell computer assisted die making software.
>
> E. Licensee agrees during the term of this Agreement and for one (1) year after the termination of this Agreement, that it will not write, develop, produce or sell or assist others in the writing, developing, producing or selling computer assisted die making software, directly or indirectly without Lasercomb's prior written consent. Any such activity undertaken without Lasercomb's written consent shall nullify any warranties or agreements of Lasercomb set forth herein.

The "term of this Agreement" referred to in these clauses is ninety-nine years. Defendants were not themselves bound by the standard licensing agreement. Lasercomb had sent the agreement to Holiday Steel with a request that it be signed and returned. Larry Holliday, however, decided not to sign the document, and Lasercomb apparently overlooked the fact that the document had not been returned. Although defendants were not party to the restrictions of which they complain, they proved at trial that at least one Interact licensee had entered into the standard agreement, including the anticompetitive language.

The district court rejected the copyright misuse defense for three reasons. First, it noted that defendants had not explicitly agreed to the contract clauses alleged to constitute copyright misuse. Second, it found "such a clause is reasonable in light of the delicate and sensitive area of computer software." And, third, it questioned whether such a defense exists. We consider the district court's reasoning in reverse order.

A. *Does a "Misuse of Copyright" Defense Exist?*

We agree with the district court that much uncertainty engulfs the "misuse of copyright" defense. We are persuaded, however, that a misuse of copyright defense is inherent in the law of copyright just as a misuse of patent defense is inherent in patent law.

The misuse of a patent is a potential defense to suit for its infringement, and both the existence and parameters of that body of law are well established. E.g., United States Gypsum Co. v. National Gypsum Co., 352 U.S. 457, 465 (1957); see generally 8 E. Lipscomb, Lipscomb's Walker on Patents §§ 28:32–28:36 (3d ed. 1989) [hereinafter Walker on Patents]; Calkins, Patent Law: The Impact of the 1988 Patent Misuse Reform Act and Noerr–Pennington Doctrine on Misuse Defenses and Antitrust Counterclaims, 38 Drake L.Rev. 175 (1989) [hereinafter Calkins, Patent Law]. Although there is little case law on the subject, courts from time to time have intimated that the similarity of rationales underlying the law of patents and the law of copyrights argues for a defense to an infringement of copyright based on misuse of the copyright. E.g., United States v. Loew's, Inc., 371 U.S. 38, 44–51 (1962); United States v. Paramount Pictures, Inc., 334 U.S. 131 (1948). The origins of patent and copyright law in England, the treatment of these two aspects of intellectual property by the framers of our Constitution, and the later statutory and judicial development of patent and copyright law in this country persuade us that parallel public policies underlie the protection of both types of intellectual property rights. We think these parallel policies call for application of the misuse defense to copyright as well as patent law.

Supreme Court comment has likewise equated the public policies of copyright and patent. For example, in Mazer v. Stein, 347 U.S. 201, 219 (1953), the Supreme Court stated:

> The economic philosophy behind the clause empowering Congress to grant patents and copyrights is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of

> authors and inventors in "Science and useful Arts." Sacrificial days devoted to such creative activities deserve rewards commensurate with the services rendered.

The philosophy behind copyright, parallel to that discussed above for patent, is that the public benefits from the efforts of authors to introduce new ideas and knowledge into the public domain. To encourage such efforts, society grants authors exclusive rights in their works for a limited time.

Although a patent misuse defense was recognized by the courts as early as 1917, most commentators point to Morton Salt Co. v. G.S. Suppiger, 314 U.S. 488 (1942), as the foundational patent misuse case. In that case, the plaintiff Morton Salt brought suit on the basis that the defendant had infringed Morton's patent in a salt-depositing machine. The salt tablets were not themselves a patented item, but Morton's patent license required that licensees use only salt tablets produced by Morton. Morton was thereby using its patent to restrain competition in the sale of an item which was not within the scope of the patent's privilege. The Supreme Court held that, as a court of equity, it would not aid Morton in protecting its patent when Morton was using that patent in a manner contrary to public policy. The Court stated:

> The grant to the inventor of the special privilege of a patent monopoly carries out a public policy adopted by the Constitution and laws of the United States, "to promote the Progress of Science and useful Arts, by securing for limited Times to . . . Inventors the exclusive Right . . . " to their "new and useful" inventions. United States Constitution, Art. I, § 8, cl. 8, 35 U.S.C. § 31. But the public policy which includes inventions within the granted monopoly excludes from it all that is not embraced in the invention. It equally forbids the use of the patent to secure an exclusive right or limited monopoly not granted by the Patent Office and which it is contrary to public policy to grant.

Thus, the Supreme Court endorsed "misuse of patent" as an equitable defense to a suit for infringement of that patent.

Since *Morton Salt*, the courts have recognized patent misuse as a valid defense and have applied it in a number of cases in which patent owners have attempted to use their patents for price fixing, tie-ins, territorial restrictions, and so forth. See Calkins, Patent Law, at 187–89 n. 38, 8 Walker on Patents §§ 28:32–28:36; W. Holmes, Intellectual Property and Antitrust Law § 1.07 (1989) [hereinafter Holmes, Intellectual Property]. The patent misuse defense also has been acknowledged by Congress in the 1988 Patent Misuse Reform Act, Pub.L. No. 100-703, 102 Stat. 4676 (1988) (codified at 35 U.S.C. § 271(d)(4) & (5)), which limited but did not eliminate the defense.

Although the patent misuse defense has been generally recognized since Morton Salt, it has been much less certain whether an analogous copyright misuse defense exists. See supra note 9. This uncertainty persists because no United States Supreme Court decision has firmly established a copyright misuse defense in a manner analogous to the establishment of the patent misuse defense by Morton Salt. The few courts considering the issue have split on whether the defense should be recognized, see Holmes, Intellectual Property § 4.09 (collecting cases), and we have discovered only one case which has actually applied copyright misuse to bar an action for infringement. M. Witmark & Sons v. Jensen, 80 F.Supp. 843 (D.Minn.1948), appeal dismissed, 177 F.2d 515 (8th Cir.1949).

We are of the view, however, that since copyright and patent law serve parallel public interests, a "misuse" defense should apply to infringement actions brought to vindicate either right. As discussed above, the similarity of the policies underlying patent and copyright is great and historically has been consistently recognized. Both patent law and copyright law seek to increase the store of human knowledge and arts by rewarding inventors and authors with the exclusive rights to their works for a limited time. At the same time, the granted monopoly power does not extend to property not covered by the patent or copyright. Morton Salt, 314 U.S. at 492; *cf.* Baker v. Selden, 101 U.S. 99, 101–04 (1880).

Thus, we are persuaded that the rationale of Morton Salt in establishing the misuse defense applies to copyrights. In the passage from Morton Salt quoted above, the phraseology adapts easily to a copyright context:

> The grant to the [author] of the special privilege of a [copyright] carries out a public policy adopted by the Constitution and laws of the United States, "to promote the Progress of Science and useful Arts, by securing for limited Times to [Authors] . . . the exclusive Right . . . " to their ["original" works]. United States Constitution, Art. I, § 8, cl. 8. But the public policy which includes [original works]

> within the granted monopoly excludes from it all that is not embraced in the [original expression]. It equally forbids the use of the [copyright] to secure an exclusive right or limited monopoly not granted by the [Copyright] Office and which it is contrary to public policy to grant
>
> .

Having determined that "misuse of copyright" is a valid defense, analogous to the misuse of patent defense, our next task is to determine whether the defense should have been applied by the district court to bar Lasercomb's infringement action against the defendants in this case.

In declining to recognize a misuse of copyright defense, the district court found "reasonable" Lasercomb's attempt to protect its software copyright by using anticompetitive clauses in their licensing agreement. In briefly expressing its reasoning, the court referred to the "delicate and sensitive" nature of software. It also observed that Lasercomb's president had testified that the noncompete language was negotiable.

If, as it appears, the district court analogized from the "rule of reason" concept of antitrust law, we think its reliance on that principle was misplaced. Such reliance is, however, understandable. Both the presentation by appellants and the literature tend to intermingle antitrust and misuse defenses. E.g., Holmes, Intellectual Property, at § 4.09. A patent or copyright is often regarded as a limited monopoly—an exception to the general public policy against restraints of trade. Since antitrust law is the statutory embodiment of that public policy, there is an understandable association of antitrust law with the misuse defense. Certainly, an entity which uses its patent as the means of violating antitrust law is subject to a misuse of patent defense. However, *Morton Salt* held that it is not necessary to prove an antitrust violation in order to successfully assert patent misuse:

> It is unnecessary to decide whether respondent has violated the Clayton Act, for we conclude that in any event the maintenance of the present suit to restrain petitioner's manufacture or sale of the alleged infringing machines is contrary to public policy and that the district court rightly dismissed the complaint for want of equity.

So while it is true that the attempted use of a copyright to violate antitrust law probably would give rise to a misuse of copyright defense, the converse is not necessarily true—a misuse need not be a violation of antitrust law in order to comprise an equitable defense to an infringement action. The question is not whether the copyright is being used in a manner violative of antitrust law (such as whether the licensing agreement is "reasonable"), but whether the copyright is being used in a manner violative of the public policy embodied in the grant of a copyright.

Lasercomb undoubtedly has the right to protect against copying of the Interact code. Its standard licensing agreement, however, goes much further and essentially attempts to suppress any attempt by the licensee to independently implement the idea which Interact expresses. The agreement forbids the licensee to develop or assist in developing any kind of computer-assisted die-making software. If the licensee is a business, it is to prevent all its directors, officers and employees from assisting in any manner to develop computer-assisted die-making software. Although one or another licensee might succeed in negotiating out the noncompete provisions, this does not negate the fact that Lasercomb is attempting to use its copyright in a manner adverse to the public policy embodied in copyright law, and that it has succeeded in doing so with at least one licensee.

The language employed in the Lasercomb agreement is extremely broad. Each time Lasercomb sells its Interact program to a company and obtains that company's agreement to the noncompete language, the company is required to forego utilization of the creative abilities of all its officers, directors and employees in the area of CAD/CAM die-making software. Of yet greater concern, these creative abilities are withdrawn from the public. The period for which this anticompetitive restraint exists is ninety-nine years, which could be longer than the life of the copyright itself.

We previously have considered the effect of anticompetitive language in a licensing agreement in the context of patent misuse. Compton v. Metal Products, Inc., 453 F.2d 38 (4th Cir.1971), cert. denied, 406 U.S. 968 (1972). Compton had invented and patented coal auguring equipment. He granted an exclusive license in the patents to Joy Manufacturing, and the license agreement included a provision that Compton would not "engage in any business or activity relating to the manufacture or sale of equipment of the type licensed hereunder" for as long as he was due royalties under the patents. Suit for infringement of the Compton patents was brought against Metal Products, and the district court granted injunctive relief and damages. On appeal we held that relief for the infringement was barred by the misuse defense, stating:

> The need of Joy to protect its investment does not

> outweigh the public's right under our system to expect competition and the benefits which flow therefrom, and the total withdrawal of Compton from the mining machine business . . . everywhere in the world for a period of 20 years unreasonably lessens the competition which the public has a right to expect, and constitutes misuse of the patents.

Id. at 45.

We think the anticompetitive language in Lasercomb's licensing agreement is at least as egregious as that which led us to bar the infringement action in Compton, and therefore amounts to misuse of its copyright. Again, the analysis necessary to a finding of misuse is similar to but separate from the analysis necessary to a finding of antitrust violation. The misuse arises from Lasercomb's attempt to use its copyright in a particular expression, the Interact software, to control competition in an area outside the copyright, i.e., the idea of computer-assisted die manufacture, regardless of whether such conduct amounts to an antitrust violation.

In its rejection of the copyright misuse defense, the district court emphasized that Holiday Steel was not explicitly party to a licensing agreement containing the offending language. However, again analogizing to patent misuse, the defense of copyright misuse is available even if the defendants themselves have not been injured by the misuse. In Morton Salt, the defendant was not a party to the license requirement that only Morton-produced salt tablets be used with Morton's salt-depositing machine. Nevertheless, suit against defendant for infringement of Morton's patent was barred on public policy grounds. Similarly, in Compton, even though the defendant Metal Products was not a party to the license agreement that restrained competition by Compton, suit against Metal Products was barred because of the public interest in free competition.

Therefore, the fact that appellants here were not parties to one of Lasercomb's standard license agreements is inapposite to their copyright misuse defense. The question is whether Lasercomb is using its copyright in a manner contrary to public policy, which question we have answered in the affirmative.

In sum, we find that misuse of copyright is a valid defense, that Lasercomb's anticompetitive clauses in its standard licensing agreement constitute misuse of copyright, and that the defense is available to appellants even though they were not parties to the standard licensing agreement. Holding that Lasercomb should have been barred by the defense of copyright misuse from suing for infringement of its copyright in the Interact program, we reverse the injunction and the award of damages for copyright infringement.

Because of this holding, we do not reach the other defenses to copyright infringement advanced by appellants. Although we find misuse of copyright, we reject the contention of appellants—that they should recover attorney fees from Lasercomb under 17 U.S.C. § 505 because Lasercomb brought this action in bad faith. Given the conduct of defendants and the obscurity of their defenses, we find such a position completely untenable.

AFFIRMED IN PART, REVERSED IN PART, AND REMANDED.

NOTES AND QUESTIONS

1. Patent "misuse" is an entirely judge made doctrine with a long and troubled history. As *Lasercomb* points out, it originated in the 1910s as a doctrine intended to permit patent "overreaching," but then formed a sort of "partnership" with antitrust in the 1940s and after. Indeed, the antitrust law of tying arrangements (see Chapter Two) very largely originated in the patent infringement lawsuits that gave rise to the patent misuse offense. Early patent misuse cases that refused to enforce tying conditions, such as *Motion Picure Patents* and *Carbice* (both printed in Chapter Two) gave lip service to the antitrust laws but were in fact patent law holdings. Only in the *International Salt* case in the 1940s did the law of tying formally move from patent law (misuse) to antitrust law. See International Salt Co. v. United States, 332 U.S. 392 (1947). The important consequence was that, while misuse is asserted mainly as a defense to an infringement action, the antitrust laws can be affirmatively be enforced by both the government and private plaintiffs.

2. Lasercomb's licensing agreement has been said to be a "model of overreaching." Philip Abromats, Comment, *Copyright Misuse and Anticompetitive Software Licensing Restrictions: Lasercomb America, Inc. v. Reynolds*, 52 U. Pitt. L. Rev. 629, 648 (1991). The terms of the license not only prohibited Holiday Steel, its directors, officers, and employees from "directly or indirectly" writing, developing, producing, or selling competing software—it prohibited them from "assist[ing] others" in doing so, and for up to a hundred years. The Fourth Circuit Court of Appeals correctly noted that these restraints would be in place long after Lasercomb's copyright expired, but the restraints would also have stopped

Holiday Steel from developing—or helping to develop—new software even after Lasercomb's product became obsolete. Abromats writes: "[E]nforcement of [such] an excessively-long noncompete agreement does nothing to protect the legitimate secrets of the licensor and unfairly burdens the original development efforts of the licensee. The practical effect of this [is] to limit competition and deprive the public of improved, less-expensive new products." Noncompete clauses like Lasercomb's prevent users like Holiday Steel—who are in a good position to spot "shortcomings in the product and opportunities for improvement that the original developer could not (or chose not) to envision"—from making the product better. This "withdraw[s] from the market the talents of those persons most able to contribute to the improvement of the product," and the public is therefore "deprived of some innovations altogether and . . . obtain[s] others only at an unnecessarily high cost."

Did the Fourth Circuit Court of Appeals also go too far? In finding that Lasercomb had misused its copyright, the Fourth Circuit relied heavily on *Morton Salt Co. v. G.S. Suppiger,* in which the Supreme Court held that patent owners cannot sue for infringement when they use their patents to "secure an exclusive right or limited monopoly not granted by the Patent office and which it is contrary to public policy to grant." 314 U.S. 488, 492 (1942). *Morton Salt* was decided during an era when the law presumed that patents gave their owners market power. In 1988 Congress amended the patent laws to prohibit findings of misuse where patent owners engage in tying but do not have market power. *See* 35 U.S.C. § 271(d)(5). While Lasercomb's noncompete clause did not contain a tie-in, it did involve "a closely analogous restriction, a tie-*out*." James B. Kobak Jr., *A Sensible Doctrine of Misuse for Intellectual Property Cases*, 2 Alb. L.J. Sci. & Tech. 1, 34 (1992). But in applying *Morton Salt Co.*, which completely bars patent holders from suing even direct infringers, the Fourth Circuit borrowed the logic of early patent-misuse cases but not the limits Congress and courts had imposed. *See id.* at 21, 34; *but see* Aaron Zavier Fellmeth, *Copyright Misuse and the Limits of the Intellectual Property Monopoly*, 6 J. Intell. Prop. L. 1, 28 (1998) (stating that while "[p]atentees have a statutory right to tie their patents to sales of other goods if they lack significant market power, copyright owners have no such immunity" Given that the doctrine of patent misuse spiraled out of (largely unfounded) fears that patent holders would use their patents to gain monopolies in other markets, does it make sense to apply *Morton Salt Co.*'s "deliberately severe rule" to copyrights, which "do not confer a fraction of the market power of a fundamental patent"? Kobak, *supra*, at 4, 32. *But see id.* at 32 ("Surely, however, some copyrighted creations such as computer software programs or commercially important databases do permit the same sort of cost savings and may confer the same sort of market power."); Fellmeth, *supra*, at 30 (arguing that "in the increasingly important software industry, a copyright can confer very significant market power").

The Fourth Circuit ultimately found that Larry Holliday never actually signed the licensing agreement and that Holiday Steel therefore wasn't bound by it—that is, nothing stopped Holiday Steel from writing, developing, producing, or selling its own die-making software as long as it didn't infringe Lasercomb's copyright. But because Lasercomb had managed to get one other user to sign the unfair licensing agreement, the Fourth Circuit held that Lasercomb was barred from enforcing its copyright against *any* users, even outright infringers like Holiday Steel. Is this a good rule? See Mark A. Lemley, Note, *The Economic Irrationality of the Patent Misuse Doctrine*, 78 Calif. L. Rev. 1599, 1610–13 (1990) (arguing that "[o]nly patent infringers benefit from the doctrine" and that "a defendant asserting patent misuse need not prove individual harm from the misuse at all. Instead, any defendant in an infringement action is protected from the suit if she can prove that the plaintiff misused the patent, even if the defendant was unaffected by the misuse"). Should the Fourth Circuit have limited the copyright misuse defense to infringers who are actually bound by the overly restrictive agreement? Professor Thomas Cotter notes that while most courts "follow *Lasercomb* and the patent misuse decisions in not requiring the defendant itself to be a victim of the misuse, there is a significant plurality of decisions that require some sort of 'nexus' between the IP plaintiff's alleged misconduct and the IP dispute at issue." Thomas F. Cotter, *Misuse*, 44 Hous. L. Rev. 901, 931 (2007).

SENZA-GEL CORP. v. SEIFFHART
803 F.2d 661 (Fed. Cir. 1986)

MARKEY, Chief Judge.

Background

Appellants (Senza-Gel) sued all appellees, asserting numerous claims under state and federal law. One such claim was for infringement of Senza-Gel's process patent No. 3,644,125. The district court separated the issues of patent validity and direct infringement for trial before all other issues. The jury returned a verdict that the patent was valid and infringed and the court denied Goehring's motion for JNOV. Months later, appellees moved to amend their answer to add an allegation of patent misuse and an antitrust counterclaim. When that motion was granted, appellees (Goehring) filed motions for summary judgment of patent misuse and antitrust violation under § 1 of the Sherman Act, 15 U.S.C. § 1. The court granted the former and denied the latter.

Before us, Senza-Gel challenges the grant of the motion to amend and the grant of summary judgment of patent misuse. Goehring seeks reversal of the denial of summary judgment of antitrust violation and a determination by this court that it had established certain elements of its counterclaim not reached by the district court.

The district court extensively discussed the evidence, the law, and the parties' arguments. Citing authorities, the court delineated the difference it correctly saw between patent misuse as a defense in a suit for patent infringement and as a basis for a complaint for antitrust violation. The court noted that the parties confused the two concepts (as they have on appeal), and that courts have done so as well.

The court cited the license agreements and testimony of Senza-Gel's principals (submitted at the patent issues trial as proof of commercial success of the patented process) as establishing Senza-Gel's refusal to permit use of the process of the patent in suit unless the user leased Senza-Gel's "macerator" machine, and the undisputed fact that the process and macerator were always leased together. The absence of conflict between the jury verdict and the grant of summary judgment of misuse was noted.

Reviewing legal history, the court discussed the "staple article of commerce" concept as it relates to contributory infringement, patent misuse, and antitrust. The court noted that Senza-Gel had insulated from review the validity of what it called its patent on the macerator. Having determined that Senza-Gel's macerator was useful in non-infringing processes, the court found it a staple article, as was OHI's machine that Senza-Gel called a "knock-off" of the macerator; the court then found that the process and the macerator (which performed one step of the process) were two "things"; and that those two things were "tied".

Because the parties had not raised the issue, the court declined to discuss any question of package licensing, but noted that the mere leasing together of the process and machine would not suffice if the effect were not, as it was here, to expand the "ambit" of the process patent. Senza-Gel's sole argument (that no one asked to lease the process alone and there was thus no coercion) was rejected.

Because Senza-Gel had submitted no evidence of business justification or other adequate response, the court concluded that no genuine issue of material fact on the misuse issue was present.

Noting that Senza-Gel had conditioned access to its process by requiring a lease of the macerator at prices making it uneconomical to lease the process and practice it with a different machine, and that Senza-Gel had thereby extended the scope of the process patent to cover the macerator, the court found misuse and granted Goehring's motion for summary judgment. .. .

[Misuse]

Senza-Gel's principals testified at trial that it never licensed or "leased" the process patent on which it was suing without leasing its "Macerator" machine useable in carrying out a step of the patented process, and it is undisputed that the process and machine were, as a matter of established policy, always leased together. Though Senza-Gel had obtained patent No. 3,893,384, which it says covers its machine, it elected not to bring that patent into court and the district court referred to and treated the machine as unpatented for the purposes of this trial. Senza-Gel not only failed to involve its machine patent and to establish the relationship of that patent to the machine leased, it has failed to establish on this certified appeal that the district court was clearly erroneous in finding that the machine as leased was suitable for substantial non-infringing use and therefore a staple article of commerce. Both parties cite antitrust cases in contesting the merits of the grant of summary judgment of misuse. The parties thus fail to distinguish between patent misuse as a defensive shield and patent misuse as an offensive sword. In both cases, the patentee's act is the same. That act may serve, as here, as a defense to a charge of patent infringement. That act may also serve as an element in a complaint charging antitrust violation. Thus, as the Supreme Court has said, the patentee's act may constitute patent misuse without rising to the level of an antitrust violation. *Zenith Radio Corp. v. Hazeltine Research, Inc.*, 395 U.S. 100, 140 (1969). All that a successful defense of patent misuse means is that a court of equity will not lend its support to enforcement of a mis-user's patent.

On the record before it, the district court's grant of summary judgment on the defense of misuse was not in conflict with its denial of summary judgment on the counterclaim for antitrust violation.

The sole argument made by Senza-Gel to the district court on the motion for summary judgment of misuse before that motion was granted was that there was "no evidence" that it had coerced lessees, who had thus entered "voluntary" leases…. The arguments that Senza-Gel did make before the district court (that its lessees acted voluntarily and that there was no evidence it ever "coerced" a lessee of the process) are refuted by the record. Its own witnesses said a lease of one was never available without a lease of the other, Senza-Gel submitted no evidence on voluntariness or on business justification, and a witness testified without contradiction that his express request to lease the process without the machine was refused by Senza-Gel. . . .

[Antitrust]

Here, the district court recognized several issues of fact that must be determined before one can be held liable for an illegal tying arrangement in violation of the antitrust laws. Because the district court determined that a genuine issue of material fact existed as to whether there was a tying arrangement consisting of two separate and distinct products for antitrust purposes, it held that determination dispositive of Goehring's motion for summary judgment. The district court correctly determined there was therefore no need to examine whether there were other genuine issues of material fact in this case, e.g., sufficient economic power in the tying product, and an effect on a "not insubstantial" amount of commerce in the tied product market….

Goehring insists that this court hold "as a matter of law" that it had established the other factual requisites for establishing Senza-Gel's violation of the antitrust laws. Matters of law rest, however, on facts determined. There is no basis for Goehring's request, the district court having entered no findings on those elements and no finding that issues of material fact in relation to them are either present or absent, and this court having no authority to determine facts *de novo.*

Concerning certified question No. 6, on determination of whether there are two separate and distinct products for antitrust purposes, Goehring argues that *Rex Chainbelt, Inc. v. Harco Products, Inc.,* 512 F.2d 993, 185 USPQ 10 (9th Cir.), *cert. denied,* 423 U.S. 831 (1975), controls, and that the "key factor" in both antitrust and patent misuse contexts is whether the tied product was a "staple", i.e., capable of non-infringing uses. Goehring contends that the district court erred in holding that a question of material fact concerning consumer behavior (character of demand) is involved in deciding its motion for summary judgment of antitrust violation. We disagree….

The district court here relied principally on *Klamath-Lake Pharmaceutical Association v. Klamath Medical Service Bureau,* 701 F.2d

1276 (9th Cir.), *cert. denied,* 464 U.S. 822 (1983). In *Klamath-Lake,* the Ninth Circuit stated:

> Separateness is determined in part by whether the products are normally sold or used as a unit and whether their joint sale effects savings beyond those of combined marketing. *Siegel v. Chicken Delight, Inc.,* 448 F.2d 43, 48 (9th Cir.1971), *cert. denied,* 405 U.S. 955 (1972) (describing the "function of the aggregate" test). The critical factor is the extent to which a producer's offerings are in response to independently structured consumer demand. Products that function together and are sold in combination may still be "separate" if consumers would prefer to buy them individually at the price necessary to market them separately. Tying denotes illegal coercion: "Rules governing tying arrangements are designed to strike, not at the mere coupling of physically separable objects, but rather at the use of a dominant desired product to compel the purchase of a second, distinct commodity." *Id.* at 47 (citing *Times-Picayune Publishing Co. v. United States,* 345 U.S. 594, 614 (1953)). *Whether a producer's combined products should be considered as separate can be decided only by looking at consumer behavior.* It is the relationship of the producer's selling decision to market demand, not the physical characteristics of the products alone, that determines the existence of legally separable products.

Since *Klamath-Lake,* the Supreme Court has stated "that the answer to the question whether two products are involved turns not on the functional relationship between them, but rather on the character of the demand for the two items." *Jefferson Parish Hospital District No. 2 v. Hyde,* 466 U.S. 2, 19 (1984) (footnote omitted). The Court noted that "a tying arrangement cannot exist unless two separate product markets have been linked." There, the Court held that anesthesiological services were separate from hospital services because there was a "sufficient demand for the purchase of anesthesiological services separate from hospital services to identify a distinct product market in which it is efficient to offer anesthesiological services separately from hospital services."

Goehring has shown no basis for answering certified question No. 6 in the negative. Its effort to equate the determination of product separability for misuse purposes with product separability for antitrust purposes must fail in light of Ninth Circuit and Supreme Court law, which requires that "consumer behavior" (market demand) be examined to determine the separability of products in determining whether there is a tying arrangement for antitrust purposes. Thus there is no conflict in the district court's holding that there are two products sufficient to sustain a defense of patent misuse, and its determination that a genuine issue of material fact exists on whether there are two products for antitrust purposes.

AFFIRMED.

[*A dissenting opinion by Judge Bennett, limited to procedural issues, is omitted.*]

NOTE: "SEPARATE PRODUCTS" UNDER MISUSE AND TYING LAW

Patent law and antitrust frequently use the same concepts and terms but in different contexts and with different meanings. For example, as *Senza-Gel* suggests, illegal tying requires (at least) two products in both patent law and antitrust. But each body of law applies its own test to determine whether there are two products. The infringement defendants in *Senza-Gel* accused Senza-Gel of tying leases of its unpatented machines to licenses of its patented process. The Court of Appeals for the Federal Circuit affirmed summary judgment on the patent-misuse claim, apparently finding no flaws in the district court's ruling that the process and the machine were "two products" for the purposes of a misuse defense or in the lower court's holding that there were nevertheless genuine issues of material fact as to whether they were "two products" under antitrust law. The Federal Circuit was correct that a "patentee's act may constitute patent misuse without rising to the level of an antitrust violation," but does it make sense to apply two different separate-products tests? In a footnote omitted here, the court wrote that:

> [t]he law of patent misuse in licensing need not look to consumer demand (*which may be non-existent*) but need look only to the nature of the claimed invention as the basis for determining whether a product is a necessary concomitant of the invention or an entirely separate product. The law of antitrust violation, tailored for situations that may or may not involve a patent, looks to a consumer demand test for determining product separability.

Senza-Gel, 803 F.2d at 670 n.14 (emphasis added); *see also* Robert P. Merges, *Reflections on Current Legislation Affecting Patent Misuse*, 70 J. Pat. & Trademark Off. Soc'y 793 (1988) ("[T]he often very limited (or 'thin') markets for patented technology make it difficult to apply antitrust law's consumer-demand definition of the relevant market."). On *Senza-Gel* and the Federal Circuit's analysis of the separate-products issue, see generally Peter M. Boyle et al., *Antitrust Law at the Federal Circuit: Red Light or Green Light at the IP–Antitrust Intersection?*, 69 Antitrust L.J. 739, 790–92 (2002) ("the Federal Circuit's analysis of the 'separate products' standard remains confused" and that the court "has yet to clarify adequately how the misuse and antitrust standards may differ, if at all").

MONSANTO CO. v. SCRUGGS
459 F.3d 1328 (Fed. Cir. 2006)

MAYER, Circuit Judge.

Background

Monsanto owns U.S. Patent No. 5,352,605 ("the '605 patent"), which is directed toward insertion of a synthetic gene consisting of a 35S cauliflower mosaic virus ("CaMV") promoter, a protein sequence of interest, and a stop signal, into plant DNA to create herbicide resistance. Monsanto also owns U.S. Patent Nos. 5,164,316; 5,196,525; and 5,322,938 (collectively "the McPherson patents"), which are directed toward insect resistant traits. The McPherson patents expand upon the '605 patent in several ways, including disclosure of an enhanced CaMV 35S promoter.

Monsanto used the technology in the '605 patent to develop glyphosate herbicide resistant soybeans and cotton, sold as Roundup Ready (R) soybeans and cotton. One of the glyphosate herbicides to which the Roundup Ready (R) plants are resistant is Roundup, which is also sold by Monsanto. Monsanto used the '605 patent in combination with the McPherson patents to develop stacked trait cotton ("Bollgard/Roundup Ready (R) cotton"), which is resistant to glyphosate herbicide and certain insects.

Monsanto began licensing its biotechnology to seed companies ("seed sellers"); it licensed Roundup Ready (R) technology starting in 1996 and Bollgard/Roundup Ready (R) cotton technology starting in 1998. The licenses allow seed growers to incorporate the Monsanto biotechnology into their germplasm to produce Roundup Ready (R) and Bollgard/Roundup Ready (R) seeds. The licenses also impose certain restrictions on seed sellers, including that seed companies may not sell seed containing

Monsanto's technology to growers unless the grower signs one of Monsanto's license agreements; and that seed so sold may be used by growers to grow only a single commercial crop. Monsanto's restrictions on seed growers include: (1) requiring growers to use only seed containing Monsanto's biotechnology for planting a single crop ("exclusivity provision"); (2) prohibiting transfer or re-use of seed containing the biotechnology for replanting ("no replant policy"); (3) prohibiting research or experimentation ("no research policy"); and (4) requiring payment of a "technology fee."

Scruggs purchased both Roundup Ready (R) soybean seeds and Bollgard/Roundup Ready (R) cotton seeds from seed companies, but never signed a licensing agreement. It planted the purchased seeds, and after harvesting the soybeans and cotton, retained the new generation of seeds. Its subsequent crops were planted with those retained seeds, as well as with seeds obtained from subsequent generations of crops.

Monsanto investigated Scruggs' activities and filed suit for infringement of the '605 and McPherson patents. The trial court issued a preliminary injunction, prohibiting Scruggs from further sale and use of seeds containing Monsanto's patented biotechnology. Scruggs answered with federal and state antitrust claims and patent misuse affirmative defenses. Specifically, it asserted that Monsanto violated the Sherman Act, 15 U.S.C. §§ 1–2, by tying the purchase of seed to the purchase of Roundup through grower license agreements, grower incentive agreements, and seed partner license agreements, as well as by tying the Roundup and Bollgard traits in cotton seeds. It also asserted Monsanto violated section 2 of the Sherman Act by unlawfully monopolizing or attempting to monopolize a relevant market….

Infringement occurs when a properly construed claim reads on the accused product. Atlas Powder Co. v. E.I. du Pont & De Nemours & Co., 750 F.2d 1569, 1579 (Fed.Cir.1984). In this case, Monsanto must show that its Roundup Ready (R) and Bollgard/Roundup Ready (R) seeds are covered by the '605 and/or McPherson patents and that Scruggs used those seeds in a way that violated Monsanto's patent rights. Affirmative defenses to infringement include noninfringement, unenforceability, invalidity (e.g., failing to satisfy the written description or enablement requirements), see 35 U.S.C. § 282, patent misuse, see Senza-Gel Corp. v. Seiffhart, 803 F.2d 661 (Fed.Cir.1986), and the existence of an implied license, see Carborundum Co. v. Molten Metal Equip. Innovations, 72 F.3d 872, 878 (Fed.Cir.1995).

In granting Monsanto's motion for summary judgment of infringement, the trial court relied on Scruggs' admissions with respect to: (1) its purchasing of the Roundup Ready (R) soybeans and Bollgard/Roundup Ready (R) cotton; (2) its failing to obtain a license from Monsanto; and (3) its saving of soybean and cotton seed for future planting. Additionally, the court pointed to Monsanto's scientific tests showing that Scruggs' soybean and cotton crops contained Monsanto's patented technology. *Id.* at 594.

[The court found that Monsanto's patents were valid and infringed.]

Antitrust/Patent Misuse

Antitrust laws may be violated if a patent holder's conduct falls outside the protection afforded by the patent laws. United States v. Line Material Co., 333 U.S. 287, 308 (1948). Under the patent laws, a patentee has the right to exclude others from making, using, or selling a patented invention. 35 U.S.C. § 154(a)(1). Conduct falling within the scope of protection includes, inter alia, limited use licensing, see Mallinckrodt, Inc. v. Medipart, Inc., 976 F.2d 700, 703 (Fed.Cir.1992), and charging of royalties, Brulotte v. Thys Co., 379 U.S. 29 (1964). Field of use licensing restrictions, i.e., permitting the use of inventions in one field and excluding it in others, are also within the scope of the patent grant. See Gen. Talking Pictures Corp. v. W. Elec. Co., 305 U.S. 124 (1938).

Under section 1 of the Sherman Act, "[e]very contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce . . . is [] declared to be illegal." Tying arrangements fall under section 1 of the Sherman Act. "A tying arrangement is the sale or lease of one product on the condition that the buyer or lessee purchase a second product." Breaux Bros. Farms, Inc. v. Teche Sugar Co., Inc., 21 F.3d 83, 85 (5th Cir.1994). To prove that a tying arrangement exists, the plaintiff must show: (1) the involvement of two separate products or services; (2) the sale of one product or service is conditioned on the purchase of another; (3) the seller has market power in the tying product; and (4) the amount of interstate commerce in the tied product is not insubstantial. Eastman Kodak Co. v. Image Tech. Serv., Inc., 504 U.S. 451, 461–62 (1992).

Under section 2 of the Sherman Act, unlawful monopolization is prohibited. To establish a section 2 violation, one must prove that the party charged had monopoly power in a relevant market and acquired or maintained that power by anti-competitive practices instead of by competition on the merits. Aspen Skiing Co. v. Aspen Highlands Skiing

Corp., 472 U.S. 585, 596 (1985).

Patent misuse may be found even where there is no antitrust violation, because "[p]atent misuse is . . . a broader wrong than [an] antitrust violation." C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1372 (Fed.Cir.1998). The "policy of the patent misuse doctrine is 'to prevent a patentee from using the patent to obtain market benefit beyond that which inures in the statutory patent right.' " Monsanto Co. v. McFarling, 363 F.3d 1336, 1341 (Fed.Cir.2004) (quoting Mallinckrodt, 976 F.2d at 704 ("Monsanto II ")). In order for competitive behavior to amount to patent misuse, one must "impermissibly broaden[] the scope of the patent grant with anticompetitive effect." *Id.* Thus, "[i]n the cases in which the restriction is reasonably within the patent grant, the patent misuse defense can never succeed." *Id.* Moreover, "[n]o patent owner otherwise entitled to relief . . . shall be denied relief or deemed guilty of misuse or illegal extension of the patent right by reason of his having . . . refused to license or use any rights to the patent . . . ." 35 U.S.C. § 271(d)….

The trial court specifically addressed Scruggs' antitrust claims under section 1 of the Sherman Act, applying both per se and rule of reason analyses. In its per se analysis, the court found that the 1996 Roundup restriction did not constitute per se illegal tying; Roundup was the only EPA-approved product for use over the top of the Roundup seeds from 1996 to 1998, and only the licenses taken out during those years had the Roundup herbicide restriction. The court also found Monsanto's grower incentive agreements to be legal restraints because they simply give growers an incentive to choose Roundup herbicide and do not coerce them into purchasing it. Next, the court found that Scruggs failed to demonstrate that Monsanto forced seed partners to buy Roundup in order to obtain a license. The court stated that if the seed partner agreements did amount to a tie, per se treatment was not appropriate.

Under its rule of reason analysis, the trial court also found the evidence Scruggs presented with respect to the tying claims insufficient. Scruggs argued that Monsanto's binding of dealers in downstream markets to the same restrictions it imposes on its seed partners (in a "third party clause") was a violation of section 1 of the Sherman Act, as were the grower incentive agreements. The court found that the third party clause was a valid restriction because limited use licenses are valid, and the third party clause simply amounted to a limited use. Additionally, the court held that the grower incentive agreements were valid; the provisions were merely financial incentives and "d[id] not foreclose competition in a substantial share of the relevant product market(s)."

The trial court also found that: (1) Scruggs' evidence was insufficient with respect to proving a violation of section 2 of the Sherman Act for unlawful monopolization or attempted monopolization; (2) because there was no federal antitrust violation, the alleged state antitrust violations could also be dismissed on summary judgment; and (3) patent misuse was inapplicable because Monsanto did not use its patents to impermissibly broaden the scope of its patent grant.

On appeal, Scruggs reasserts that the exclusivity provision, no replant policy, and technology fee payments required by Monsanto's licensing agreements with seed growers are illegal anticompetitive practices. Monsanto has a right to exclude others from making, using, or selling its patented plant technology, see Brulotte, 379 U.S. at 29–30, and its no replant policy simply prevents purchasers of the seeds from using the patented biotechnology when that biotechnology makes a copy of itself. This restriction therefore is a valid exercise of its rights under the patent laws. Furthermore, Monsanto's uniform technology fee is essentially a royalty fee, the charging of which is also within the scope of the patent grant. Lastly, the no research policy is a field of use restriction and is also within the protection of the patent laws….

Lastly, Scruggs asserts that the trial court's decision should be sent back for a separate patent misuse analysis, because the burden of proving patent misuse is lower. However, patent misuse covers only activity falling outside of the patent grant, and Scruggs did not point to any activity falling outside Monsanto's patent.

DYK, Circuit Judge, concurring in part and dissenting in part.

… As a condition on the purchase of Roundup Ready seeds between 1996 and 1998, Monsanto required that growers execute a licensing agreement containing the following (or similar) language. "You [the grower] agree: . . . [i]f a herbicide containing the same active ingredient as Roundup Ultra ™ herbicide [glyphosate] (or one with a similar mode of action) is used over the top of Roundup Ready crops, you agree to use only Roundup® branded herbicide." Scruggs claims that this provision unlawfully tied the sale of Roundup brand glyphosate herbicides to the sale of Roundup Ready seeds.

The district court held, and Monsanto agrees, that the provision was justified by the fact that Roundup was the only glyphosate herbicide approved by the EPA at that time for use "over the top" of crops. The district court concluded that "[b]ecause Roundup was the only product labeled for use 'over-the-top' of Roundup Ready crops between 1996 and 1998, it was the only EPA-approved herbicide that could be used on Roundup Ready crops during that period[,]" and thus that the "defendants . . . failed to meet their burden of producing significant probative evidence that Monsanto forced farmers who wanted to purchase Roundup Ready seeds to purchase Roundup as well." Monsanto Co. v. Scruggs, 342 F.Supp.2d 568, 577 (N.D.Miss.2004). The majority agrees. I read the Supreme Court cases as to the contrary.

The Supreme Court has unequivocally held: "That a particular practice may be unlawful is not, in itself, a sufficient justification for collusion among competitors to prevent it." Fed. Trade Comm'n v. Ind. Fed'n of Dentists, 476 U.S. 447, 465 (1986). While the Supreme Court has not directly addressed this issue in the context of tying arrangements, I see no basis for applying a different rule or for justifying otherwise per se unlawful tying arrangements as designed to prevent illegal conduct. Monsanto urges that these cases are distinguishable because the competitors there sought to enforce state law, whereas here the tying arrangement is designed to enforce federal law. I see no basis for such a distinction. This is not a case in which federal law pervasively regulates, compels, or permits the allegedly anticompetitive conduct, which might create an implied antitrust immunity. See Billing v. Credit Suisse First Bos. Ltd., 426 F.3d 130, 164–65 (2d Cir.2005).

…. This is not a situation in which there were no commercially feasible alternatives. There was evidence that manufacturers produced products that could have been used "over the top," and that all that was lacking was regulatory approval. In other words, Monsanto's tying arrangements here did no more than enforce a regulatory requirement. Substantial competitive risks inhere in such an arrangement. Potential competitors are potentially discouraged from seeking regulatory approval or attempting to have the regulation modified or eliminated. To the extent that such efforts are discouraged, the proponent of the tie has succeeded in eliminating competition.

Moreover, in this connection it is highly significant that Monsanto's grower license agreements did not simply require the use of a government-approved herbicide; they explicitly required the use of "Roundup branded herbicide." A potential herbicide competitor thus would be concerned that, even if it secured government approval of its product, use of the approved herbicide would still be barred under the contracts. The elimination of such potential competition is not permissible under the antitrust laws.

The district court did not make a finding as to Monsanto's market power in the alleged tying product…. I would vacate the judgment as to the alleged tie in the 1996–1998 grower agreements, and remand for the district court to determine whether the relevant contract provision in fact constituted patent misuse and, if misuse occurred, whether it was purged. See Senza-Gel Corp. v. Seiffhart, 803 F.2d 661, 668 n. 10 (Fed.Cir.1986).

NOTE

In an amicus brief supporting Mitchell and Eddie Scruggs and the other defendants, the American Antitrust Institute argued that

> [t]he invention at issue in this case is not a plant or seed, but a genetic trait. Although the plants and seeds at issue here can be characterized as producing new generations each year, it is less clear that such a characterization is accurate for a genetic trait. The trait, after all, does not change from year to year, any more than it does within a generation as additional cells are produced. (If the trait at issue changed, it presumably would no longer be covered by Monsanto's patent.) As a result, it is not clear that the "generational" dividing line on which Monsanto's seed-saving restriction is based is a meaningful one that can be viewed as within the scope of its invention.
>
> The Supreme Court's discussion of the repair–reconstruction distinction in *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 342-343 (1991), is apt:
>
>> [A]lthough there is no right to "rebuild" a patented combination, the entity "exists" notwithstanding the fact that destruction or impairment of one of its elements renders it inoperable; and that, accordingly, replacement of that worn-out essential part is permissible restoration of the machine to the original use for which it was bought. The Court explained that it is "the use of the whole" of the

> combination which a purchaser buys, and that repair or replacement of the worn-out, damaged or destroyed part is but an exercise of the right "to give duration to that which he owns, or has a right to use as a whole."

> With reference to this discussion, the patented genetic trait "exists" from cell generation to cell generation and from year to year notwithstanding the annual cycle of the plant's reproduction. To put it another way, Monsanto has imposed a plant-level restriction, rather than a gene-level restriction that would be within the scope of its patent. Monsanto's genes are expressed in the reproduction of plant cells as the plant develops, and in the production of the enzyme that makes the plants Roundup Ready. They are not expressed in the act of replanting a seed, and as the replanted seeds grow they are not expressed in any way different from their expression in the first planting. . . . Monsanto's practices are akin to an attempt by the patentee of a new kind of automobile engine to require that buyers of cars incorporating that engine buy new cars every year.

Corrected Brief of Amicus Curiae American Antitrust Institute in Support of Defendants–Appellants Supporting Reversal on Certain Issues at 22–24, Monsanto Co. v. Scruggs, 459 F.3d 1328 (Fed. Cir. 2006) (No. 0401532), 2005 WL 3937333 (some citations and footnotes omitted). Is there anything wrong with this analogy? A leading biotech trade association responded:

> The crux of this argument . . . lies in the incorrect belief, held by both [the defendants] and *amici*, that because the '605 patent does not "cover" seed, the DNA sequence and seed must be distinct products. The argument fails because the claims of the '605 patent can indeed "cover" seed. There can be no serious doubt that the claims of the '605 patent drafted in the open-ended "comprising" language, can cover seed if that seed includes the patented DNA sequence. Simply put the preambles to the claims of the '605 patent (which recite a chimeric gene, but which might also have recited a plant or a seed) are not, in this case, a proper basis for determining the existence of separate products.

> In fact, despite protests that the '605 patent does not

> "cover" seed, the appellants and *amici* have effectively recognized that Monsanto's genetic invention, at least as a commercial matter, can only be embodied in seeds and plants. In their brief, appellants rely on the statement of their expert, Prof. Carstensen, that by "[dis]allowing the use of the saved seed on the farm, [Monsanto] forecloses the farmer's freedom of choice as to the *source of seed with that genetic trait*." Thus, appellants admit that a seed is required to obtain Monsanto's patented technology in a commercially useful product.
>
> Briefs of the various *amici curiae* in this case also acknowledge that there is no demand for the patented DNA sequence without the germplasm. For example, the *amicus* State of Mississippi states that "[o]f course, farmers must buy first-generation seed in order to obtain the Roundup Ready technology." In admitting that "farmers must buy first-generation seed," the State of Mississippi recognizes that there is no separate product directed to the patented DNA sequences of the '605 patent useful to farmers. Similarly, the *amicus* [American Antitrust Institute] admits that "[o]f course, most if not all farmers would purchase the unpatented seed components from a Monsanto seed partner in the first year in any event, because the farmers could not themselves incorporate Monsanto's genetic technology in the seed." Finally, *amicus* Center for Food Safety . . . notes that "farmers do not plant 'plant cells' or 'chimeric genes.'" Once again, farmers would have no demand for, much less the ability to use, the patented DNA sequence of the '605 patent if it were not embodied in seed.

Brief of Amicus Curiae, the Biotechnology Industry Organization, in Support of Plaintiff–Appellee Monsanto Company Supporting Affirmance on Certain Issues at 7–9, *Monsanto Co.*, 459 F.3d 1328 (No. 04-1532), 2005 WL 2477397 (citations and footnotes omitted).

PRINCO CORP. v. INTERNATIONAL TRADE COMMISSION
616 F.3d 1318 (Fed. Cir. 2010)

BRYSON, Circuit Judge:

This case requires us to consider the scope of the doctrine of patent misuse. Patent misuse developed as a nonstatutory defense to claims of patent infringement. In the licensing context, the doctrine limits a patentee's right to impose conditions on a licensee that exceed the scope of the patent right. Because patent misuse is a judge-made doctrine that is in derogation of statutory patent rights against infringement, this court has not applied the doctrine of patent misuse expansively. In this case, we adhere to that approach, and we sustain the decision of the International Trade Commission that the doctrine of patent misuse does not bar the intervenor, U.S. Philips Corporation, from enforcing its patent rights against the appellants Princo Corporation and Princo America Corporation (collectively, "Princo").

This case has a lengthy history, which we will recite only in pertinent part. The technology at issue concerns two types of digital storage devices—recordable compact discs ("CD-Rs") and rewritable compact discs ("CD-RWs"). Those devices were developed in the 1980s and 1990s. The companies that developed the CD-R/RW technology generated technical standards to ensure that discs made by different manufacturers would be compatible and playable on machines that were designed to read the earlier generation compact discs ("CDs") and "read-only" compact discs ("CD-ROMs"). The standards that were generated for CD-Rs and CD-RWs were collected in a publication entitled "Recordable CD Standard," informally known as the "Orange Book." The CD-R/RW technology was developed principally by Philips and Sony Corporation, working in collaboration. Philips and Sony also jointly developed the Orange Book standards.

One aspect of the CD-R/RW technology—and the corresponding Orange Book standards—is at issue in this case. In the course of their work, the Sony and Philips engineers had to address the problem of how to encode position information in the disc so that a consumer's CD reader/writer could maintain proper positioning while writing data to the disc. Philips and Sony proposed different solutions to that problem. Philips's solution was to use an analog method of modulating the frequency of the "groove" on the disc so as to add location codes to the disc. One of Sony's proposed solutions was to use a digital method to encode location codes into the disc groove. Philips's approach was later set forth in two of the patents at issue in this case, referred to as the "Raaymakers patents." Sony's approach was set forth in one of its own patents, referred to as the "Lagadec patent."

After reviewing the competing solutions, the Sony and Philips engineers agreed that they would use the Raaymakers approach to solving the problem, not the Lagadec approach. The engineers from both companies agreed that the Raaymakers approach "was simple and . . . worked very well." By contrast, as the Commission found in the course of this litigation, the Lagadec approach was "prone to error" and would have been "very difficult" to implement. Philips and Sony therefore incorporated the Raaymakers approach in the Orange Book as the standard for manufacturing CD-R/RW discs.

Philips and Sony sought to commercialize their technology by offering licenses to the patents that were required to manufacture CD-R/RW discs in accordance with the Orange Book standards. Administering the licensing program, Philips offered several different "package" licenses to the Philips and Sony patents (and those of several other patent holders). Philips included in the patent packages those patents that it regarded as potentially necessary to make Orange-Book-compliant CD-R or CD-RW discs, including the Raaymakers and Lagadec patents. The package licenses contained a "field of use" restriction, limiting the licensees to using the licensed patents to produce discs according to the Orange Book standards. After 2001, Philips offered additional package options, grouping the patents into two categories, denominated "essential" and "nonessential," for producing compact discs that complied with the technology standards set forth in the Orange Book.

In the late 1990s, Princo sought to manufacture discs and import them into this country, and it entered into a package license agreement with Philips. Soon after entering the agreement, however, Princo stopped paying the licensing fees required by the agreement. Philips then filed a complaint with the International Trade Commission, alleging that Princo (along with several other parties) was violating section 337(a)(1)(B) of the Tariff Act of 1930, 19 U.S.C. § 1337(a)(1)(B), by importing CD-Rs and CD-RWs that infringed Philips's patents.

In the course of proceedings before an administrative law judge, Princo raised the affirmative defense of patent misuse. Among other arguments, Princo contended that Philips had improperly forced Princo and other licensees, as a condition of licensing patents that were necessary to manufacture CD-Rs or CD-RWs, to take licenses to other patents that were not necessary to manufacture those products.

The administrative law judge agreed with Philips that Princo had infringed various claims of the six asserted Philips patents and that the patents were not invalid. However, the administrative law judge denied relief to Philips on the ground that the Philips patents were unenforceable because of patent misuse. The administrative law judge found, inter alia, that the package licensing agreements offered by Philips constituted impermissible tying arrangements because they forced manufacturers to license extraneous patents in addition to the patents that the manufacturers wanted to license. That tying arrangement, according to the administrative law judge, rendered all of Philips's patents in suit unenforceable. The administrative law judge also held Philips's patents unenforceable based on price fixing, price discrimination, and restraint of trade.

On Philips's petition for review, the Commission affirmed the administrative law judge's ruling that Philips's package licensing practice constituted patent misuse for unlawfully tying patents that were essential for the Orange Book standard to licenses for other patents that were not essential. That practice was improper, according to the Commission, because it forced licensees to purchase licenses to patents that they did not want or need, and it did not allow them the option of licensing individual patents. The Commission did not address the administrative judge's ruling that the patent pooling arrangements between Philips and its co-licensors, including Sony, constituted price fixing and price discrimination, or the administrative judge's ruling that the royalty structure of the patent pools resulted in an unreasonable restraint of trade.

Philips appealed to this court, and we reversed. U.S. Philips Corp. v. Int'l Trade Comm'n (Philips I), 424 F.3d 1179 (Fed.Cir.2005). We rejected the Commission's theory that Philips's package licensing practice constituted patent misuse by improperly tying nonessential patents to essential ones. We explained that Philips gave its licensees the option of using any of the patents in the package at the licensee's option, and that Philips charged a uniform fee to permit the manufacture of discs covered by the patented technology regardless of which patents the licensee used in its manufacturing process. Philips did not require the licensee to use any particular technology in any of the patents, including the patents that Princo complained were "nonessential." In effect, we concluded, Philips was simply charging a fixed licensing fee for licensees to manufacture discs under the Orange Book standard. We noted that including additional patents in the package was the functional equivalent of promising not to sue licensees on any of the patents in the group, which had the advantages of minimizing transaction costs and ensuring against the risk of post-agreement disputes as to whether those additional patents were required to practice the patented technology.

We also reversed the Commission's ruling that Philips had engaged in patent misuse under the rule of reason. As to that issue, we held that the Commission's conclusion that Philips's patent package licensing program was anticompetitive was predicated on legal errors and on factual findings that were not supported by substantial evidence. We remanded the case to the Commission for further proceedings because the Commission had not addressed all the grounds on which the administrative law judge had based his ruling.

On remand, the Commission rejected Princo's remaining theories of patent misuse. The Commission first rejected Princo's argument that Philips committed patent misuse by combining with its horizontal competitors to fix the price of patent licenses in the relevant market, i.e., the market for licensing CD-R/RW patents. The Commission found that there was no evidence in the record that the patents in the joint package licenses covered technologies that were close substitutes, or that the pool licensors would have competed in the technology licensing market absent the pooling arrangements. Consequently, the Commission found that the joint package licenses had not been shown to constitute horizontal price fixing.

In particular, the Commission rejected Princo's argument that Sony's Lagadec patent should not have been included in the patent packages. The Commission noted Philips's contention that claim 6 of the Lagadec patent covered a portion of the Orange Book standard and therefore was technically a "blocking patent." The Commission explained that if Philips was correct that Lagadec was a necessary part of the Orange Book patent package, then "no misuse flows from including the [Lagadec] patent in the joint licenses." Even if a license to the Lagadec patent was not necessary to manufacture Orange-Book-compliant discs, the Commission stated, there was no merit to Princo's theories of patent misuse based on the Lagadec patent, because "there has been no showing that the Lagadec . . . patent competes with another patent in the pool, no showing that the pool licensors would have competed in the technology licensing market absent the pooling arrangement, and no showing of the anticompetitive effect required under a rule of reason analysis."

After an extensive analysis of the evidence presented to the administrative law judge, the Commission concluded that the record "does not support a finding that the Lagadec ′565 patent competes with the [Raaymakers] patents," and that Princo "failed to identify evidence demonstrating that, absent the pooling arrangements, the pool licensors would have competed in the technology licensing market." The Commission noted that the administrative law judge had found that testimony at the hearing indicated that the Lagadec patent "constitutes completely different technology that does not work well according to the Orange Book standards" and that Lagadec was therefore "extraneous to the Orange Book." In particular, the administrative law judge had found that Lagadec constituted "at best, a substitute technology" that could not be used to manufacture Orange-Book-compliant discs, and "at worst, an extraneous, nonworking add-on to the patent pool." Under those circumstances, the Commission explained, licensees who wished to make Orange-Book-compliant discs were, at most, required to accept something they did not want and would not otherwise have sought to obtain from other sellers.

With respect to the contention that including the Lagadec patent in the license packages enabled Philips to secure Sony's adherence to the Orange Book standards and thereby foreclose competition, the Commission found that theory speculative and unsupported by the evidence in the record. Because there was no evidence that Sony would have entered the CD-R/RW market with a system based on the Lagadec technology and no evidence that such a system would have become a significant competitive force in that market, the Commission held that theory insufficient to support a finding of patent misuse.

On Princo's appeal, a divided panel of this court ruled against the Commission and Philips. Princo Corp. v. Int'l Trade Comm'n, 563 F.3d 1301 (Fed.Cir.2009). Although the panel rejected several of Princo's arguments, it vacated the Commission's remedial orders and remanded the case for further proceedings on one issue.

At the outset, the panel unanimously rejected Princo's argument that Philips had engaged in patent misuse through improper "tying" by including the Lagadec patent in the Orange Book license packages. The court noted that while grouping patents together in package licenses has anticompetitive potential, it "also has potential to create substantial procompetitive efficiencies" such as clearing possible blocking patents, integrating complementary technology, and avoiding litigation. 563 F.3d at 1308. The court explained that the inclusion in a package license of the patents that are necessary to enable the practice of the particular technology "is not tying of the type that patent misuse doctrine seeks to prevent." *Id.* Because the court concluded that it would have been reasonable for a manufacturer to believe that a license under the Lagadec patent was necessary to practice the Orange Book technology, and because "one of the major potential efficiencies of package licensing in the context of innovative technology is the avoidance of 'uncertainty that could only be resolved through expensive litigation,' " the court ruled that the "inclusion of the Lagadec patent in the patent pool did not give rise to an illegal tying arrangement."

The panel also unanimously rejected Princo's argument that Philips had violated the principle of Zenith Radio Corp. v. Hazeltine Research, Inc., 395 U.S. 100, 135 (1969), that "conditioning the grant of a patent license upon payment of royalties on products which do not use the teaching of the patent [is] misuse." Because, at the time the package licenses were executed, "it appeared that Lagadec reasonably might be necessary to manufacture Orange Book compact discs," the panel concluded that "it cannot fairly be said on these facts that a royalty is paid on products which do not use the teaching of the Lagadec patent." . . .

In our cases applying the Supreme Court's patent misuse decisions, we have characterized patent misuse as the patentee's act of "impermissibly broaden [ing] the 'physical or temporal scope' of the patent grant with anticompetitive effect." Windsurfing Int'l, Inc. v. AMF, Inc., 782 F.2d 995, 1001 (Fed.Cir.1986). When the patentee has used restrictive conditions on licenses or sales to broaden the scope of the patent grant, we have held that an accused infringer may invoke the doctrine of patent misuse to defeat the patentee's claim….

In determining whether a particular licensing condition has the effect of impermissibly broadening the patent grant, courts have noted that the patentee begins with substantial rights under the patent grant—"includ[ing] the right to suppress the invention while continuing to prevent all others from using it, to license others, or to refuse to license, . . . to charge such royalty as the leverage of the patent monopoly permits," and to limit the scope of the license to a particular "field of use." United States v. Studiengesellschaft Kohle, m.b.H., 670 F.2d 1122, 1127, 1133 (D.C.Cir.1981). Given that the patent grant entitles the patentee to impose a broad range of conditions in licensing the right to practice the patent, the doctrine of patent misuse "has largely been confined to a handful of specific practices by which the patentee seemed to be trying to 'extend' his patent grant beyond its statutory limits." USM Corp. v. SPS Techs., Inc., 694 F.2d 505, 510 (7th Cir.1982).

Recognizing the narrow scope of the doctrine, we have emphasized that the defense of patent misuse is not available to a presumptive infringer simply because a patentee engages in some kind of wrongful commercial conduct, even conduct that may have anticompetitive effects. See C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1373 (Fed.Cir.1998) ("Although the defense of patent misuse . . . evolved to protect against 'wrongful' use of patents, the catalog of practices labeled 'patent misuse' does not include a general notion of 'wrongful' use."). Other courts have expressed the same view. See Kolene Corp. v. Motor City Metal Treating, Inc., 440 F.2d 77, 84–85 (6th Cir.1971) (There is no such thing as "misuse in the air. The misuse must be of the patent in suit. An antitrust offense does not necessarily amount to misuse merely because it involves patented products or products which are the subject of a patented process." (citations omitted)); McCullough Tool Co. v. Well Surveys, Inc., 395 F.2d 230, 238–39 (10th Cir.1968) (the defense of patent misuse has been allowed "only where there had been a misuse of the patent in suit"). While proof of an antitrust violation shows that the patentee has committed wrongful conduct having anticompetitive effects, that does not establish misuse of the patent in suit unless the conduct in question restricts the use of that patent and does so in one of the specific ways that have been held to be outside the otherwise broad scope of the patent grant.

Although patent misuse has been mainly a judicially created defense, Congress has not been entirely silent about the doctrine. However, instead of saying what patent misuse is, Congress has said what it is not. Thus, section 271(d) of the Patent Act sets forth five types of conduct that may not provide the basis for finding "misuse or illegal extension of the patent right." The last two of the five, which were added in 1988, are

> (4) refus[ing] to license or use any rights to the patent; or (5) condition [ing] the license of any rights to the patent or the sale of the patented product on the acquisition of a license to rights in another patent or purchase of a separate product, unless, in view of the circumstances, the patent owner has market power in the relevant market for the patent or patented product on which the license or sale is conditioned.

35 U.S.C. § 271(d).

Importantly, Congress enacted section 271(d) not to broaden the doctrine of patent misuse, but to cabin it. See Dawson Chem. Co. v. Rohm & Haas Co., 448 U.S. 176, 201 (1980)….

The dissent argues that the 1988 amendment to section 271(d) makes it "quite clear that Congress intended that the patent misuse doctrine could extend to a refusal to license patented technologies by parties acting in concert." That, however, is not how we interpret the statute or its legislative history. The statute itself contains no mention of concerted action. In the legislative history, Representative Kastenmeier described various licensing provisions that had been held to constitute patent misuse, including price fixing, covenants not to compete, resale price maintenance, and grantback licenses. 134 Cong. Rec. 32,295 (1988). The dissent points to the inclusion of "covenants not to compete" in Representative Kastenmeier's list, and interprets that statement as an endorsement of the proposition that a concerted refusal to license a patent constitutes patent misuse. But Representative Kastenmeier described the listed practices as "patent licensing arrangements." Moreover, his catalog of unlawful practices corresponded to the list of proscribed practices set forth in the House bill, the "Patent Licensing Reform Act of 1988," to which he alluded in his remarks.. Each of the prohibited practices listed in that bill was a condition on granting licenses, including the imposition of "covenants not to compete." 134 Cong. Rec. 3261 (1988) (statement of Rep. Robert Kastenmeier); H.R. 4086, 100th Cong. (1988) ("unreasonably imposing as a condition of granting a license for a patent that the licensee may not produce or sell competing goods."). From the context, it is clear that Representative Kastenmeier's reference to "covenants not to compete" on which the dissent relies was an allusion to non-compete clauses in patent licenses, not to concerted refusals to license among horizontal competitors. Nor is there anything else in the legislative history that supports the dissent's interpretation of Congress's intent.

Section 271(d) is not directly implicated in this case because the conduct here at issue does not fall within any of the five statutorily defined categories. Nonetheless, the statute is pertinent because, as both the text and the legislative history of the 1988 amendment to section 271(d) make clear, Congress was concerned about the open-ended scope of the doctrine and sought to confine it to anticompetitive conduct by patentees who leverage their patents to obtain economic advantages outside the legitimate scope of the patent grant.

This case presents a completely different scenario from the cases previously identified by the Supreme Court and by this court as implicating the doctrine of patent misuse. Philips is not imposing restrictive conditions on the use of the Raaymakers patents to enlarge the physical or temporal scope of those patents. Instead, the alleged act of patent misuse that the panel focused on was the claimed horizontal agreement between Philips and Sony to restrict the availability of the Lagadec patent—an entirely different patent that was never asserted in the infringement action against Princo. Even if such an agreement were shown to exist, and even if it were shown to have anticompetitive effects, a horizontal agreement restricting the availability of Sony's Lagadec patent would not constitute misuse of Philips's Raaymakers patents or any of Philips's other patents in suit.

Reduced to its simplest elements, the question in this case comes down to this: When a patentee offers to license a patent, does the patentee misuse that patent by inducing a third party not to license its separate, competitive technology? Princo has not pointed to any authority suggesting that such a scenario constitutes patent misuse, and nothing in the policy underlying the judge-made doctrine of patent misuse would support such a result. Such an agreement would not have the effect of increasing the physical or temporal scope of the patent in suit, and it therefore would not fall within the rationale of the patent misuse doctrine as explicated by the Supreme Court and this court.

What patent misuse is about, in short, is "patent leverage," i.e., the use of the patent power to impose overbroad conditions on the use of the patent in suit that are "not within the reach of the monopoly granted by the Government." Zenith, 395 U.S. at 136–38. What that requires, at minimum, is that the patent in suit must "itself significantly contribute[] to the practice under attack." Kolene Corp., 440 F.2d at 85. Patent misuse will not be found when there is "no connection" between the patent right and the misconduct in question, see Republic Molding Corp. v. B.W. Photo Utils., 319 F.2d 347, 351 (9th Cir.1963), or no "use" of the patent, see Virginia Panel, 133 F.3d at 870. In this case, there is no such link between the putative misconduct and the Raaymakers patents.

Princo makes several arguments in its effort to bring this case within the scope of the traditional patent misuse doctrine. First, Princo contends that Philips "leveraged" its patents, as that term has been used in patent misuse cases, because it used the proceeds of its highly successful licensing program to fund royalty payments to Sony and because those payments gave Sony the incentive to enter into the alleged agreement to suppress the Lagadec patent. However, the use of funds from a lawful licensing program to support other, anticompetitive behavior is not the kind of "leveraging" that the Supreme Court and this court have referred to in discussing the leveraging of a patent that constitutes patent misuse. See *C.R. Bard*, 157 F.3d at 1373 ("Although the law should not condone wrongful commercial activity, the body of misuse law and precedent need not be enlarged into an open-ended pitfall for patent-supported commerce."). Even if such use of funds were to be deemed misconduct, it does not place any conditions on the availability of Philips's patents to any potential licensees, so it is not the power of Philips's patent right that is being misused.

Princo also argues that the Supreme Court has not required conventional "leveraging" of a patent in order to establish patent misuse. For that proposition, however, Princo relies on antitrust cases in which the Court stated that a patentee is not immunized against an antitrust violation by the privilege of a patent; those cases did not involve patent misuse or the enforceability of the defendants' patents. See United States v. U.S. Gypsum Co., 333 U.S. 364, 396–400 (1948) (finding unlawful price fixing and control of distribution of gypsum board); Standard Oil Co. (Ind.) v. United States, 283 U.S. 163, 174 (1931) ("[T]he limited monopolies granted to patent owners do not exempt them from the prohibitions of the Sherman Act."). That is a different issue altogether from the issue before us, which is whether an infringing party can obtain immunity against a valid charge of patent infringement by showing an unrelated antitrust violation. Although the Lagadec patent and the Raaymakers patents were all included together in the Orange Book package licenses offered by Philips, those package licenses are independent of the antitrust violation that is now being alleged, i.e., a separate agreement between Philips and Sony to suppress the availability of the Lagadec technology.

In theory, the reason an agreement with Sony has value to Philips is because suppressing potential competition with the Raaymakers technology makes the Philips licenses more valuable. But that value does not derive from the fact that Sony is a co-licensor with Philips or the fact that the Lagadec patent is included in the package licenses. If the Lagadec patent were owned by an independent third party and not included in the Philips–Sony package licenses at all, an agreement between Philips and the third party to suppress the Lagadec technology would have exactly the same economic impact on Philips and Princo as the hypothesized agreement with Sony. That agreement might be vulnerable to challenge under the antitrust laws, but it could not reasonably be characterized as misuse of the Raaymakers patents. Thus, it does not follow from the possible existence of an antitrust violation with respect to Sony's Lagadec patent that Philips is guilty of patent misuse with respect to the Raaymakers patents.

… At bottom, Princo's complaint is not that its license to the Raaymakers patents is unreasonably conditioned, but that the Lagadec patent has not been made available for non-Orange-Book uses. And that is not patent misuse under any court's definition of the term.

The purported agreement between Philips and Sony has none of the features that courts have characterized as constituting patent misuse. In particular, it does not leverage the power of a patent to exact concessions from a licensee that are not fairly within the ambit of the patent right. Although the dissent contends that using the leverage of a patent against licensees is not a necessary component of patent misuse, every one of the "patent misuse" cases cited by the dissent for that proposition have that very fact pattern (except for the Compton case, discussed above, in which the patentee agreed to place restrictions on his own right to compete). If the purported agreement between Philips and Sony not to license the Lagadec technology is unlawful, that can only be under antitrust law, not patent misuse law; nothing about that agreement, if it exists, constitutes an exploitation of the Raaymakers patents against Philips's licensees….

In sum, this is not a case in which conditions have been placed in patent licenses to require licensees to agree to anticompetitive terms going beyond the scope of the patent grant. Rather, in this case the assertion of misuse arises not from the terms of the license itself but rather from an alleged collateral agreement between Sony and Philips. In that setting, the doctrine of patent misuse does not immunize Princo against the legal effect of its acts of infringement.

Apart from Princo's failure to show that Philips unlawfully leveraged its Raaymakers patents, a finding of patent misuse is unwarranted in this case because Princo failed to establish that the alleged agreement to suppress the Lagadec technology had anticompetitive effects. Whether viewed as a matter of patent misuse or in light of general antitrust principles, Princo's claim regarding the alleged agreement fails because Philips and Sony acted legitimately in choosing not to compete against their own joint venture. Princo also failed to show that the asserted agreement had any anticompetitive effects because, as the Commission found, the Lagadec technology was not a viable potential competitor to the technology embodied in the Raaymakers patents.

At the outset, Princo urges us to overrule the line of authority in this court holding that patent misuse requires a showing that the patentee's conduct had anticompetitive effects. We decline to do so. This court has observed that "[t]o sustain a misuse defense involving a licensing arrangement not held to have been per se anticompetitive by the Supreme Court, a factual determination must reveal that the overall effect of the license tends to restrain competition unlawfully in an appropriately defined relevant market." *Windsurfing*, 782 F.2d at 1001–02. We have consistently adhered to that requirement. Our position is consistent with the traditional characterization of the defense of patent misuse by the Supreme Court, see Ill. Tool Works, 547 U.S. at 38 (describing the patent misuse doctrine as applying "when a patentee uses its patent 'as the effective means of restraining competition with its sale of an unpatented article' ")….

Turning from patent misuse law to antitrust principles, Princo contends that the hypothesized agreement between Philips and Sony not to license the Lagadec technology for non-Orange-Book purposes was a naked restraint of trade with no procompetitive justification, and that Philips's conduct in entering into that agreement should render its Orange Book patents unenforceable. For the reasons set forth below, we disagree.

Although joint ventures can be used to facilitate collusion among competitors and are therefore subject to antitrust scrutiny, see NCAA v. Bd. of Regents of the Univ. of Okla., 468 U.S. 85, 113 (1984), research joint ventures such as the one between Philips and Sony can have significant procompetitive features, and it is now well settled that an agreement among joint venturers to pool their research efforts is analyzed under the rule of reason. See Addamax Corp. v. Open Software Found., Inc., 152 F.3d 48, 52 (1st Cir.1998) (Joint venture research enterprises, "unless they amount to complete shams, are rarely susceptible to per se treatment. Where the venture is producing a new product . . . there is patently a potential for a productive contribution to the economy, and conduct that is strictly ancillary to this productive effort . . . is evaluated under the rule of reason.").. . .

Collaboration for the purpose of developing and commercializing new technology can result in economies of scale and integrations of complementary capacities that reduce costs, facilitate innovation, eliminate duplication of effort and assets, and share risks that no individual member would be willing to undertake alone, thereby "promot[ing] rather than hinder[ing] competition." Dep't of Justice & FTC, Antitrust Guidelines for the Licensing of Intellectual Property §§ 5.1, at 24; 5.5, at 28 (Apr. 6, 1995); see also Herbert Hovenkamp, Antitrust Law ¶ 2115a, at 110 ("[J]oint innovation often produces significant social benefits in relation to costs."); FTC & Dep't of Justice, Antitrust Guidelines for Collaborations Among Competitors § 2.1, at 6 (Apr.2000); Thomas A. Piraino, Jr., The Antitrust Analysis of Joint Ventures After the Supreme Court's Dagher Decision, 57 Emory L.J. 735, 767–68 (2008); Joseph Kattan, Antitrust Analysis of Technology Joint Ventures: Allocative Efficiency and the Rewards of Innovation, 61 Antitrust L.J. 937, 938 (1993).

In particular, as we explained in Philips I, research joint ventures that seek to develop industry-wide standards for new technology can have decidedly procompetitive effects. The absence of standards for new technology can easily result in a "Tower of Babel" effect that increases costs, reduces utility, and frustrates consumers. As a leading treatise has noted, cooperation by competitors in standard-setting "can provide procompetitive benefits the market would not otherwise provide, by allowing a number of different firms to produce and market competing products compatible with a single standard." Herbert Hovenkamp et al., IP & Antitrust § 35.2b (2010). Those benefits include greater product interoperability, including the promotion of price competition among interoperable products; positive network effects, including an increase in the value of products as interoperable products become more widely used; and incentives to innovate by establishing a technical baseline for further product improvements. See Patrick D. Curran, Comment, Standard-Setting Organizations: Patents, Price Fixing, and Per Se Legality, 70 U. Chi. L.Rev. 983, 985–90 (2003). Congress has recognized those procompetitive features and has directed that the activities of a "standards development organization while engaged in a standards development activity" is subject to the rule of reason. See Standards Development Organization Advancement Act of 2004, Pub.L. No. 108-237 § 104, 118 Stat. 661, 663.

The "ancillary restraints" that are often important to collaborative ventures, such as agreements between the collaborators not to compete against their joint venture, are also assessed under the rule of reason. See Rothery Storage & Van Co. v. Atlas Van Lines, Inc., 792 F.2d 210, 214, 223–30 (D.C.Cir.1986) (unlike a naked horizontal restraint that does not accompany a contract integration, "an ancillary horizontal restraint, one that is part of an integration of the economic activities of the parties and appears capable of enhancing the group's efficiency, is to be judged according to its purpose and effect"); Polk Bros., Inc. v. Forest City Enters., Inc., 776 F.2d 185, 189 (7th Cir.1985) ("A restraint is ancillary when it may contribute to the success of a cooperative venture that promises greater productivity and output."); Engine Specialties, Inc. v. Bombardier Ltd., 605 F.2d 1, 11 (1st Cir.1979) (agreement that "neither of the parties to the joint venture will compete with it" is "not offensive in and of itself"); United States v. Addyston Pipe & Steel Co., 85 F. 271, 280 (6th Cir.1898), aff'd, 175 U.S. 211 (1899) ("Restrictions in the articles of partnership upon the business activity of the members, with a view of securing their entire effort in the common enterprise were, of course, only ancillary to the main end of the union, and were to be encouraged."); Hovenkamp, Antitrust Law ¶ 2115b1, at 113 (agreements between firms engaged in joint innovation not to innovate in the same area outside the context of the joint venture "are to be regarded as ancillary rather than naked restraints and are thus subject to the usual proof of power and anticompetitive effects"). Moreover, those ancillary restraints are not viewed in isolation, but in the context of the joint venture or other collaborative effort. Thus, agreements not to compete that might be suspect standing alone are regarded as reasonable when they are ancillary to "a larger endeavor whose success they promote." Polk Bros., 776 F.2d at 189.

Princo does not contend that the selection of the Raaymakers technology, rather than the Lagadec technology, for the Orange Book standard was a violation of the public policy in favor of free competition, nor did the panel so find. Instead, the panel focused on whether Sony and Philips agreed to suppress competition between the technology represented by the Orange Book standard and technology that fell outside the Orange Book standard, i.e., the Lagadec digital encoding technology. The Commission did not answer that question because the question was never squarely presented to it. Nor do we need to decide whether there was any such agreement between Sony and Philips. That is because the Commission's factual findings make it clear that even if there was such an agreement, it did not have the effect of suppressing potentially viable technology that could have competed with the Orange Book standards.

The Commission found that "there has been no showing that the Lagadec ′565 patent competes with another patent in the pool, no showing that the pool licensors would have competed in the technology licensing market absent the pooling arrangement, and no showing of the anti-competitive effect required under a rule of reason analysis." The Commission supported that general finding with a series of specific findings based on the record before it.

First, the Commission noted that the evidence before the administrative law judge showed that the Lagadec technology "does not work well according to the Orange Book standards." The Commission added that the administrative law judge "credited testimony that the Lagadec approach is prone to errors and 'did not provide a scheme that would work and was reliable.' " Those findings were not limited to the unsuitability of using Lagadec to produce Orange-Book-compliant discs, as Princo argues. Instead, as is clear from the testimony on which those findings were based, the findings applied more generally to the technical problems presented by the Lagadec technology. The administrative law judge referred to testimony by Philips's expert explaining that there is "a real problem" with the

Lagadec digital approach and that "it is very difficult to carry out a decoding of this particular approach." The expert added that "[a]s a result, Philips and Sony dismissed the Lagadec approach because this is a very difficult problem to solve and Lagadec just did not provide a scheme that would work and was reliable. . . . [F]rom basic physics, you can just see that this is not a good solution, and it really wouldn't work well."

The Commission also noted that Princo had not pointed to any evidence "that the Lagadec approach is a commercially viable technological alternative to the technology of [the Raaymakers patents]." By way of explanation, the Commission commented that "the commercial viability of a method that is prone to errors, unreliable, and unworkable is doubtful." Based on the Commission's use of the term "commercial viability," Princo argues that the Commission used the wrong standard in evaluating the Lagadec technology. According to Princo, instead of addressing the commercial viability of that technology, the Commission should have limited its inquiry to whether Lagadec had "the technical potential to develop as a workable alternative." The Commission, however, addressed both technical feasibility and commercial potential, and it found the Lagadec approach lacking in both respects.

Second, the Commission rejected the argument that Philips "included Sony in the [patent] pool not because Sony brought anything necessary to the CD-R/RW technology, but rather because Sony is a major player in the industry, whose cooperation Philips wanted." The Commission found that assertion to be baseless and contrary to the testimony of several witnesses that Philips "partnered with Sony for technical reasons." Thus, although Princo argues at length that the pooling arrangement was not designed as a joint technical project between Philips and Sony, but rather as a means of allowing Philips to share its royalties with Sony in exchange for Sony's agreement not to compete against the Orange Book standard, the Commission found to the contrary.

Finally, with respect to Princo's related argument that including the Lagadec patent in the package licenses enabled Philips to avoid competition from non-Orange-book discs, the Commission stated that Princo had "not identified evidence establishing that, if Sony's [Lagadec patent] were not included in the licenses, Sony likely would have developed technologies that competed against the Orange Book standard in a relevant market." The Commission added that there was no evidence in the record that Sony "would have entered and survived to become a significant competitive force" in the CD-R/RW market with the Lagadec technology or that, absent the pooling arrangements, the pool licensors would have competed with the Orange Book technology.

Likewise, there was no evidence that any potential licensee might develop the Lagadec technology to compete with the Orange Book discs. Princo did not show that any potential disc manufacturer had ever been refused a license to the Lagadec patent for purposes of producing non-Orange-Book discs, or had even sought to explore that possibility. Nor has Princo pointed to any evidence that the Lagadec patent was anything more than a theoretical solution, or that the unavailability of a separate license to Lagadec for non-Orange-Book purposes resulted in some realistic foreclosure of competition.

While the suppression of nascent threats can be construed as anticompetitive behavior under certain circumstances, see United States v. Microsoft Corp., 253 F.3d 34, 79 (D.C.Cir.2001) (en banc), Princo had the burden of showing that the hypothesized agreement had an actual adverse effect on competition in the relevant market. See Cal. Dental Ass'n v. FTC, 526 U.S. 756, 775 n. 12 (1999); In re Ciprofloxacin Hydrochloride Antitrust Litig., 544 F.3d 1323, 1332 (Fed.Cir.2008) (noting that an antitrust plaintiff bears the initial burden of showing an actual adverse effect on competition); Phillip E. Areeda & Herbert Hovenkamp, Antitrust Law ¶ 1507c (antitrust plaintiff must introduce evidence that defendants "have restrained trade significantly" and have "impair[ed] competition" in a relevant market).

What Princo had to demonstrate was that there was a "reasonable probability" that the Lagadec technology, if available for licensing, would have matured into a competitive force in the storage technology market. See United States v. Penn–Olin Chem. Co., 378 U.S. 158, 175-76 (1964) (requiring a finding that there was a reasonable probability that the competing companies would have "entered the market" or "remained a significant potential competitor"). It was not enough that there was some speculative possibility that Lagadec could have overcome the barriers to its technical feasibility and commercial success and become the basis for competing disc technology. The Commission found that Princo failed to show that the Lagadec technology had technical or commercial prospects that could enable it to compete with the Orange Book technology. Those findings wholly undermine Princo's contention that this is a case in which the patents in suit have been used as part of an overall horizontal agreement with the effect of keeping a viable competitor out of the relevant market….

In sum, Princo has failed to show that the putative agreement between

Sony and Philips not to license the Lagadec technology for non-Orange-Book purposes had any market effect at all—actual or prospective. The record, and the findings of the Commission, make clear that the Lagadec technology lacked both the technical and the commercial prospects that would have made it a possible basis for a product that could compete with Orange-Book-compliant discs in the data storage market. For that reason, Princo failed to demonstrate that any agreement not to license Lagadec would have had the anticompetitive effects necessary to condemn that agreement under rule-of-reason analysis.

Accordingly, we conclude that even if Philips and Sony engaged in an agreement not to license the Lagadec patent for non-Orange-Book purposes, that hypothesized agreement had no bearing on the physical or temporal scope of the patents in suit, nor did it have anticompetitive effects in the relevant market. The asserted agreement between Philips and Sony therefore did not constitute patent misuse and cannot justify rendering all of Philips's Orange Book patents unenforceable.

AFFIRMED

[Concurring and dissenting opinions omitted.]

NOTES AND QUESTIONS

1. Unilateral refusals to license IP rights—like unilateral refusals to deal generally—almost never violate antitrust laws. Concerted refusals to deal, on the other hand, are treated harshly. While the Patent Act explicitly states that a unilateral refusal to license a patent cannot constitute misuse, it doesn't clearly give *concerted* refusals to license the same protection—nor, however, does the statute explicitly condemn them as misuse. *See* 35 U.S.C. § 271(d)(4)(2006). In a dissenting opinion Judge Dyk argued that it "would be absurd to assume that Congress intended to provide that the use of a patent that merited punishment as a felony [under the Sherman Act] would not constitute 'misuse.'"

A concerted refusal to license a plant or other input can facilitate collusion by denying resources to rivals unless they can find other sources. A concerted refusal to license an unused patent can go much further. Not only does it deny rivals that particular technology but it also prevents them from developing any technology independently that would infringe one or more of that patent's claims. Someone wishing to develop a digital alternative to the analog technology licensed in the Sony/Philips package would have to invent around the Lagadec patent claims even though the technology claimed in that patent is not in use.

Further, this licensing rule would not distinguish between internally developed patents and those acquired from the outside. A group of firms employing a particular technology could purchase exclusive rights in patents developed by a nascent rival and agree not to assign them to anyone else, thus protecting their own technology from competitive entry. The *Princo* majority and dissent debated whether Congress intended section 271(d)(4) to cover concerted as well as unilateral refusals, but the legislative history is very thin, producing only a debate over whether noncompetition agreements in patent licenses amounted to concerted refusals. They should have looked at the status of antitrust law on the issue, however, which made unilateral refusals to license virtually lawful per se while often condemning concerted refusals.

Of course, not every concerted refusal to license should be unlawful per se. They are appropriately covered by the ancillary restraints doctrine. Naked agreements not to license are unlawful per se, while refusals reasonably necessary to further joint research or production would be unlawful only if market power and anticompetitive effects were proven. By contrast, reading section 271(d) to authorize naked concerted refusals is likely to harm both competition and the incentive to innovate. See Christina Bohannan & Herbert Hovenkamp, *Concerted Refusals to License Intellectual Property Rights*, 1 Harv. Bus. L. Rev. Online 21, 22–24 (2011).

2. As of late 2011, no court has relied on the majority's conclusion that a concerted refusal to license a patent does not constitute misuse. But patent holders *are* relying on *Princo* to argue against "expansion of patent misuse beyond existing precedent." Brief of Plaintiff–Appellee Novartis Pharmaceuticals Corporation at 36, *Novartis Pharm. Corp. v. Mylan Pharm. Inc.*, No. 2011-1203, (Fed. Cir. May 23, 2011), 2011 WL 2323813; *see also* Plaintiff's Reply in Support of Their Renewed Motion to Strike the Teva and Sun Defendants' Patent Misuse and Unclean Hands Defenses at 2, *Altana Pharma AG v. Teva Pharm. USA, Inc.*, No. 04-2355 (D.N.J. Oct. 25, 2010), 2010 WL 4806209 ("[A]s the Federal Circuit has said and recently reinforced, allegations of anticompetitive conduct generally related to a patent or a patented product are insufficient to state a misuse claim. . . . [A]n affirmative defense of patent misuse must allege '"patent leverage," *i.e., the use of the patent power* to impose overbroad conditions on the use of the patent in suit that are not within the reach of the [patent] monopoly' and which have an anticompetitive effect."). Commentators seem to agree

with these patent holders. *See, e.g.*, Richard Li-dar Wang, *Deviated, Unsound, and Self-Retreating: A Critical Assessment of* Princo v. ITC *En Banc Decision*, 16 Marquette Intell. Prop. L. Rev. (Jan. 2012) (stating that *Princo* "arguably reduce[s] the misuse scope even narrower than antitrust"); Stephen McJohn, *Top Tens in 2010: Patent and Trademark Cases*, 9 Nw. J. Tech. & Intell. Prop. 312, 317 (2011); Timothy J. Barron & Olivia T. Luk, *The Patent Misuse Defense After* Princo, Intell. Prop. Litig., Winter 2011; Phillip W. Goter, Note, Princo*, Patent Pools, and the Risk of Foreclosure: A Framework for Assessing Misuse,* 96 Iowa L. Rev. 699, 723 (2011).

BRULOTTE v. THYS CO.
379 U.S. 29 (1964)

MR. JUSTICE DOUGLAS delivered the opinion of the Court.

Respondent, owner of various patents for hop-picking, sold a machine to each of the petitioners for a flat sum and issued a license for its use. Under that license there is payable a minimum royalty of $500 for each hop-picking season or 3.33^{1}/_{3}$ per 200 pounds of dried hops harvested by the machine, whichever is greater. The licenses by their terms may not be assigned nor may the machines be removed from Yakima County. The licenses issued to petitioners listed 12 patents relating to hop-picking machines; but only seven were incorporated into the machines sold to and licensed for use by petitioners. Of those seven all expired on or before 1957. But the licenses issued by respondent to them continued for terms beyond that date.

Petitioners refused to make royalty payments accruing both before and after the expiration of the patents. This suit followed. One defense was misuse of the patents through extension of the license agreements beyond the expiration date of the patents. The trial court rendered judgment for respondent and the Supreme Court of Washington affirmed. 62 Wash.2d 284, 382 P.2d 271. The case is here on a writ of certiorari.

We conclude that the judgment below must be reversed insofar as it allows royalties to be collected which accrued after the last of the patents incorporated into the machines had expired. The Constitution by Art. I, § 8 authorizes Congress to secure 'for limited times' to inventors 'the exclusive right' to their discoveries. Congress exercised that power by 35 U.S.C. s 154 which provides in part as follows:

> 'Every patent shall contain a short title of the invention

> and a grant to the patentee, his heirs or assigns, for the term of seventeen years, of the right to exclude others from making, using, or selling the invention throughout the United States, referring to the specification for the particulars thereof. . . .'

The right to make, the right to sell, and the right to use 'may be granted or conferred separately by the patentee.' Adams v. Burke, 17 Wall. 453, 456 700. But these rights become public property once the 17-year period expires. As stated by Chief Justice Stone, speaking for the Court in Scott Paper Co. v. Marcalus Mfg. Co., 326 U.S. 249, 256:

> '. . . any attempted reservation or continuation in the patentee or those claiming under him of the patent monopoly, after the patent expires, whatever the legal device employed, runs counter to the policy and purpose of the patent laws.'

The Supreme Court of Washington held that in the present case the period during which royalties were required was only 'a reasonable amount of time over which to spread the payments for the use of the patent.' But there is intrinsic evidence that the agreements were not designed with that limited view. As we have seen the purchase price in each case was a flat sum, the annual payments not being part of the purchase price but royalties for use of the machine during that year. The royalty payments due for the post-expiration period are by their terms for use during that period, and are not deferred payments for use during the pre-expiration period. Nor is the case like the hypothetical ones put to us where non-patented articles are marketed at prices based on use. The machines in issue here were patented articles and the royalties exacted were the same for the post-expiration period as they were for the period of the patent. That is peculiarly significant in this case in view of other provisions of the license agreements. The license agreements prevent assignment of the machines or their removal from Yakima County after, as well as before, the expiration of the patents.

Those restrictions are apt and pertinent to protection of the patent monopoly; and their applicability to the post-expiration period is a telltale sign that the licensor was using the licenses to project its monopoly beyond the patent period. They forcefully negate the suggestion that we have here a bare arrangement for a sale or a lease at an undetermined price based on use. The sale or lease of unpatented machines on long-term payments based on a deferred purchase price or on use would present wholly different considerations. Those arrangements seldom rise to the level of a federal question. But patents are in the federal domain; and 'whatever the legal device employed' a projection of the patent monopoly after the patent expires is not enforceable. The present licenses draw no line between the term of the patent and the post-expiration period. The same provisions as respects both use and royalties are applicable to each. The contracts are, therefore, on their face a bald attempt to exact the same terms and conditions for the period after the patents have expired as they do for the monopoly period. We are, therefore, unable to conjecture what the bargaining position of the parties might have been and what resultant arrangement might have emerged had the provision for post-expiration royalties been divorced from the patent and nowise subject to its leverage.

In light of those considerations, we conclude that a patentee's use of a royalty agreement that projects beyond the expiration date of the patent is unlawful per se. If that device were available to patentees, the free market visualized for the post-expiration period would be subject to monopoly influences that have no proper place there.

Automatic Radio Co. v. Hazeltine, 339 U.S. 827, is not in point. While some of the patents under that license apparently had expired, the royalties claimed were not for a period when all of them had expired.[1] That license covered several hundred patents and the royalty was based on the licensee's sales, even when no patents were used. The Court held that the computation of royalty payments by that formula was a convenient and reasonable device. We decline the invitation to extend it so as to project the patent monopoly beyond the 17-year period.

A patent empowers the owner to exact royalties as high as he can negotiate with the leverage of that monopoly. But to use that leverage to project those royalty payments beyond the life of the patent is analogous to an effort to enlarge the monopoly of the patent by tieing the sale or use of the patented article to the purchase or use of unpatented ones. . . . The exaction of royalties for use of a machine after the patent has expired is an

[1] The petition for certiorari did not in the questions presented raise the question of the effect of the expiration of any of the patents on the royalty agreement. Also, the Hazeltine license, which covered many patents, exacted royalties for patents never used. But that aspect of the case is likewise not apposite here for the present licensees are farmers using the machines, not manufacturers buying the right to incorporate patents into their manufactured products.

assertion of monopoly power in the post-expiration period when, as we have seen, the patent has entered the public domain. We share the views of the Court of Appeals in Ar-Tik Systems, Inc. v. Dairy Queen, Inc., 3 Cir., 302 F.2d 496, 510, that after expiration of the last of the patents incorporated in the machines 'the grant of patent monopoly was spent' and that an attempt to project it into another term by continuation of the licensing agreement is unenforceable.

Reversed.

MR. JUSTICE HARLAN, dissenting.

The Court holds that the Thys Company unlawfully misused its patent monopoly by contracting with purchasers of its patented machines for royalty payments based on use beyond the patent term. I think that more discriminating analysis than the Court has seen fit to give this case produces a different result.

The patent laws prohibit post-expiration restrictions on the use of patented ideas; they have no bearing on use restrictions upon nonpatented, tangible machines. We have before us a mixed case involving the sale of a tangible machine which incorporates an intangible, patented idea. My effort in what follows is to separate out these two notions, to show that there is no substantial restriction on the use of the Thys idea, and to demonstrate that what slight restriction there may be is less objectionable than other post-expiration use restrictions which are clearly acceptable.

It surely cannot be questioned that Thys could have lawfully set a fixed price for its machine and extended credit terms beyond the patent period. It is equally unquestionable, I take it, that if Thys had had no patent or if its patent had expired, it could have sold its machines at a flexible, undetermined price based on use; for example, a phonograph record manufacturer could sell a recording of a song in the public domain to a juke-box owner for an undetermined consideration based on the number of times the record was played.

Conversely it should be equally clear that if Thys licensed another manufacturer to produce hop-picking machines incorporating any of the Thys patents, royalties could not be exacted beyond the patent term. Such royalties would restrict the manufacturer's exploitation of the idea after it falls into the public domain, and no such restriction should be valid. To give another example unconnected with a tangible machine, a song writer could charge a royalty every time his song—his idea—was sung for profit during the period of copyright. But once the song falls into the public domain each and every member of the public should be free to sing it.

In fact Thys sells both a machine and the use of an idea. The company should be free to restrict the use of its machine, as in the first two examples given above. It may not restrict the use of its patented idea once it has fallen into the public domain. Whether it has done so must be the point of inquiry.

Consider the situation as of the day the patent monopoly ends. Any manufacturer is completely free to produce Thys-type hop-pickers. The farmer who has previously purchased a Thys machine is free to buy and use any other kind of machine whether or not it incorporates the Thys idea, or make one himself if he is able. Of course, he is not entitled as against Thys to the free use of any Thys machine. The Court's opinion must therefore ultimately rest on the proposition that the purchasing farmer is restricted in using his particular machine, embodying as it does an application of the patented idea, by the fact that royalties are tied directly to use.

To test this proposition I again put a hypothetical. Assume that a Thys contract called for neither an initial flat-sum payment nor any annual minimum royalties; Thys' sole recompense for giving up ownership of its machine was a royalty payment extending beyond the patent term based on use, without any requirement either to use the machine or not to use a competitor's. A moment's thought reveals that, despite the clear restriction on use both before and after the expiration of the patent term, the arrangement would involve no misuse of patent leverage. Unless the Court's opinion rests on technicalities of contract draftsmanship and not on the economic substance of the transaction, the distinction between the hypothetical and the actual case lies only in the cumulative investment consisting of the initial and minimum payments independent of use, which the purchaser obligated himself to make to Thys. I fail to see why this distinguishing feature should be critical. If anything the investment will encourage the purchaser to use his machine in order to amortize the machine's fixed cost over as large a production base as possible. Yet the gravamen of the majority opinion is restriction, not encouragement, of use…..

In fact a distinction should not be accepted based on the assumption that Thys, which exploits its patents by selling its patented machines rather than licensing others to manufacture them, can use its patent leverage to exact more onerous payments from farmers by gearing price to use instead of charging a flat sum. Four possible situations must be considered. The purchasing farmer could overestimate, exactly estimate, underestimate, or have no firm estimate of his use requirements for a Thys machine. If he overestimates or exactly estimates, the farmer will be fully aware of what the machine will cost him in the long run, and it is unrealistic to suppose that in such circumstances he would be willing to pay more to have the machine on use than on straight terms. If the farmer underestimates, the thought may be that Thys will take advantage of him; but surely the farmer is in a better position than Thys or anyone else to estimate his own requirements and is hardly in need of the Court's protection in this respect. If the farmer has no fixed estimate of his use requirements he may have good business reasons entirely unconnected with 'patent leverage' for wanting payments tied to use, and may indeed be willing to pay more in the long run to obtain such an arrangement. On final example should illustrate my point:

At the time when the Thys patent term still has a few years to run, a farmer who has been picking his hops by hand comes into the Thys retail outlet to inquire about the mechanical pickers. The salesman concludes his description of the advantages of the Thys machine with the price tag—$20,000. Value to the farmer depends completely on the use he will derive from the machine; he is willing to obligate himself on long credit terms to pay $10,000, but unless the machine can substantially outpick his old hand-picking methods, it is worth no more to him. He therefore offers to pay $2,000 down, $400 annually for 20 years, and an additional payment during the contract term for any production he can derive from the machine over and above the minimum amount he could pick by hand. Thys accepts, and by doing so, according to the majority, commits a per se misuse of its patent. I cannot believe that this is good law.

I would affirm.

SCHEIBER v. DOLBY LABS., INC.
293 F.3d 1014 (7th Cir. 2002)

POSNER, Circuit Judge.

The plaintiff in a suit to enforce a patent licensing agreement appeals to us from the grant of summary judgment to the defendants, Dolby for short. Scheiber, the plaintiff, a musician turned inventor who held U.S. and Canadian patents on the audio system known as "surround sound," sued Dolby in 1983 for infringement of his patents. The parties settled the suit by agreeing that Scheiber would license his patents to Dolby in exchange for royalties. The last U.S. patent covered by the agreement was scheduled to expire in May 1993, while the last Canadian patent was not scheduled to expire until September 1995. During the settlement negotiations Dolby suggested to Scheiber that in exchange for a lower royalty rate the license agreement provide that royalties on all the patents would continue until the Canadian patent expired, including, therefore, patents that had already expired. That way Dolby could, it hoped, pass on the entire royalty expense to its sublicensees without their balking at the rate. Scheiber acceded to the suggestion and the agreement was drafted accordingly, but Dolby later refused to pay royalties on any patent after it expired, precipitating this suit. Federal jurisdiction over the suit is based on diversity of citizenship, because a suit to enforce a patent licensing agreement does not arise under federal patent law.

Dolby argues that the duty to pay royalties on any patent covered by the agreement expired by the terms of the agreement itself as soon as the patent expired, because the royalties were to be based on Dolby's sales of equipment within the scope of the patents and once a patent expires, Dolby argues, there is no equipment within its scope. The argument would make meaningless the provision that Dolby itself proposed for continuing the payment of royalties until the last patent expired. Anyway the reference to equipment within the scope of the patent was clearly meant to identify the equipment on which royalties would be based (Dolby makes equipment that does not utilize Scheiber's patents as well as equipment that does) rather than to limit the duration of the obligation to pay royalties.

Dolby's principal argument is that the Supreme Court held in a decision that has never been overruled that a patent owner may not enforce a contract for the payment of patent royalties beyond the expiration date of the patent. The decision was Brulotte v. Thys Co., 379 U.S. 29 (1964), dutifully followed by lower courts, including our own, in such cases as Meehan v. PPG Industries, Inc., 802 F.2d 881, 883 (7th Cir.1986); Virginia Panel Corp. v. MAC Panel Co., 133 F.3d 860, 869 (Fed.Cir.1997), and Boggild v. Kenner Products, 776 F.2d 1315, 1318–19 (6th Cir.1985). *Brulotte* involved an agreement licensing patents that expired at different dates, just like this case; the two cases are indistinguishable. The decision has, it is true, been severely, and as it seems to us, with all due respect, justly, criticized, beginning with Justice Harlan's dissent, 379 U.S. at 34, and continuing with our opinion in USM Corp. v. SPS Technologies, Inc., 694 F.2d 505, 510–11 (7th Cir.1982). The Supreme Court's majority opinion reasoned that by extracting a promise to continue paying royalties after expiration of the patent, the patentee extends the patent beyond the term fixed in the patent statute and therefore in violation of the law. That is not true. After the patent expires, anyone can make the patented process or product without being guilty of patent infringement. The patent can no longer be used to exclude anybody from such production. Expiration thus accomplishes what it is supposed to accomplish. For a licensee in accordance with a provision in the license agreement to go on paying royalties after the patent expires does not extend the duration of the patent either technically or practically, because, as this case demonstrates, if the licensee agrees to continue paying royalties after the patent expires the royalty rate will be lower. The duration of the patent fixes the limit of the patentee's power to extract royalties; it is a detail whether he extracts them at a higher rate over a shorter period of time or a lower rate over a longer period of time.

This insight is not original with us. "The *Brulotte* rule incorrectly assumes that a patent license has significance after the patent terminates. When the patent term ends, the exclusive right to make, use or sell the licensed invention also ends. Because the invention is available to the world, the license in fact ceases to have value. Presumably, licensees know this when they enter into a licensing agreement. If the licensing agreement calls for royalty payments beyond the patent term, the parties base those payments on the licensees' assessment of the value of the license during the patent period. These payments, therefore, do not represent an extension in time of the patent monopoly. . . . Courts do not remove the obligation of the consignee to pay because payment after receipt is an extension of market power—it is simply a division of the payment-for-delivery transaction. Royalties beyond the patent term are no different. If royalties are calculated on post-patent term sales, the calculation is simply a risk-shifting credit arrangement between patentee and licensee. The arrangement can be no more than that, because the patentee at that time has nothing else to sell." Harold See & Frank M. Caprio, "The Trouble with *Brulotte*: the Patent Royalty Term and Patent Monopoly Extension," 1990 Utah L.Rev. 813, 814, 851; to similar effect see Rochelle Cooper Dreyfuss, "Dethroning Lear: Licensee Estoppel and the Incentive to Innovate," 72 Va. L.Rev. 677, 709–12 (1986). "[T]he Supreme Court refused to see that typically such post-expiration royalties merely amortize the price of using patented technology." 10 Phillip E. Areeda & Herbert Hovenkamp, Antitrust Law ¶¶ 1782c2–c3, pp. 505–11 (1996).

These criticisms might be wide of the mark if *Brulotte* had been based on a[n] interpretation of the patent clause of the Constitution, or of the patent statute or any other statute; but it seems rather to have been a freefloating product of a misplaced fear of monopoly ("a patentee's use of a royalty agreement that projects beyond the expiration date of the patent is unlawful per se. If that device were available to patentees, the free market visualized for the post-expiration period would be subject to monopoly influences that have no proper place there") that was not even tied to one of the antitrust statutes. 10 Areeda et al., supra, at ¶¶ 1782c2, 1782c3, pp. 505, 511. The doctrinal basis of the decision was the doctrine of patent misuse, of which more later.

A patent confers a monopoly, and the longer the term of the patent the greater the monopoly. The limitation of the term of a patent, besides being commanded by the Constitution, and necessary to avoid impossible tracing problems (imagine if some caveman had gotten a perpetual patent on the wheel), serves to limit the monopoly power conferred on the patentee. But as we have pointed out, charging royalties beyond the term of the patent does not lengthen the patentee's monopoly; it merely alters the timing of royalty payments. This would be obvious if the license agreement between Scheiber and Dolby had become effective a month before the last patent expired. The parties could have agreed that Dolby would pay royalties for the next 100 years, but obviously the royalty rate would be minuscule because of the imminence of the patent's expiration.

However, we have no authority to overrule a Supreme Court decision no matter how dubious its reasoning strikes us, or even how out of touch with the Supreme Court's current thinking the decision seems….

Now it is true that in Aronson v. Quick Point Pencil Co., 440 U.S. 257 (1979), a case decided some years after *Brulotte*, the Supreme Court upheld an agreement superficially similar to the one invalidated in *Brulotte* and at issue in the present case: a patent applicant granted a license for the invention it hoped to patent to a firm that agreed, if a patent were not granted, to pay the inventor–applicant royalties for as long as the firm sold products embodying the invention. The Court was careful to distinguish *Brulotte*, and not a single Justice suggested that any cloud had been cast over the earlier decision. Since no patent was granted, the doctrine of patent misuse could not be brought into play, and there was no other federal ground for invalidating the license. The Court emphasized that *Brulotte* had been based on the "leverage" that the patent had granted the patentee to extract royalties beyond the date of expiration, and that leverage was of course missing in *Aronson*.

If *Aronson* and *Brulotte* were inconsistent with each other and the Court had not reaffirmed *Brulotte* in *Aronson*, then we would have to follow Aronson, the later opinion, since to follow *Brulotte* in those circumstances would be to overrule Aronson. But the reaffirmation of Brulotte in Aronson tells us that the Court did not deem the cases inconsistent, and so, whether we agree or not, we have no warrant for declaring *Brulotte* overruled.

Scheiber argues further, however, that *Brulotte* has been superseded by a 1988 amendment to the patent statute which provides, so far as bears on this case, that "no patent owner otherwise entitled to relief for infringement . . . shall be . . . deemed guilty of misuse or illegal extension of the patent right by reason of his having . . . conditioned the license of any rights to the patent or the sale of the patented product on the acquisition of a license to rights in another patent or purchase of a separate product" unless the patentee has market power in the market for the conditioning product (which is not argued here). 35 U.S.C. § 271(d)(5). The statute is doubly inapplicable to this case. It merely limits defenses to infringement suits, and Scheiber isn't suing for infringement; he's suing to enforce a license agreement. He can't sue for infringement; his patents have expired. Scheiber argues that since the agreement was in settlement of his infringement suit, the only effect of limiting the statute to such suits would be to dissuade patentees from settling them. Not so. Had Scheiber pressed his 1983 infringement suit against Dolby to judgment, he would not have obtained royalties beyond the expiration date of his patents, because Dolby had not as yet agreed to pay any royalties; there was no license agreement before the case was settled. The significance of the statute is that if some subsequent infringer should point to the license agreement with Dolby as a misuse of Scheiber's patent by reason of the tying together of different patents, Scheiber could plead the statute as a bar to the infringer's defense of patent misuse.

In any event, the new statutory defense is explicitly limited to tying,.. normally of a nonpatented product to a patented product…. The 1988 amendment limited the tying doctrine, in cases in which the tying product is a patent, to situations in which the patentee has real market power, not merely the technical monopoly (right to exclude) that every patent confers. But it is not … bundling … on which Dolby pitches its refusal to pay royalties; it is the duration of the royalty obligation. The objection would be the same if there were a single patent and the agreement required the licensee to continue paying royalties after the patent expired.

Brulotte called extending the royalty obligation beyond the term of the patent analogous to tying, because the traditional objection to tying as we noted is that by telling the buyer that he can't buy the tying product unless he agrees to buy a separate product from the seller as well, the seller is trying to "lever" or "extend" his monopoly to the market for that separate product: only extending it in product space rather than in time. Yet if the seller tries to charge a monopoly price for that separate product, the buyer will not be willing to pay as much for the tying product as he would if the separate product, which he has to buy also, were priced at a lower rate. Acquiring monopoly power in the tied-product market comes at the expense of losing it in the tying-product market. Advo, Inc. v. Philadelphia Newspapers, Inc., 51 F.3d 1191, 1202–03 (3d Cir.1995); Hirsh v. Martindale–Hubbell, Inc., 674 F.2d 1343, 1349 n. 19 (9th Cir.1982). Thus, as these cases and a tidal wave of legal and economic scholarship point out, the idea that you can use tying to lever your way to a second (or, in the post-expiration patent royalty setting, a longer and therefore greater) monopoly is economic nonsense, imputing systematic irrationality to businessmen. Congress seems to have recognized this in the 1988 amendment. But even if the amendment should therefore be interpreted to reject the rationale of the tying cases, and even though the rationale of *Brulotte* is materially identical to that of the discredited tying cases—the Court even invoked "leverage" (as it emphasized later in Aronson), saying that to "use that leverage [the power conferred by the monopoly] to project those royalty payments beyond the life of the patent is analogous to an effort to enlarge the monopoly of the patent," 379 U.S. at 33—and not a whit stronger (probably even weaker, since there is only one product), it would not follow that the statute had changed the rule of that case. Congress isn't constrained, as courts like to think they are, to rule logically. Most statutes are the product of compromise, and compromises need not cut at the logical joints of a controversy. There just is no evidence that Congress in the 1988 amendment wanted to go or did go beyond tying. Had it wanted to, it would have chosen different words. We are not literalists, but there must be some semantic handle on which to hang a proposed statutory interpretation, and there is none here….

AFFIRMED.

NOTES AND QUESTIONS

1. Brulotte is an odd misuse decision in one sense. Nearly all misuse cases arise as defenses to infringement suits. In *Brulotte*, however, the patentee had brought a state court breach of contract action to enforce the license agreement, and the contract defendant raised the royalty extension agreement as a defense. See Thys Co. v. Brulotte, 62 Wash.2d 284, 382

P.2d 271 (1963). Why are not more misuse claims raised as defenses in contract suits? Under the first sale doctrine (see Chapter Ten), a patentee may not enforce a tying condition via a patent infringement suit once the patented tying good has been sold; however, it may continue to enforce lawful tying or other clauses by breach of contract actions. See CHRISTINA BOHANNAN & HERBERT HOVENKAMP, CREATION WITHOUT RESTRAINT: PROMOTING LIBERTY AND RIVALRY IN INNOVATION, chs. 10 & 13 (2011).

2. As Judge Posner's opinion in *Scheiber* suggests, *Brulotte v. Thys Co.* has no shortage of critics. But in a 2007 decision, the Ninth Circuit questioned whether *Brulotte*'s detractors overstate its flaws. *Zila, Inc. v. Tinnell*, 502 F.3d 1014 (9th Cir. 2007). In the mid-1970s, while serving as house physician at a large Las Vegas hotel, James Tinnell developed a treatment for oral and genital herpes. He applied for a patent and set up a corporation, Zila, Inc., to market and sell his invention, which he called Zilactin. In 1980, while the patent application was still pending, Tinnell and Zila entered into a licensing agreement in which Tinell assigned to Zila any and all patent rights he might come to have in Zilactin and Zila agreed to pay Tinnell a five percent royalty on its gross sales of Zilactin in perpetuity. The Zila officers who signed the agreement testified that the "obligation to pay Tinnell royalties was not related in any way to the patents that might or might not be obtained by [Zila] as a result of Tinnell's previously filed patent application." *Zila*, 502 F.3d at 1017. Eventually, three patents issued on Zilactin—a U.S. patent in 1981, a Canadian patent in 1985, and an improvement on the U.S. patent in 1992 (for which Zila "inexplicably" named its regulatory specialist, not Tinnell, as the inventor).

By July 2000, annual sales of Zilactin had grown from $321,000 to more than $8 million, and Zila was paying Tinnell half a million dollars in royalties each year. But in September 2000, the company stopped paying Tinnell on the grounds that under *Brulotte*, Tinnell's right to royalties had expired in August 1998, when the 1981 patent had expired. Zila filed a complaint seeking declaratory judgment that the expiration of the 1981 patent had terminated the licensing agreement and reimbursement for the royalties it paid after the patent expired. Tinnell counterclaimed for declaratory relief, arguing that his right to royalties did not expire with the 1981 patent but rather continued in perpetuity, and sought damages under state law for breach of contract and fraud.

The district court applied *Brulotte* and ruled that the 1980 agreement was "'unlawful per se under federal patent law' because it 'project[ed] beyond the expiration of the patent.'" *Zila*, 502 F.3d at 1018. Significantly, while Zila had argued that it did not have to pay royalties on the Canadian patent because it had paid overpaid on the first U.S. patent, the district court "went further": it held that the unlawful licensing agreement meant that Zila no longer had to pay royalties on *any* of the three patents. The court acknowledged that the result seemed unfair, but wrote that *Brulotte* left it no choice.

In reversing, the Ninth Circuit wrote that "*Brulotte* indicates that under some circumstances patent owners cannot exact royalties for use of patented devices beyond the duration of their patents," and "it does so for a reason that many courts and commentators have found economically unconvincing, namely, that 'the free market visualized for the post-expiration period would be subject to monopoly influences' if 'a royalty agreement [was allowed to] project[] beyond the expiration date of the patent.'" But the court saw a potentially crucial difference between the two cases: while the royalty agreement in *Brulotte* depended on the existence of a patent, Zila's licensing agreement with Tinnell did not. Furthermore, in *Brulotte*, it was "because of post-patent-expiration contractual restrictions *other* than royalties that the Thys Company could not collect the royalties after the patents expired":

> Specifically, the Court in *Brulotte* noted that, although the farmers bought the hop-picking machines outright and title transferred, they were forced to obtain a license to actually use the machines; the licenses could not be assigned, making the machines the farmers purchased worthless for subsequent sales; the farmers were forbidden from moving their machines out of the *county,* whether or not they intended to use them elsewhere; and the license charged both a sliding royalty rate and a minimum fee, depending on use. It is only "in view of [these] *other* provisions of the license agreements" that the Court found the unchanging royalty rate to be "peculiarly significant." The Court emphasized that the presence of "*[t]hose* restrictions," rather than the royalty alone, in the "post-expiration period [was] a telltale sign that the licensor was using the licenses to project its monopoly beyond the patent period." In other words, the Thys Company was not simply attempting to charge a royalty after the patent expired; it was acting *in all respects* as if the patent remained in place.

The Ninth Circuit observed that "every other circuit to consider *Brulotte* has ignored the relevance" of the use restrictions to *Brulotte*'s holding, but the court couldn't quite say that the consensus view was wrong. In the interest of "national uniformity concerns," it adopted the majority approach and asked "not whether but the extent to which *Brulotte* preempts state law with regard to a contract for payment of royalties on the sale of an invention that may be patented, if a patent indeed issues on the invention."

Ultimately, the court held that *Brulotte* "does not render an entire contract void"—just "that portion of a license agreement that demands royalty payments beyond the expiration of the patent for which the royalties are paid." Further, it held Zila owed royalties on the Canadian patent because *Brulotte* doesn't "extend its royalty-canceling powers to contracts for foreign patents."

3. In *NOVA Chemicals, Inc. v. Sekisui Plastics Co.*, the Third Circuit Court of Appeals acknowledged that "the economic reasoning in *Brulotte* has been criticized," but it dutifully noted that the case "remains good law and binding precedent." 579 F.3d 319, 327 n.10 (3d Cir. 2009).

Still, like the Ninth Circuit in *Zila, Inc. v. Tinnell*, the Third Circuit was careful not to extend *Brulotte*'s holding. Sekisui Plastics patented Piocelan, a polystyrene–polyethyline foam used to manufacture automobile parts and food packaging materials, among other goods. In 1983, Sekisui and ARCO Chemical Company entered into a licensing agreement that gave ARCO exclusive rights to use the Piocelan patent and related trade secrets to make and sell Piocelan in the United States and Canada for three years. The agreement also granted ARCO an option to extend the license for another ten years, during which it would continue to have exclusive rights in the U.S. and Canada and would also get nonexclusive rights in the rest of the world, with the exception of most of the major Asian markets. In exchange, ARCO agreed to pay Sekisui $100,000 for the initial three-year license, and a lump sum of $500,000 and running royalties on ARCO's Piocelan sales during the ten-year license. ARCO exercised the option in 1985, and in 1996, NOVA Chemicals bought ARCO and became a party to the agreement.

In 2002, NOVA started selling Piocelan products in Asia, and when Sekisui objected, NOVA sought declaratory judgment that the license agreement "had a defined term of ten years and expired thereafter." *Id.* at 324. Sekisui counterclaimed for breach of contract, arguing that the terms of the agreement in fact gave NOVA a *permanent* license to sell and use Sekisui's Piocelan patent and trade secrets once the $500,000 lump sum and running royalties for the ten-year period were "fully paid-up." Furthermore, Sekisui argued, because this "fully paid-up" license had no expiration date, the licensing agreement barred NOVA from selling in the Asian markets indefinitely.

The Third Circuit affirmed summary judgment for NOVA because the license agreement "clearly expired along with Sekisui's intellectual property rights." Citing *Brulotte*, the court wrote that "[if] the License Agreement were only based on patent rights, it is implicit that it would have terminated with the expiration of those patent rights." *Id.* at 327.

Perhaps recognizing its *Brulotte* problem, Sekisui stressed that the license was not based on patent rights alone and argued that its *trade secrets* were in fact the "heart" of the agreement. "Unlike a patent monopoly, trade secret protections are theoretically unlimited in duration, lasting as long as the information remains a trade secret." Furthermore, trade secret *licenses* "may endure even where the trade secret itself is destroyed by general disclosure." In this case, however, the agreement did not prohibit NOVA from revealing Sekisui's trade secrets after the ten-year license expired, which seemed "inconsistent with the notion that trade secrets, rather than patent rights, were at the heart of the license."

Suppose you were writing a license agreement for software owned by your client and that was protected by both copyright and some patents. While the patents had a few years remaining, the copyright would last for another eighty or more years. How would you draft the agreement?

4. Michael Risch argues that cases like *Brulotte*, which helped create "an unfettered right to challenge patents," have also led to a phenomenon he calls *royalty inflation*. *See* Michael Risch, *Patent Challenges and Royalty Inflation*, 85 Ind. L.J. 1003, 1007–08, 1018-1019 (2010). In Professor Risch's analysis, a patentee "will always perceive a chance, however small, that the licensee will challenge the patent." This risk "decreases the expected value of any royalty stream by imposing additional costs on the patentee, including potential attorneys' fees and other litigation costs, potential loss of royalties, and interference with other licenses if the patent is invalidated." Such costs "are essentially an excise tax on each patent license—a patent-challenge tax." And "[l]ike any tax, the burden will be shared in part by the licensee in the form of higher royalties." On top of these "inflated royalties, the tax causes trickle-down costs to consumers and disincentives to create and license patented technology." Do you agree? Land with questionable title almost always sells for less than land with good

title? Do patents operate differently? Or are the issues not the same?

COUNTY MATERIALS CORP. v. ALLAN BLOCK CORP.
502 F.3d 730 (7th Cir. 2007)

WOOD, Circuit Judge.

. . . County Materials is in the business of manufacturing concrete blocks. Allan Block develops, markets, and licenses technology for the manufacturing of concrete blocks; it does not manufacture blocks itself. In April 1993, County Materials's predecessor in interest, County Concrete Corporation, entered into a production agreement with Allan Block. The Agreement granted to County Materials the exclusive right to manufacture Allan Block's patented block products in northwest Wisconsin. County also was granted the right to sell these products under the Allan Block trademark. Finally, Allan Block agreed to provide County Materials with significant technical, marketing, and strategic support while the Agreement was in effect.

The Agreement included a limited covenant not to compete, which allowed County Materials to make and sell two specific competing block products, without any time restrictions. The non-compete provision also required that for the 18 months following the termination of the Agreement, County Materials could not "directly or indirectly engage in the manufacture and/or sale of any other [competing] . . . block."

In 2005, Allan Block notified County Materials that it would be terminating the Agreement. Shortly thereafter, County Materials completed its own design for a new concrete block that would compete directly with the Allan Block products that it had been manufacturing and selling in northwest Wisconsin. As County Materials took steps to begin producing this new block, Allan Block threatened that it would sue to enforce the non-compete provision from the terminated Agreement. County Materials decided to move first, and so it filed this suit alleging that the inclusion of the non-compete provision in the Agreement constituted patent misuse, which made the Agreement void.

. . . This court reviews a district court's decision to grant summary judgment de novo. Balderston v. Fairbanks Morse Engine Div. of Coltec Indus., 328 F.3d 309, 320 (7th Cir.2003). The parties appear to agree that the production agreement is a patent license, which is the way that we too would characterize it. County Materials essentially claims that the inclusion of the covenant not to compete in the patent license here was per se unlawful patent misuse and the improper result of patent leverage. While at one time this argument might have had traction, in certain circumstances, it is at least disfavored today, if not entirely rejected. Today, the concept of patent misuse is cabined first by statute, 35 U.S.C. § 271(d), which essentially eliminates from the field of "patent misuse" claims based on tying and refusals to deal, unless the patent owner has market power, and second by case law. As the Federal Circuit explained in Virginia Panel Corp. v. MAC Panel Co., 133 F.3d 860 (Fed.Cir.1997), there are certain practices that court identified as "constituting per se patent misuse," including "arrangements in which a patentee effectively extends the term of its patent by requiring post-expiration royalties." *Id.* at 869; see also Brulotte v. Thys Co., 379 U.S. 29 (1964) (holding that "a patentee's use of a royalty agreement that projects beyond the expiration date of the patent is unlawful per se "). The practices identified in § 271(d), in contrast, may not be branded "misuse." *Va. Panel Corp*., 133 F.3d at 869.

If a practice is not per se unlawful nor specifically excluded from a misuse analysis by § 271(d) a court must determine if that practice is reasonably within the patent grant, i.e., that it relates to subject matter within the scope of the patent claims. If so, the practice does not have the effect of broadening the scope of the patent claims and thus cannot constitute patent misuse. If, on the other hand, the practice has the effect of extending the patentee's statutory rights and does so with an anti-competitive effect, that practice must then be analyzed in accordance with the rule of reason. Under the rule of reason, the finder of fact must decide whether the questioned practice imposes an unreasonable restraint on competition, taking into account a variety of factors, including specific information about the relevant business, its condition before and after the restraint was imposed, and the restraint's history, nature, and effect.

County Materials is not claiming that Allan Block was trying to extend the term of its patent by requiring post-expiration royalties. It is wrong, therefore, to argue that some form of per se analysis applies here. (By the same token, we have no need to explore further the question whether it makes any economic sense to treat these arrangements so harshly. See Scheiber, 293 F.3d at 1020, which questions the economic soundness of per se condemnation.) The covenant not to compete in the agreement before us must therefore be assessed under a rule of reason. County Materials argues that this clause is unreasonable because it allows Allan Block to use its patent to exclude competition in the market from unpatented products.

As County Materials recognizes, it is essentially making a leveraging argument. It argues both that "[l]everage is presumed" and that there is a "proper method to conclude whether patent leverage was used." Whatever else one might say about leveraging theory (which as we noted in Scheiber has been criticized in academic circles), however, there is no doubt that there is nothing "presumed" about it outside the narrow confines of post-expiration royalties. In *Brulotte*, the Supreme Court held that there are both proper and improper uses of patent leverage. It acknowledged that "[a] patent empowers the owner to exact royalties as high as he can negotiate with the leverage of that monopoly[, b]ut to use that leverage to project those royalty payments beyond the life of the patent is analogous to an effort to enlarge the monopoly of the patent." 379 U.S. at 33 (emphasis added). But as both Congress and the Court have come to recognize, it may not be possible to exercise any leverage at all from a patent, if that patent does not confer any market power upon its owner. See Ill. Tool Works Inc. v. Independent Ink, Inc., 547 U.S. 28, 42 (2006)….

The Federal Circuit's decision in Windsurfing Int'l, Inc. v. AMF, Inc., 782 F.2d 995 (Fed.Cir.1986), provides helpful guidance in deciding whether a particular use of a patent might amount to "misuse" and thus furnish the defense to a licensing agreement that County Materials is looking for. In Windsurfing, the Federal Circuit said that patent misuse does not exist unless the party asserting it can "show that the patentee has impermissibly broadened the 'physical or temporal scope' of the patent grant with anti-competitive effect." This standard is satisfied by showing some overall harm to competition, and so, contrary to County Materials's contentions, it fully takes into account the fact that patents exist to "spur progress and innovation." The Windsurfing standard for patent misuse necessarily considers whether progress and innovation have been stymied and allows courts concretely to answer the vague question whether progress has been slowed….

Anticompetitive effects, in short, are a critical element of any patent misuse case that is evaluated under a rule of reason approach. Windsurfing was one of the first cases to recognize this; it required "a factual determination [that] . . . reveal[s] that the overall effect of the license tends to restrain competition unlawfully in an appropriately defined relevant market."… A plaintiff is not required to show a defendant's subjective intent to obtain some kind of leverage over its patent. We assume, for the sake of argument, that it is also not necessary for a plaintiff to plead a case that would suffice to show that the antitrust laws have been violated. But, at the summary judgment stage, some evidence tending to show an adverse effect in an economically sound relevant market is essential for any claim governed by the rule of reason.

With these principles in mind, we are ready to assess County Materials's case. To begin with, the Agreement between County Materials and Allan Block shows no sign of one-sidedness or abuse of power on Allan Block's part. County Materials received significant benefits, starting with the right to use the patented technology for the manufacture of the concrete blocks, and continuing with the right to use Allan Block's trademark and the right to receive supporting technical, marketing, and strategic services from Allan Block. In return, County Materials had to promise to pay royalties to Allan Block and to devote significant efforts to the exploitation of Allan Block's patent. If County Materials had been free to pick and choose among all potentially competing products on the market, Allan Block may have signed over the rights to use its patent and know-how for little or nothing in return. Allan Block's services alone have considerable value for any company undertaking the manufacture and sale of these products (or so the parties could have concluded), whether or not they are tied to a patented product. Nothing in these facts suggests that Allan Block needed or used any kind of leverage made possible by the patent to secure County Materials's promise to refrain from working with all but the designated two competing products, or its promise to refrain from using other products for 18 months after the expiration of the Agreement.

In fact, this was not a particularly onerous covenant not to compete. It allowed County Materials to continue to manufacture and sell not one but two competing products, which the district court reasoned would "guarantee plaintiff could always compete with defendant in the landscape block market." In addition, the clause had both temporal and geographical limits. It lasted for only 18 months after the Agreement's termination (a period which no one contends goes beyond the duration of Allan Block's patent) and applied only to County Materials's exclusive production territory, which was a section of Wisconsin. Although the non-compete clause may have hurt County Materials's ability to compete as aggressively as it would have liked in the concrete block market in northwest Wisconsin, there does not appear to be any evidence in the record showing that these limited requirements have hurt competition for cement blocks in County Materials's former exclusive territory. In the related field of antitrust, the Supreme Court has said that "[i]t is axiomatic that the antitrust laws were passed for the protection of competition, not competitors." Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 224 (1993) (internal quotation marks omitted). Independent Ink, supra, held that the principles underlying the patent misuse doctrine are closely aligned to those underlying antitrust law. Without a showing that this clause had any effect on the broader market for concrete block (as opposed to an effect only on County Materials), its purported patent misuse defense cannot succeed. . . .

The judgment of the district court is AFFIRMED.

BAYER AG v. HOUSEY PHARMACEUTICALS, INC.
228 F.Supp.2d 467 (D. Del. 2002),
aff'd, 340 F.3d 1367 (Fed. Cir. 2003)

SUE L. ROBINSON, Chief Judge.

. . . The ICT patents, each entitled, "Method of Screening for Protein Inhibitors and Activators," generally relate to research methods used by pharmaceutical companies for discovering drugs. (D.I.1) The patented methods enable companies to screen substances for active compounds that indicate a potential for development as pharmaceuticals. (*Id.*) This court's October 17, 2001 order found that the defendant's patents cover only research methods, not manufacturing methods. See Bayer AG v. Housey Pharmaceuticals, Inc., 169 F.Supp.2d 328 (D.Del.2001). Thus, the patent claims at issue do not cover end products, but rather the identification and generation of data used to develop new pharmaceuticals. . . .

Defendant has agreed to, and proposed, two different types of licensing arrangements with licensees and potential licensees. One type is a running royalty license that requires the licensee to pay a royalty for sales of pharmaceutical products discovered using the subject invention. . . . The second type is a lump sum payment license that requires the licensee to pay a lump sum royalty based upon the licensee's research and development budget.

Patent misuse is an equitable defense to a charge of patent infringement. The basic allegation is that the patentee has "extend[ed] the economic benefit beyond the scope of the patent grant." C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1372 (Fed.Cir.1998) (citing Mallinckrodt, Inc. v. Medipart, Inc., 976 F.2d 700, 703–04 (Fed.Cir.1992)). Patent misuse "requires that the alleged infringer show that the patentee has impermissibly broadened the physical or temporal scope of the patent grant with anticompetitive effect." Virginia Panel Corp. v. MAC Panel Co., 133 F.3d 860, 868–71 (Fed.Cir.1997).

Plaintiffs assert defendant has committed the following acts of patent misuse: (1) extracting and attempting to extract royalties on products and activities that are not covered by the claims of any of the patents in suit; (2) imposing a requirement of royalty payments beyond the term of the patent; and (3) attempting to muzzle licensees. Defendant denies each of these allegations and asserts that, regardless of whether the above acts were committed, patent misuse requires an anti-competitive effect that is lacking in this case. The court will discuss each of plaintiffs' allegations in turn.

A. Extracting and Attempting to Extract Royalties on Products and Activities That Are Not Covered by the Claims of Any of the Patents in Suit

1. License Agreements and Proposals Based on Products and Activities not Covered by the Patents

Citing both the existing licensing agreements and the licensing proposals, plaintiffs argue that defendant has insisted upon licenses that impose royalties on products and activities not covered by the patents. According to plaintiffs, this constitutes patent misuse. Defendant asserts that it has not conditioned the grant of a license on the inclusion of unpatented products and activities and, thus, cannot have committed patent misuse. Defendant further argues that license agreements based on products and activities not covered by the patent are not patent misuse if the license agreements are for the convenience of the parties.

Plaintiffs rely on Zenith Radio Corp. v. Hazeltine Research, Inc., 395 U.S. 100 (1969), for their contention that defendant's licensing activities constitute patent misuse. In Zenith Radio, the Supreme Court held "that conditioning the grant of a patent license upon payment of royalties on products which do not use the teaching of the patent does amount to patent misuse." The Court, however, limited the holding to particularly egregious circumstances. In refusing to reverse the district court's injunction, the Court stated:

> The trial court's injunction does not purport to prevent the parties from serving their mutual convenience by basing royalties on the sale of all radios and television sets, irrespective of the use of [the patentee's] inventions. The injunction reaches only situations where the patentee directly or indirectly "conditions" his license upon the payment of royalties on unpatented products—that is, where the patentee

> refuses to license on any other basis and leaves the licensee with the choice between a license so providing and no license at all. . . .

. . . Plaintiffs have provided no evidence that defendant has impermissibly "conditioned" its licenses upon royalty provisions covering unpatented products and activities. Plaintiffs have only established that licensees, including themselves, have objected to the terms proposed by defendant. Specifically, after receiving the initial offer from defendant, plaintiffs determined that the patents were invalid and the proposed licensing terms were improper. Defendant continued to make numerous offers to plaintiffs over the next several years. Plaintiffs make much of the fact that the license terms and proposals were drafted by defendant. However, plaintiffs provide no evidence of ever offering other terms they felt were equally convenient and more appropriate. In Zenith Radio, relied on by plaintiffs, the Supreme Court stated that "misuse inheres in a patentee's insistence on a percentage-of-sales royalty . . . and his rejections of licensee proposals to pay for actual use." 395 U.S. at 139. In the case at bar, plaintiffs provided no evidence of proposing a licensing arrangement to pay for actual use. Rather, they blame defendant for not doing so. . . .

The court finds that defendant has not impermissibly conditioned a license upon royalty provisions covering unpatented products and activities. Thus, on this point, plaintiffs' motion for summary judgment is denied and defendant's motion for summary judgment is granted. . . .

B. Imposing a Requirement of Royalty Payments Beyond the Term of the Patent

The license agreement with SCIOS Inc. ("SCIOS") contains the following section regarding royalty payments:

> In the case of an End Product that is not a Licensed Product and is not covered per se or for a given purpose by any patents obtained by LICENSEE, the obligation to pay royalties shall end ten (10) years after the last to expire of the patents in the Licensed Patent Rights having a claim or claims for a Licensed Method utilized in discovering, creating, identifying, characterizing, isolating, developing, manufacturing, evaluating or establishing the pharmacological properties or condition of use of the End Product (or a component thereof) for the given purpose.

Plaintiffs assert that this royalty clause in the SCIOS license requires the payment of royalties after the expiration of the patent. Relying on the Supreme Court's holding in Brulotte v. Thys Co., 379 U.S. 29 (1964), plaintiffs argue this constitutes patent misuse per se.

Defendant asserts that the license provision is not patent misuse per se for two reasons. First, the license provision only imposes royalties for use of the subject invention during the life of the patent. The royalties paid after the expiration of the patent, on pharmaceuticals sold after the expiration of the patent, are actually royalties for use of the invention during the research phase of the pharmaceutical—the research phase that occurred prior to the expiration of the patent. Second, defendant argues, the license provision is not patent misuse unless defendant actually attempts to collect post-expiration royalties. The mere presence of a clause permitting collection of post-expiration royalties is not patent misuse.

In *Brulotte*, the Supreme Court held that patent misuse occurs when a licensing agreement "allows royalties to be collected which accrued after the last of the patents . . . [has] expired." 379 U.S. at 30. In the case at bar, the royalties to be paid after the expiration of the patent are for the use of the subject invention prior to the expiration of the patent. Royalties are collected based on later pharmaceutical sales, but the royalties are being accrued as the invention is practiced during the research phase. Collecting royalties after the expiration of the patent has expired is not per se patent misuse as plaintiffs assert. Indeed, the Supreme Court has recognized that a patentee may collect royalties post-expiration without violating Brulotte. The Court acknowledged "that the patentee could lawfully charge a royalty for practicing a patented invention prior to its expiration date and that the payment of this royalty could be postponed beyond that time[.]" Zenith Radio, 395 U.S. at 136. The problem arises when "the post-expiration royalties were not for prior use but for current use, and were nothing less than an effort by the patentee to extend the term of his monopoly beyond that granted by law." *Id.* Thus, the SCIOS license does not violate Brulotte and defendant has not committed patent misuse. . . .

The court finds that plaintiffs have not proven patent misuse on the issue of imposing royalties beyond the term of the patent. Thus, on this point, plaintiffs' motion for summary judgment is denied and defendant's motion for summary judgment is granted.

NOTE: REACH-THROUGH ROYALTIES AND BIOMEDICAL RESEARCH

The court found that Housey did not violate *Brulotte* because "the royalties to be paid after the expiration of [Housey's] patent [were] *for use of the subject invention prior to the expiration of the patent*." *Bayer*, 228 F. Supp. 2d at 472 (emphasis added). One famous example of reach through royalties was Harvard University's "OncoMouse," a genetically engineered mouse created to have a high susceptibility to certain cancers, making it a very valuable tool for scientific research. The patent on the OncoMouse expired in 2005. See Brenda M. Simon, *Patent Cover-Up*, 47 HOUS.L.REV. 1299 (2011) (describing the royalty provisions governing use of the OncoMouse while it was under patent). The OncoMouse was widely regarded as challenging a tradition in science of using predecessors' research tools freely. See Fiona Murray, *The Oncomouse that Roared: Hybrid Exchange Strategies as a Source of Distinction at the Boundary of Overlapping Institutions*, 116 AM.J.SOC. 341 (2010).

Robin Feldman has described reach-through licenses as "I use your product now, but I can pay for it over an extended period of time," up to and including after the patent expires. *See* Robin C. Feldman, *The Insufficiency of Antitrust Analysis for Patent Misuse*, 55 Hastings L.J. 399, 444 (2003). She argues that such licenses "should raise patent misuse concerns" because they can extend the time and expand the scope of a patent. For example, such agreements "may result in royalties paid long after the patent . . . has expired," despite the fact that "[o]rdinarily, when the patent term ends, royalties should end, and the invention should be dedicated to the public domain."

Even if the use occurs during the period of the patent, she argues, "extending the time for determining the value of the use . . . violates the notion that patent holders have a limited time to capture a return on their inventions":

> A patent is not a guarantee that a patent holder will earn anything. It is a time-limited opportunity to try to capture a return on an invention. The market may not be ready, for example, to appreciate the invention during the patent period. Nevertheless, one cannot ask the patent office to extend the patent for a few years on the grounds that the invention was ahead of its time and the market simply was not ready to appreciate its value. The market's inability to

> recognize or calculate the value of an invention is one of the hazards of having a limited patent term.
>
> . . . [T]he patent system has strong policy reasons for limiting the time of a patent grant. These include not only concerns related to anticompetitive effects but also concerns related to limiting wasteful and duplicative activities and creating disincentives to future inventors. Leaving open the time for determining and capturing the value of an invention threatens the overall balances struck by the current patent system. In particular, it shifts the patent system's current allocation of reward between those who participate in the early stage of inventions and those who participate in later stages of invention.
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> . . . [T]he process of invention is often evolutionary with one invention building on those that have gone before. While early stage inventors make an initial leap forward, later stage https://images-statcont.westlaw.com/images/spacer13x13.gifinventors create further developments. Thus, many inventions are the product of successive contributions by multiple inventors.
>
> The structure of the patent system limits the reward that may be gained by early stage inventors in comparison to those who come later. Such limits enhance the overall progress of science by ensuring that those who create initial steps do not discourage those who would take the next steps by aggregating too much of the total available reward to those at the early stages.
>
> By leaving open the time for calculating the value of a current use, Reach-Through Royalties shift a greater portion of the total reward available for an invention to those who contribute to the early stages of invention leaving less for those who contribute later. This discourages later invention and disrupts the balances implicit in the current patent system.

Feldman, *id*. at 443–447 (footnotes omitted); *see also* Natalie M. Derzko, *In Search of a Compromised Solution to the Problem Arising from Patenting Biomedical Research Tools*, 20 Santa Clara Computer & High Tech. L.J.

347, 393, 398 (2004) (proposing the elimination of reach-through licensing of biomedical research tools and arguing that "since the concept of [a reach-through license] seems to inappropriately expand the monopoly rights on a patented research tool beyond the scope of the patent itself, it seems reasonable . . . that [reach-through licenses] can be a form of patent misuse").

Feldman also highlights the problem of "royalty stacking," where "the presence of too many rights holders . . . inhibits the efficient exploitation of [an] invention." Feldman, *supra*, at 447. Professors Michael Heller and Rebecca Eisenberg describe this scenario as a "'tragedy of the *anti*commons,' when multiple owners each have a right to exclude others from a scarce resource and no one has an effective privilege of use." Michael A. Heller & Rebecca S. Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 Science 698, 698 (1998) (emphasis added). As Heller and Eisenberg explain, in the context of biomedical research, reach-through licenses cause royalty stacking because they give

> the owner of a patented invention, used in upstream stages of research, rights in subsequent downstream discoveries. Such rights may take the form of a royalty on sales that result from use of the upstream research tool, an exclusive or nonexclusive license on future discoveries, or an option to acquire such a license. In principle, [reach-through licenses] offer advantages to both patent holders and researchers. They permit researchers with limited funds to use patented research tools right away and defer payment until the research yields valuable results. Patent holders may also prefer a chance at larger payoffs from sales of downstream products rather than certain, but smaller, upfront fees. In practice, [however, reach-through licenses] may lead to an anticommons as upstream owners stack overlapping and inconsistent claims on potential downstream products. In effect, the use of [reach-through licenses] gives each upstream patent owner a continuing right to be present at the bargaining table as a research project moves downstream toward product development.
>
> . . . .
>
> As [reach-through licenses] to use patented research tools multiply, researchers will face increasing difficulties conveying clear title to firms that might develop future discoveries. If a particularly valuable commercial product is

> in view, downstream product developers might be motivated and able to reach agreements with multiple holders of RTLAs. But if the prospects for success are more uncertain or the expected commercial value is small, the parties may fail to bargain past the anticommons.

Id. at 699–700.

Heller and Eisenberg point out that intellectual-property owners who regularly deal with each other "have sometimes developed institutions to reduce transaction costs of bundling multiple licenses." *Id.* at 700. For example,

> in the music industry, copyright collectives have evolved to facilitate licensing transactions so that broadcasters and other producers may readily obtain permission to use numerous copyrighted works held by different owners. Similarly, in the automobile, aircraft manufacturing, and synthetic rubber industries, patent pools have emerged, sometimes with the help of government, when licenses under multiple patent rights have been necessary to develop important new products. . . . Perhaps some of the problems caused by proliferating upstream patent rights in biomedical research will recede as licensors and licensees gain experience with intellectual property rights and institutions evolve to help owners and users reach agreements. The short-term costs from delayed development of new treatments for disease may be worth incurring if fragmented privatization allows upstream research to pay its own way and helps to ensure its long-run viability. Patent barriers to product development may be a transitional phenomenon rather than an enduring tragedy.

Id. "On the other hand, there may be reasons to fear that a patent anticommons could prove more intractable in biomedical research than in other settings":

> Because patents matter more to the pharmaceutical and biotechnology industries than to other industries, firms in these industries may be less willing to participate in patent pools that undermine the gains from exclusivity. Moreover, the lack of substitutes for certain biomedical discoveries (such as patented genes or receptors) may increase the

> leverage of some patent holders, thereby aggravating holdout problems. Rivals may not be able to invent around patents in research aimed at understanding the genetic bases of diseases as they occur in nature.

Id. (footnotes omitted). Heller and Eisenberg warn that "three structural concerns caution against uncritical reliance on markets and norms to avoid a biomedical anticommons tragedy." *Id.* First, transaction costs are high because

> [m]any upstream patent owners are public institutions with limited resources for absorbing transaction costs and limited competence in fast-paced, market-oriented bargaining. [Furthermore], the rights involved cover a diverse set of techniques, reagents, DNA sequences, and instruments. Difficulties in comparing the values of these patents will likely impede development of a standard distribution scheme. . . . [Finally], licensing transaction costs are likely to arise early in the course of R&D when the outcome of a project is uncertain, the potential gains are speculative, and it is not yet clear that the value of downstream products justifies the trouble of overcoming the anticommons.

Id. Heller and Eisenberg add that "[e]ven when upstream owners see potential gains from cooperation and are motivated to devise mechanisms for reducing transaction costs, they may be deterred by other legal constraints, such as antitrust laws," where "[e]ven a remote prospect of facing treble damages . . . may give firms pause about entering into such agreements." *Id.*

Second, compounding these transaction costs are IP owners' heterogeneous and often conflicting interests. "Intellectual property rights in upstream biomedical research belong to a large, diverse group of owners in the public and private sectors with divergent institutional agendas." *Id.* For example, while government agencies like the National Institute of Health may use their intellectual-property rights to increase the public's access to medical products, private firms are more likely to use their IP rights to "maintain a lucrative product monopoly that rewards shareholders and funds future product development." *Id.* "When owners have conflicting goals and each can deploy its rights to block the strategies of the others, they may not be able to reach an agreement that leaves enough private value for downstream developers to bring products to the market." *Id.*

Finally, Heller and Eisenberg argue that researchers' cognitive biases make it difficult for them to bargain around the anticommons problem:

> People consistently overestimate the likelihood that very low probability events of high salience will occur. For example, many travelers overestimate the danger of an airplane crash relative to the hazards of other modes of transportation. We suspect that a similar bias is likely to cause owners of upstream biomedical research patents to overvalue their discoveries. Imagine that one of a set of 50 upstream inventions will likely be the key to identifying an important new drug, the rest of the set will have no practical use, and a downstream product developer is willing to pay $10 million for the set. Given the assumption that no owner knows ex ante which invention will be the key, a rational owner should be willing to sell her patent for the probabilistic value of $200,000. However, if each owner overestimates the likelihood that her patent will be the key, then each will demand more than the probabilistic value, the upstream owners collectively will demand more than the aggregate market value of their inputs, the downstream user will decline the offers, and the new drug will not be developed. Individuals trained in deterministic rather than probabilistic disciplines are particularly likely to succumb to this sort of error.
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> A related "attribution bias" suggests that people systematically overvalue their assets and disparage the claims of their opponents when in competition with others. We suspect that the attribution bias is pervasive among scientists because it is likely adaptive for the research enterprise as a whole. Overcommitment by individuals to particular research approaches ensures that no hypothesis is dismissed too quickly, and skepticism toward rivals' claims ensures that they are not too readily accepted. But this bias can interfere with clear-headed bargaining, leading owners to overvalue their own patents, undervalue others' patents, and reject reasonable offers. Institutional ownership could mitigate these biases, but technology transfer offices rely on scientists to evaluate their discoveries. When two or more

> patent owners each hope to dominate the product market, the history of biotechnology patent litigation suggests a likelihood that bargaining will fail.

But aren't reach through royalties simply a form of risk sharing, which may often facilitate innovation that would not otherwise occur? If a researcher is impecunious and unable to pay research costs immediately, she may pay under a "contingency" arrangement that assess royalties against a successful product. In principle, such an agreement is no different than a book publisher's promise to an author that it will pay the considerable costs of publication in exchange for royalties in the future that will follow after market success. If the book fails the publisher will lose, but if the book succeeds the publisher may earn a great deal. The main difference is that the life of the copyright – approximately 100 years – is far longer than the life of a patent, but that should not affect the underlying economics of the transaction.

For example, suppose the researcher is embarking on a product that has a 25% chance of succeeding but may pay off handsomely if it does succeed. The researcher needs a patented process in order to perform the research, but has few funds. Licensing the process costs little for the patentee, so its downside risk from failure is negligible; by contrast, paying for the license up front is a major commitment for the licensee. Under these circumstances the efficient solution would be for the patentee and researcher to reach a contingency arrangement under which the royalty will come out of the proceeds of a successful conclusion of the project. See CHRISTINA BOHANNAN AND HERBERT HOVENKAMP, CREATION WITHOUT RESTRAINT: PROMOTING LIBERTY AND RIVALRY IN INNOVATION, Ch. 10 (2011).